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Definitions of Managed Objects for the Optical Interface Type

Status of this Memo

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Abstract

This memo defines a portion of the Management Information Base (MIB) for use with Simple Network Management Protocol (SNMP) in TCP/IP-based internets. In particular, it defines objects for managing Optical Interfaces associated with WavelengthDivision Multiplexing systems or characterized by the Optical Transport Network (OTN) in accordance with the OTN architecture defined in ITU-T Recommendation G.872.

The MIB module defined in this memo can be used for performance monitoring and/or configuration of such optical interface.

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1. The Internet-Standard Management Framework

For a detailed overview of the documents that describe the current Internet-Standard Management Framework, please refer to section 7 of RFC 3410 [RFC3410].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. MIB objects are generally accessed through the Simple Network Management Protocol (SNMP). Objects in the MIB are defined using the mechanisms defined in the Structure of Management Information (SMI). This memo specifies a MIB module that is compliant to the SMIv2, which is described in STD 58, RFC 2578 [RFC2578], STD 58, RFC 2579 [RFC2579] and STD 58, RFC 2580 [RFC2580].

2. Overview

In this document, the term OTN (Optical Transport Network) system is used to describe devices that are compliant with the requirements specified in the ITU-T Recommendations G.872 [ITU-T G.872], G.709 [ITU-T G.709], G.798 [ITU-T G.798], G.874 [ITU-T G.874], and G.874.1 [ITU-T G.874.1].

The optical objects will be managed using the MIB II ifTable and ifStackTable. Additional tables will also be supported to monitor layer specific status and provide performance monitoring data. In the tables, some entries are required for OTN systems only. A Configuration (Config) table, Current Performance Monitoring (PM) table, and Interval PM table will be maintained for the OTSn, OMSn, OChGroup, and OCh layers on a source and sink trail termination basis. These tables will be linked to the ifTable by using the ifIndex that is associated with that layer.

These objects are used when the particular media being used to realize an interface is an Optical Transport interface. At present, this applies to these values of the ifType variable in the Internet-standard MIB:

opticalChannel (195), opticalChannelGroup (219), opticalTransport (196)

The definitions contained herein are based on the OTN specifications in ITU-T G.872[ITU-T G.872], G.709 [ITU-T G.709], G.798[ITU-T G.798], G.874[ITU-T G.874], and G.874.1 [ITU-T G.874.1].

2.1. Use of the ifTable

This section specifies how the MIB II interfaces group, as defined in RFC 2863 [RFC2863], is used for optical interfaces. Only the ifGeneralInformationGroup will be supported for the ifTable and the ifStackTable to maintain the relationship between the various layers. The OTN layers are managed in the ifTable using IfEntries that correlate to the layers depicted in Figure 1.

For example, a DWDM device with an Optical Network Node Interface (ONNI) will have an Optical Transmission Section (OTS) physical layer, an Optical Multiplex Section (OMS) layer (transports multiple optical channels), and an Optical Channel (OCh) layer. There is a one to one relationship between the OMS and OTS layers. The OMS layer has fixed connectivity via the OTS and thus no connectivity flexibility at the OMS layer is supported.

A device with an ONNI that does not multiplex would consist of the OTS and OCh layers supporting a single channel.

MIB-II (RFC 1213) [RFC1213], as amended and extended by RFC 3418 [RFC3418], RFC 2863 [RFC2863], and RFC 2864 [RFC2864], accommodates these cases through appropriate use of the system and interfaces groups. The system group names and describes the type of managed resource. The interfaces group defines which OTN layers exist and how these layers are configured and multiplexed. This is achieved by proper representation of OTN Layers as IfEntries as defined in RFC 2863 [RFC2863], as follows.

In the following figures, opticalChannel and opticalTransport are abbreviated as och and otn respectively.

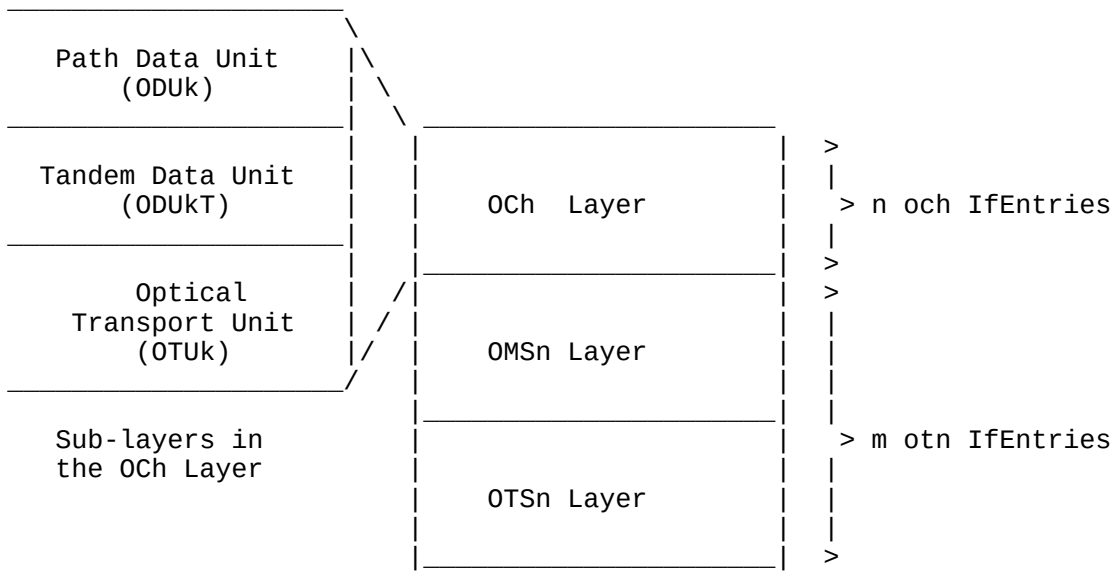


Figure 1: OTN Layers

Since the OMSn and OTSn layers have a one to one relationship, only one otn IfEntry is required to support these two layers. Therefore, each opticalChannel IfEntry may be mapped to m opticalTransport IfEntries, where m is greater than or equal to 1. Conversely, each opticalTransport entry may be mapped to n opticalChannel IfEntries, where n is greater than or equal to 1.

There are implementations that have banded amplifers that operate on a group of optical channels separately (e.g., C and L band channels) before finally muxing them together and transporting them over a

physical layer. For such DWDM system implementations, it is important to have the ability to model each of the groups (or bands) with an ifIndex and measure the pre-OTN PM parameters for each band separately.

The OTN layering, as described in Figure 1, can be extended to accomodate such implementations by introducing another layer called the OChGroup Layer.

As an example, Figure 2 depicts the OTN layering of a DWDM system with 80 C-band and 80 L-band channels combined into their respective channel band groups before being muxed into the OMS and transported over the OTS.

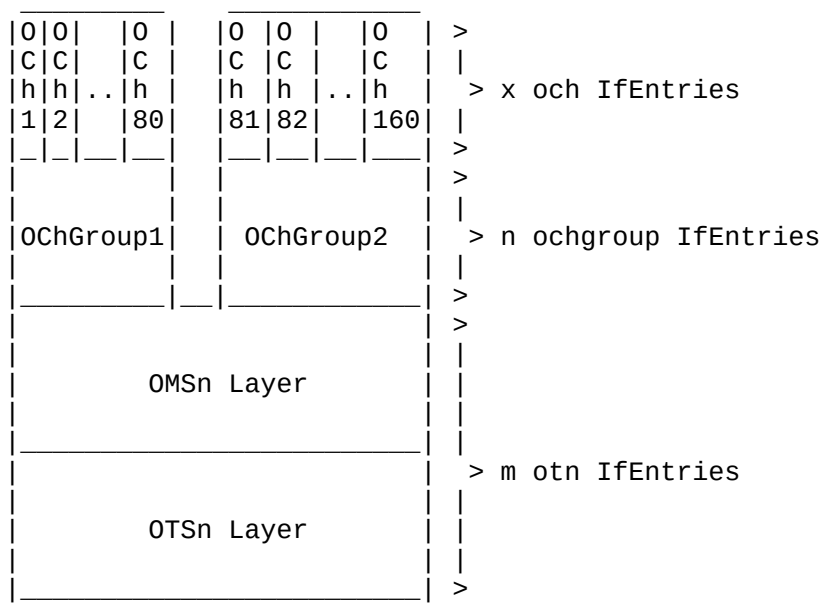


Figure 2: OTN Layers for a Banded Configuration

If an implementation does not wish to model the banded configuration, the OChGroup layer is absent and the OTN layering model degenerates to the description in Figure 1. In other words, when there is an amplifier that covers the whole band, the optIfOMSn objects should be used, rather than using the optIfOChGroup objects with a degenerate group that covers all channels.

The design of the Optical Interface MIB provides the option to model an interface either as a single bidirectional object containing both sink and source functions or as a pair of unidirectional objects, one containing sink functions and the other containing source functions.

If the sink and source for a given protocol layer are to be modelled as separate objects, then there need to be two ifTable entries, one that corresponds to the sink and one that corresponds to the source, where the directionality information is provided in the configuration tables for that layer via the xxxDirectionality objects. The agent is expected to maintain consistent directionality values between ifStackTable layers (e.g., a sink must not be stacked in a 1:1 manner on top of a source, or vice-versa), and all protocol layers that are represented by a given ifTable entry are expected to have the same directionality (i.e., instances of optIfOTSnDirectionality and optIfOMSnDirectionality that correspond to a given ifIndex value must have the same value, and instances of optIfOChDirectionality, optIfOTUkDirectionality, and optIfODUkDirectionality that correspond to a given ifIndex value must have the same value).

When separate ifTable entries are used for the source and sink functions of a given physical interface, association between the two uni-directional ifTable entries (one for the source function and the other for the sink functions) should be provided. It is recommended that identical ifName values are used for the two ifTable entries to indicate such association. An implementation shall explicitly state what mechanism is used to indicate the association, if ifName is not used.

Example 1: Management of unterminated opticalChannel (och) using passive optics

An OTN device connected with two adjacent nodes in a single fiber ring that supports 10 wavelengths per fiber would have 2 opticalTransport IfEntries and 20 opticalChannel IfEntries, as depicted in Figure 3. Thus 10 opticalChannel IfEntries are stacked above the first opticalTransport IfEntry, and the other 10 opticalChannel IfEntries are stacked above the second opticalTransport IfEntry. Note that the optical channels in this example are un-terminated, and thus no OTUk objects will be instantiated for these optical channels. The opticalChannel IfEntries of one otn may be dropped/added from/to the OTN device or cross-connected with the opticalChannel IfEntries of the other otn. Cross-connection from a member of the first 10 opticalChannel IfEntries to a member of the second 10 opticalChannel IfEntries could be modelled by using a cross-connect object, which is not yet defined in this version of the MIB.

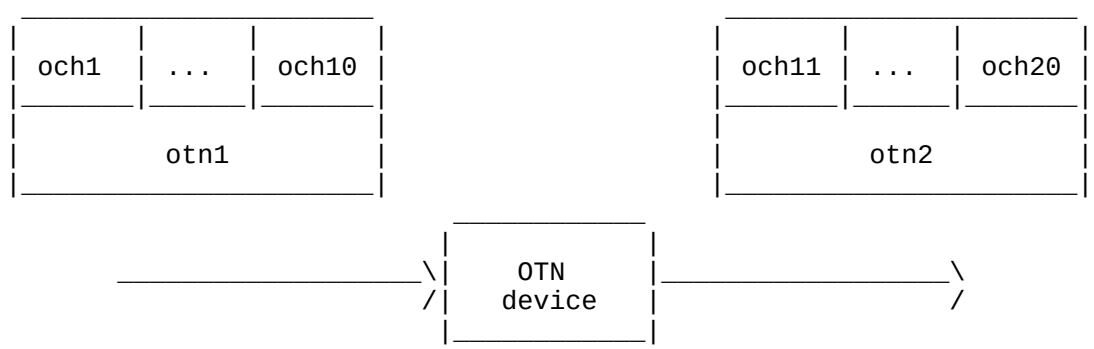


Figure 3: Interface stacks when channels are unterminated

Example 2: Management of terminated opticalChannel (och) interfaces

An OTN device connected with two adjacent nodes in a single fiber ring that supports 10 wavelengths per fiber would have 2 opticalTransport IfEntries and 20 opticalChannel IfEntries, as depicted in Figure 4. Thus 10 opticalChannel IfEntries are stacked above the first opticalTransport IfEntry, and the other 10 opticalChannel IfEntries are stacked above the second opticalTransport IfEntry. As the optical channels in this example are terminated, OTUk objects and possibly ODUk objects will be instantiated for the terminated opticalChannel IfEntries.

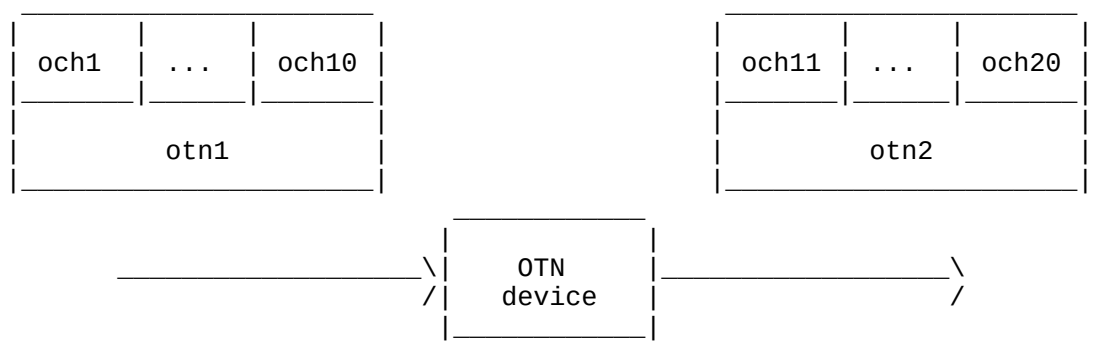


Figure 4: Interface stacks when channels are terminated

Note that the two examples described above depict the interface stacks when the banded configuration is not modeled.

The exact configuration and multiplexing of the layers is maintained in the ifStackTable (RFC 2863) [RFC2863] and in the ifInvStackTable (RFC 2864) [RFC2864]; see section 2.5 for details.

2.2. Use of ifTable for OTN OTS/OMS Layer

Only the ifGeneralInformationGroup needs to be supported.

ifTable Object	Use for combined OTN OTS/OMS Layer
ifIndex	The interface index.
ifDescr	Optical Transport Network (OTN) Optical Transmission Section (OTS)/Optical Multiplex Section (OMS)
ifType	opticalTransport (196)
ifSpeed	Actual bandwidth of the interface in bits per second. If the bandwidth of the interface is greater than the maximum value of 4,294,967,295, then the maximum value is reported and ifHighSpeed must be used to report the interface's speed.
ifPhysAddress	An octet string with zero length. (There is no specific address associated with the interface.)
ifAdminStatus	The desired administrative status of the interface. Supports read-only access.
ifOperStatus	The operational status of the interface. The value lowerLayerDown(7) is not used, since there is no lower layer interface. This object is set to notPresent(6) if a component is missing, otherwise it is set to down(2) if either of the objects optIfOTSnCurrentStatus or optIfOMSnCurrentStatus indicates that any defect is present.
ifLastChange	The value of sysUpTime at the last change in ifOperStatus.

ifName	Enterprise-specific convention (e.g., TL-1 AID) to identify the physical or data entity associated with this interface or an OCTET STRING of zero length. The enterprise-specific convention is intended to provide the means to reference one or more enterprise-specific tables.
ifLinkUpDownTrapEnable	Default value is enabled(1). Supports read-only access.
ifHighSpeed	Actual bandwidth of the interface in Mega-bits per second. A value of n represents a range of 'n-0.5' to 'n+0.499999'.
ifConnectorPresent	Set to true(1).
ifAlias	The (non-volatile) alias name for this interface as assigned by the network manager.

2.3. Use of ifTable for OTN OChGroup Layer

Only the ifGeneralInformationGroup needs to be supported.

ifTable Object	Use for OTN OChGroup Layer
ifIndex	The interface index.
ifDescr	Optical Transport Network (OTN) Optical Channel Group (OChGroup)
ifType	opticalChannelGroup(219)
ifSpeed	Current bandwidth of the interface in bits per second. If the bandwidth of the interface is greater than the maximum value of 4,294,967,295, then the maximum value is reported and ifHighSpeed must be used to report the interface's speed.
ifPhysAddress	A string that specifies the range of wavelengths in the format of w1-w2, where w1 and w2 are the lower and upper end of the wavelength range, both in ASCII decimal digits expressed in nanometers (e.g., 1350-1650)

ifAdminStatus	The desired administrative status of the interface. Supports read-only access.
ifOperStatus	The operational status of the interface. This object is set to lowerLayerDown(7) if the ifOperStatus of its otn interface is down(2). Otherwise, it is set to down(2) if the amplifier for this band is unable to carry traffic.
ifLastChange	The value of sysUpTime at the last change in ifOperStatus.
ifName	Enterprise-specific convention (e.g., TL-1 AID) to identify the physical or data entity associated with this interface or an OCTET STRING of zero length. The enterprise-specific convention is intended to provide the means to reference one or more enterprise-specific tables.
ifLinkUpDownTrapEnable	Default value is disabled(2). Supports read-only access.
ifHighSpeed	Current bandwidth of the interface in Mega-bits per second. A value of n represents a range of 'n-0.5' to 'n+0.499999'.
ifConnectorPresent	Set to false(2).
ifAlias	The (non-volatile) alias name for this interface as assigned by the network manager.

2.4. Use of ifTable for OTN OCh Layer

Only the ifGeneralInformationGroup needs to be supported.

ifTable Object	Use for OTN OCh Layer
ifIndex	The interface index.
ifDescr	Optical Transport Network (OTN) Optical Channel (OCh)
ifType	opticalChannel(195)

ifSpeed	Current bandwidth of the interface in bits per second. If the bandwidth of the interface is greater than the maximum value of 4,294,967,295, then the maximum value is reported and ifHighSpeed must be used to report the interface's speed.
ifPhysAddress	A string of ASCII decimal digits containing the wavelength of the optical channel, expressed in nanometers (e.g., 1550).
ifAdminStatus	The desired administrative status of the interface. Supports read-only access.
ifOperStatus	The operational status of the interface. This object is set to lowerLayerDown(7) if the ifOperStatus of its otn interface or of its OChGroup interface is down(2). Otherwise, it is set to down(2) if one or more of the objects optIfOChCurrentStatus, optIfOTUkCurrentStatus, optIfODUkTCurrentStatus, and optIfODUkTtpCurrentStatus indicates that any defect is present.
ifLastChange	The value of sysUpTime at the last change in ifOperStatus.
ifName	Enterprise-specific convention (e.g., TL-1 AID) to identify the physical or data entity associated with this interface or an OCTET STRING of zero length. The enterprise-specific convention is intended to provide the means to reference one or more enterprise-specific tables.
ifLinkUpDownTrapEnable	Default value is disabled(2). Supports read-only access.
ifHighSpeed	Current bandwidth of the interface in Mega-bits per second. A value of n represents a range of 'n-0.5' to 'n+0.499999'.
ifConnectorPresent	Set to false(2).
ifAlias	The (non-volatile) alias name for this interface as assigned by the network manager.

2.5. Use of ifStackTable

Use of the ifStackTable and ifInvStackTable to associate the opticalTransport and opticalChannel interface entries is best illustrated by the example shown in Figure 5. The example assumes an otn interface with ifIndex i that carries two multiplexed och interfaces with ifIndex values of j and k, respectively. The example shows that j and k are stacked above (i.e., multiplexed into) i. Furthermore, it shows that there is no layer lower than i and no layer higher than j and/or k.

HigherLayer	LowerLayer
0	j
0	k
j	i
k	i
i	0

Figure 5: Use of ifStackTable for an OTN port

Figure 6 illustrates an example for a banded configuration. The example assumes an otn interface with ifIndex i that carries two multiplexed och groups with ifIndex values u and v. An och group with ifIndex value u combines two och interfaces with ifIndex values of a and b. An och group with ifIndex value v combines two och interfaces with ifIndex values of c and d. The example show that a and b are stacked above (i.e., multiplexed into) u. Likewise, c and d are stacked above v. u and v are multiplexed into i. Furthermore, it shows that there is no layer lower than i and no layer higher than a, b, c, and/or d. It also shows that u has a and b as its higher layers, and v has c and d as its higher layers.

HigherLayer	LowerLayer
0	a
0	b
0	c
0	d
a	u
b	u
c	v
d	v
u	i
v	i
i	0

Figure 6: Use of ifStackTable for an OTN port for a banded configuration

For the inverse stack table, it provides the same information as the interface stack table, with the order of the Higher and Lower layer interfaces reversed.

2.6. Optical Network Terminology

The terminology used in this document to describe the layers of an optical network and the error conditions and performance monitoring parameters on an optical circuit as monitored by an optical system is listed below. These terms are defined in ITU-T Recommendations G.872 [ITU-T G.872], G.709 [ITU-T G.709], G.798 [ITU-T G.798], G.874 [ITU-T G.874], G.874.1 [ITU-T G.874.1], and G.806 [ITU-T G.806]. Brief definitions of some terms are also included here to facilitate the readability of this document.

Degraded Threshold (DEGTHR) - G.806
: A threshold level for declaring a performance monitoring (PM) Second (a time period of one second) to be bad. A PM Second is declared bad if the percentage of detected errored blocks in that second or the number of errored blocks in that Second is greater than or equal to DEGTHR.

DEGM - G.806
: A threshold level for declaring a Degraded Signal defect (dDEG). A dDEG shall be declared if DEGM consecutive bad PM Seconds are detected.

Expected Destination Access Point Identifier (ExDAPI) - G.798
: The Expected Destination Access Point Identifier (ExDAPI), provisioned by the managing system, to be compared with the TTI accepted at the overhead position of the sink for the purpose of checking the integrity of connectivity.

Expected Source Access Point Identifier (ExSAPI) - G.798
: The Expected Source Access Point Identifier (ExSAPI), provisioned by the managing system, to be compared with the TTI accepted at the overhead position of the sink for the purpose of checking the integrity of connectivity.

Inter-Domain Interface (IrDI) - G.872
: A physical interface that represents the boundary between two administrative domains.

  G.709 defines the requirements for the IrDI at the Network Node Interface (NNI).

Intra-Domain Interface (IaDI) - G.872
: A physical interface within an administrative domain.

Optical Channel Layer Network (OCh) - G.872
: This layer network provides end-to-end networking of optical channels for transparently conveying client information of varying format (e.g., SDH STM-N, PDH 565 Mbit/s, cell based ATM, etc.).

Optical Channel Data Unit Path Layer Network (ODUk) - G.709/Y.1331
: This layer network provides functionality for the transport of information structure consisting of the information payload (OPUk) and the related overhead for management of an optical channel.

Optical Channel Data Unit Tandem Connection Sub-Layer Network (ODUkT) - G.709/Y.1331
: This layer network is a sub-layer of the optical data unit layer, which provides the capability for tandem connection monitoring. One to six nested levels of monitoring are defined for OTN.

Optical Channel Payload Unit (OPUk) - G.709/Y.1331
: The OPUk is the information structure used to adapt client information for transport over an optical channel. OPUk capacities for k=1, k=2, k=3 are defined in ITU-T. The index "k" is used to represent different versions of OPUk, ODUk and OTUk. k=1 represents an approximate bit rate of 2.5 Gbit/s, k=2 represents an approximate bit rate of 10 Gbit/s, and k=3 represents an approximate bit rate of 40 Gbit/s.

Optical Multiplex Section Layer Network (OMS) - G.872
: This layer network provides functionality for networking of a multi-wavelength optical signal. Note that a "multi-wavelength" signal includes the case of just one optical channel.

Optical Transport Module (OTM-n[r].m) - G.872
: The OTM is the information structure that is transported across an ONNI. The index n and m define the number of supported wavelengths and bit rates at the interface.

  Two OTM structures are defined: OTM with full functionality (OTM-n.m) and OTM with reduced functionality (OTM-0.m & OTM-nr.m).

  The OTM-n.m consists of up to n multiplexed optical channels and an OTM overhead signal to support the non-associated overhead. The OTM-0 consists of a single optical channel

without a specific color assigned. The OTM-nr.m consists of up to n multiplexed optical channels. Non associated overhead is not supported.

Optical Transport Network (OTN) - G.872
A transport network bounded by optical channel access points. The optical transport network layered structure is comprised of the optical channel, optical multiplex section and optical transmission section layer networks.

According to G.872, an OTN-compliant interface is an interface of the optical transport network based on the architecture defined in G.872, while an OTN-non-compliant interface is an interface that does not comply with the interface recommendations that will be defined for the optical transport network based on the architecture defined in G.872.

Optical Transmission Section Layer Network (OTS) - G.872
This layer network provides functionality for transmission of optical signals on optical media of various types.

Optical Channel Transport Unit Section Layer Network (OTUk) - G.709
The OTUk is the layer network that provides for the transport of an ODUk over one or more optical channel link connections. It consists of the optical channel data unit and OTUk related overhead (FEC and overhead for management of an optical channel link connection). It is characterized by its frame structure, bit rate, and bandwidth.

Payload Type Mismatch (PLM)
The detection of a mismatch of payload type is based on a comparison between the expected Payload Type signal, provisioned via the management interface, and the received Payload Type signal.

Trail Trace Identifier Transmitted (TxTI) - G.798
The Trail Trace Identifier (TTI) information, provisioned by the managing system, to be placed in the TTI overhead position of the source of a trail for transmission.

Trail Trace Identifier Accepted (AcTI) - G.798
The Trail Trace Identifier (TTI) information accepted from the TTI overhead position at the sink of a trail.

Trail Trace Identifier Accepted Status (AcTIStatus) - G.798
The Status of the Trail Trace Identifier (TTI) accepted from the TTI overhead position at the sink of a trail.

Trace Identifier Mismatch (TIM) - G.798
The detection of TIM is based on a comparison between the expected Trial Trace Identifier (TTI), configured via the management interface, and the received TTI.

Trace Identifier Mismatch Consequent Action Enabled (TimActEnabled) - G.798
The Consequent Action function of TIM is disabled.

Trace Identifier Mismatch Detection Mode (TimDetMode) - G.798
The mode of detecting Trace Identifier Mismatch (TIM). Possible modes are:

(1) off - no checking,
(2) SAPI - checking the SAPI only,
(3) DAPI - checking the DAPI only, and
(4) Both - checking both the SAPI and DAPI.

2.6.1. Defect Conditions

The following Defect conditions are defined in G.798 (as fault cause) for OTN monitoring.

ais	Alarm Indication Signal (AIS)
bdi	Backward Defect Indication (BDI)
bdiO	Backward Defect Indication - Overhead (BDI-O)
bdiP	Backward Defect Indication - Payload (BDI-P)
deg	Degraded (DEG)
lck	Locked (LCK)
lof	Loss of Frame (LOF)
lom	Loss of Multi Frame
los	Loss of Signal (LOS)
losO	Loss of Signal - Overhead (LOS-O)
losP	Loss of Signal - Payload (LOS-P)
oci	Open Connection Indication (OCI)
plm	Payload Mismatch (PLM)
ssf	Server Signal Failure (SSF)
ssfO	Server Signal Failure - Overhead (SSF-O)
ssfP	Server Signal Failure - Payload (SSF-P)
tim	Trace Identifier Mismatch (TIM)

The relationship of these conditions within a network layer and between layers are described in G.798 [ITU-T G.798].

2.6.2. Performance Parameters

To facilitate identification of equipment and facilities that may require maintenance, it is necessary to monitor parameters such as optical power at each layer. The measurements are taken periodically, and a snapshot of the current value is also made available. More specifically, performance parameters at each layer are maintained for the current 15-minute interval, the current 24-hour interval, N previous 15-minute intervals where 4 <= N <= 96, and one previous 24-hour interval.

Note that some of the previous interval data will be unavailable if the agent has restarted within the last 24 hours.

There is no requirement for an agent to ensure a fixed relationship between the start of a 15-minute or 24-hour interval and any wall clock; however, some agents may align the 15-minute intervals with quarter hours and may align the 24-hour intervals with a particular hour of the day (e.g., 00:00 UTC).

Note that some DWDM systems may also monitor the laser temperature of the equipment in addition to monitoring the optical power. However, industry opinions vary widely with respect to laser temperature monitoring, in particular regarding the benefit of the monitoring and which temperatures are to be monitored (i.e., all or only some of the pump lasers). Similarly, there are varying opinions regarding mid-stage power monitoring. Since no consensus was reached, it was decided that the laser temperature monitoring and mid-stage monitoring would not be standardized in the MIB. If an implementation would like to monitor these parameters, one could use a proprietary MIB or the ENTITY-SENSOR-MIB [RFC3433] to capture this information.

The sink-side monitoring points for the various layers are shown in Figure 7 below.

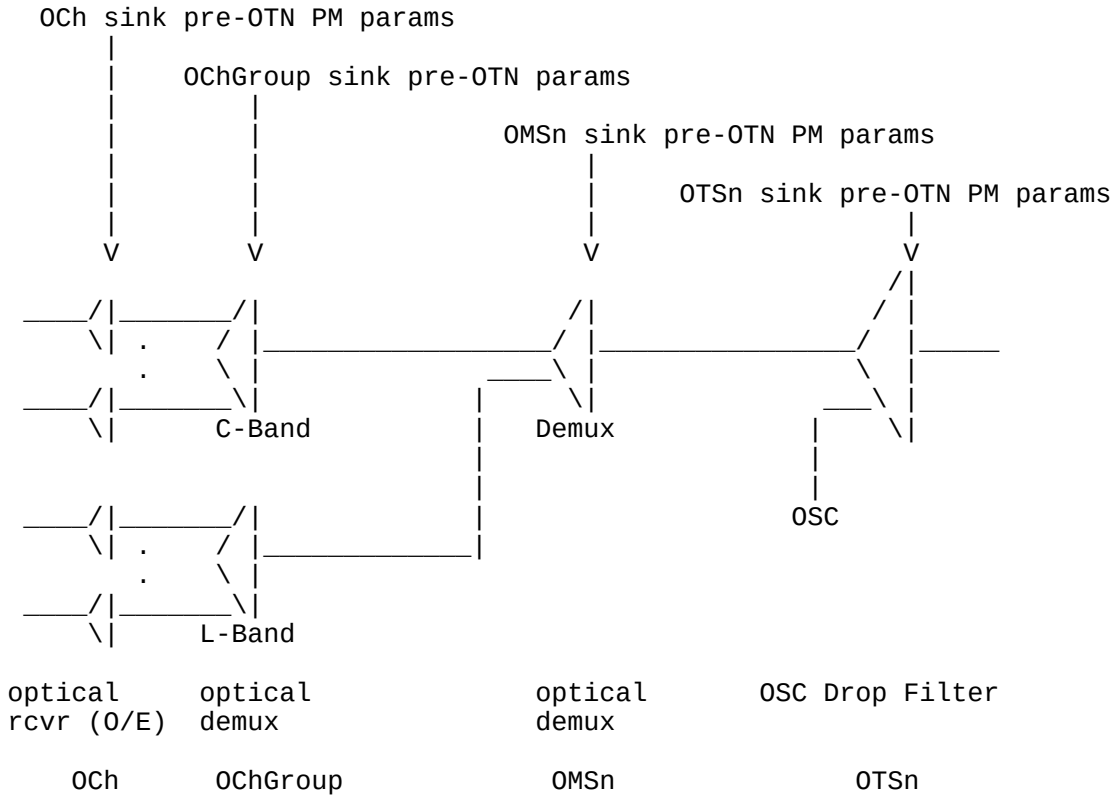


Figure 7: Sink-side pre-OTN monitoring points

The source-side monitoring points for the various layers are shown in Figure 8 below.

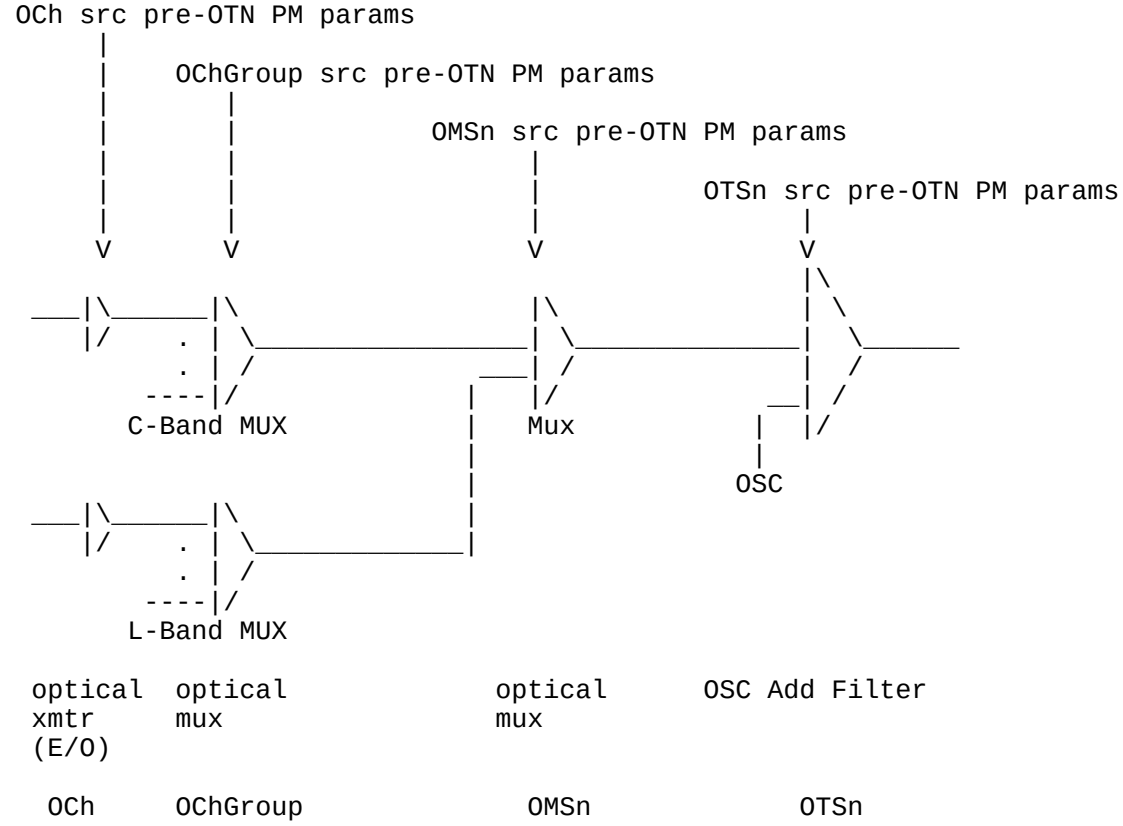


Figure 8: Source-side pre-OTN monitoring points

Note that optical performance parameters are of type Integer32, rather than Counter32 or Gauge32, because it is possible for these objects to increase or decrease and to assume negative or positive values.

2.7. Tandem Connection Monitoring (TCM)

An ODUk termination can be provisioned to support (0..6) TCM levels. Each TCM field contains the following subfields:

- Trail Trace Identifier (TTI)
- Bit Interleaved Parity 8 (BIP8)
- Backward Defect Indication (BDI)
- Backward Error Indication (BEI)
- Status bits indicating the presence of TCM overhead, Incoming AlignmentError, or a maintenance signal (STAT).

The insertion of these subfields is controlled by:

- optIfODUkTSourceMode or otnODUkTsinkMode

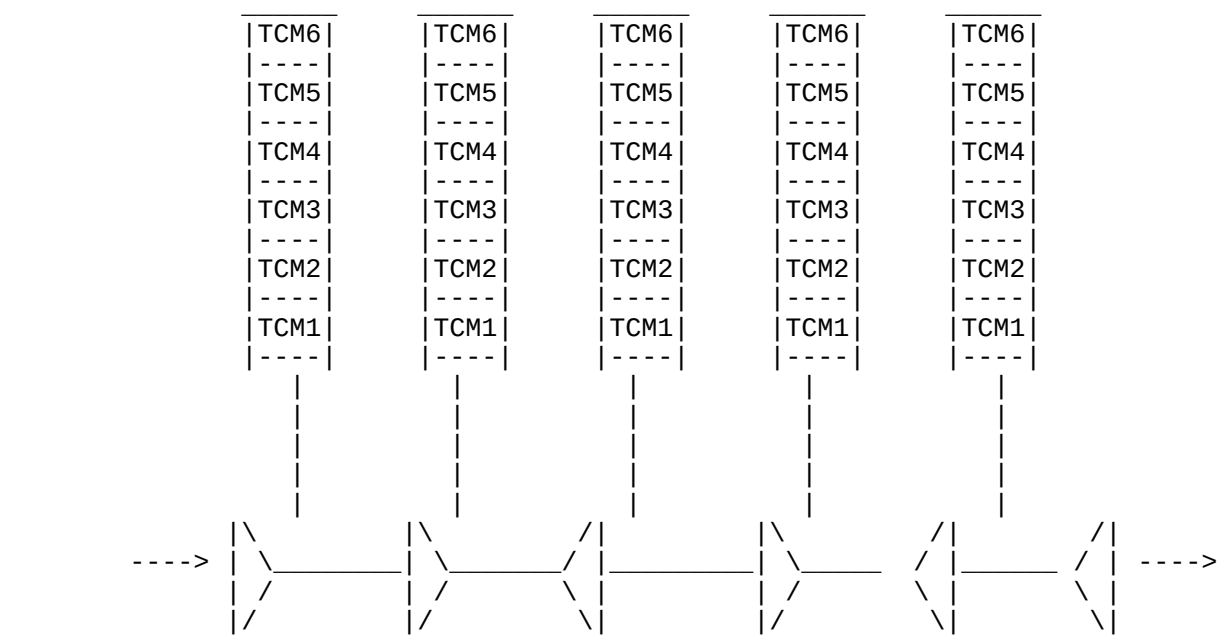
The detection and corresponding action of these subfields are controlled by:

- optIfODUkTTimDetMode
- optIfODUkTTimActEnabled

The TCM connection is used for monitoring the quality of an end to end connection or any segment, as illustrated in the example:

TCM1 used for the end-to-end connection from A1 to A2.
TCM2 used for segment B1-B2, then used again for segment B3-B4.
TCM3-TCM6 these bytes are not in used in this example.

The TCM connection can be nested (B1-B2 is nested in A1-A2) or cascaded (B1-B2 and B3-B4).



3. Structure of the MIB

The managed Optical Networking interface objects are arranged into the following groups of tables:

The optIfOTMn group handles the OTM information structure of an optical interface.

optIfOTMnTable

The optIfPerfMon group handles the current 15-minute and 24-hour interval elapsed time, as well as the number of 15-minute intervals for all layers.

optIfPerfMonIntervalTable

The optIfOTSn groups handle the configuration and performance monitoring information for OTS layers.

- optIfOTSnConfigTable
- optIfOTSnSinkCurrentTable
- optIfOTSnSinkIntervalTable
- optIfOTSnSinkCurDayTable
- optIfOTSnSinkPrevDayTable
- optIfOTSnSrcCurrentTable
- optIfOTSnSrcIntervalTable
- optIfOTSnSrcCurDayTable
- optIfOTSnSrcPrevDayTable

The optIfOMSn groups handle the configuration and performance information for OMS layers.

- optIfOMSnConfigTable
- optIfOMSnSinkCurrentTable
- optIfOMSnSinkIntervalTable
- optIfOMSnSinkCurDayTable
- optIfOMSnSinkPrevDayTable
- optIfOMSnSrcCurrentTable
- optIfOMSnSrcIntervalTable
- optIfOMSnSrcCurDayTable
- optIfOMSnSrcPrevDayTable

The optIfOChGroup groups handle the configuration and performance information for OChGroup layers.

- optIfOChGroupConfigTable
- optIfOChGroupSinkCurrentTable
- optIfOChGroupSinkIntervalTable
- optIfOChGroupSinkCurDayTable
- optIfOChGroupSinkPrevDayTable
- optIfOChGroupSrcCurrentTable
- optIfOChGroupSrcIntervalTable
- optIfOChGroupSrcCurDayTable
- optIfOChGroupSrcPrevDayTable

The optIfOCh groups handle the configuration and performance monitoring information for OCh layers.

- optIfOChConfigTable
- optIfOChSinkCurrentTable
- optIfOChSinkIntervalTable
- optIfOChSinkCurDayTable
- optIfOChSinkPrevDayTable
- optIfOChSrcCurrentTable
- optIfOChSrcIntervalTable
- optIfOChSrcCurDayTable
- optIfOChSrcPrevDayTable

The optIfOTUk groups handle configuration information for OTUk.

- optIfOTUkConfigTable
- optIfGCC0ConfigTable

The optIfODUk groups handle configuration information for ODUk.

- optIfODUkConfigTable
- optIfODUkTtpConfigTable
- optIfODUkPositionSeqTable
- optIfODUkNimConfigTable
- optIfGCC12ConfigTable

The optIfODUkT groups handle configuration information for ODUkT.

- optIfODUkTConfigTable
- optIfODUkTNimConfigTable

This memo does not define MIB objects for optical system cross-connects. After a consensus is reached on definitions of the interface MIB objects for optical systems (resulting from resolution of discussions on the objects proposed in this memo), work can progress on the definitions of tables to represent cross-connects (e.g., OCh optical cross-connects and ODUk electrical cross-connects).

3.1. The optIfOTMn group

3.1.1. optIfOTMnTable

This table contains the OTM structure information of an optical interface.

3.2. The optIfPerfMon group

3.2.1. optIf Performance Monitoring Interval Table

This table applies to all performance monitoring on an NE. It records on a per-interface basis the elapsed time in the current 15-minute and 24-hour interval, as well as the total number of 15-minute intervals and the number of invalid 15-minute intervals.

3.3. The optIfOTSn groups

3.3.1. optIfOTSn Configuration group

3.3.1.1. optIfOTSn Configuration Table

This table contains information on configuration of optIfOTSn interfaces, in addition to the information on such interfaces contained in the ifTable.

3.3.2. optIfOTSn Pre-OTN PM group

3.3.2.1. optIfOTSn Source Current Table

This table contains information on current performance of optIfOTSn interfaces contained in the ifTable.

3.3.2.2. optIfOTSn Source Interval Table

This table contains information on historic performance of optIfOTSn interfaces contained in the ifTable.

3.3.2.3. optIfOTSn Source Current Day Table

This table contains a snapshot of information for the current 24-hour period for optIfOTSn interfaces contained in the ifTable.

3.3.2.4. optIfOTSn Source Previous Day Table

This table contains a snapshot of information for the previous 24-hour period for optIfOTSn interfaces contained in the ifTable.

3.3.2.5. optIfOTSn Sink Current Table

This table contains information on current performance of optIfOTSn interfaces contained in the ifTable.

3.3.2.6. optIfOTSn Sink Interval Table

This table contains information on historic performance of optIfOTSn interfaces contained in the ifTable.

3.3.2.7. optIfOTSn Sink Current Day Table

This table contains a snapshot of information for the current 24-hour period for optIfOTSn interfaces contained in the ifTable.

3.3.2.8. optIfOTSn Sink Previous Day Table

This table contains a snapshot of information for the previous 24-hour period for optIfOTSn interfaces contained in the ifTable.

3.4. The optIfOMSn groups

3.4.1. optIfOMSn Configuration group

3.4.1.1. optIfOMSn Configuration Table

This table contains information on configuration of optIfOMSn interfaces, in addition to the information on such interfaces contained in the ifTable.

3.4.2. optIfOMSn Pre-OTN PM group

3.4.2.1. optIfOMSn Source Current Table

This table contains information on current performance of optIfOMSn interfaces contained in the ifTable.

3.4.2.2. optIfOMSn Source Interval Table

This table contains information on historic performance of optIfOMSn interfaces contained in the ifTable.

3.4.2.3. optIfOMSn Source Current Day Table

This table contains a snapshot of information for the current 24-hour period for optIfOMSn interfaces contained in the ifTable.

3.4.2.4. optIfOMSn Source Previous Day Table

This table contains a snapshot of information for the previous 24-hour period for optIfOMSn interfaces contained in the ifTable.

3.4.2.5. optIfOMSn Sink Current Table

This table contains information on current performance of optIfOMSn interfaces contained in the ifTable.

3.4.2.6. optIfOMSn Sink Interval Table

This table contains information on historic performance of optIfOMSn interfaces contained in the ifTable.

3.4.2.7. optIfOMSn Sink Current Day Table

This table contains a snapshot of information for the current 24-hour period for optIfOMSn interfaces contained in the ifTable.

3.4.2.8. optIfOMSn Sink Previous Day Table

This table contains a snapshot of information for the previous 24-hour period for optIfOMSn interfaces contained in the ifTable.

3.5. The optIfOChGroup groups

3.5.1. optIfOChGroup Configuration group

3.5.1.1. optIfOChGroup Configuration Table

This table contains information on configuration of optIfOChGroup interfaces, in addition to the information on such interfaces contained in the ifTable.

3.5.2. optIfOChGroup Pre-OTN PM group

3.5.2.1. optIfOChGroup Source Current Table

This table contains information on current performance of optIfOChGroup interfaces contained in the ifTable.

3.5.2.2. optIfOChGroup Source Interval Table

This table contains information on historic performance of optIfOChGroup interfaces contained in the ifTable.

3.5.2.3. optIfOChGroup Source Current Day Table

This table contains a snapshot of information for the current 24-hour period for optIfOChGroup interfaces contained in the ifTable.

3.5.2.4. optIfOChGroup Source Previous Day Table

This table contains a snapshot of information for the previous 24-hour period for optIfOChGroup interfaces contained in the ifTable.

3.5.2.5. optIfOChGroup Sink Current Table

This table contains information on current performance of optIfOChGroup interfaces contained in the ifTable.

3.5.2.6. optIfOChGroup Sink Interval Table

This table contains information on historic performance of optIfOChGroup interfaces contained in the ifTable.

3.5.2.7. optIfOChGroup Sink Current Day Table

This table contains a snapshot of information for the current 24-hour period for optIfOChGroup interfaces contained in the ifTable.

3.5.2.8. optIfOChGroup Sink Previous Day Table

This table contains a snapshot of information for the previous 24-hour period for optIfOChGroup interfaces contained in the ifTable.

3.6. The optIfOCh groups

3.6.1. optIfOCh Configuration group

3.6.1.1. optIfOCh Configuration Table

This table contains information on configuration of optIfOCh interfaces, in addition to the information on such interfaces contained in the ifTable.

3.6.2. optIfOCh Pre-OTN PM group

3.6.2.1. optIfOCh Source Current Table

This table contains information on current performance of optIfOCh interfaces contained in the ifTable.

3.6.2.2. optIfOCh Source Interval Table

This table contains information on historic performance of optIfOCh interfaces contained in the ifTable.

3.6.2.3. optIfOCh Source Current Day Table

This table contains a snapshot of information for the current 24-hour period for optIfOCh interfaces contained in the ifTable.

3.6.2.4. optIfOCh Source Previous Day Table

This table contains a snapshot of information for the previous 24-hour period for optIfOCh interfaces contained in the ifTable.

3.6.2.5. optIfOCh Sink Current Table

This table contains information on current performance of optIfOCh interfaces contained in the ifTable.

3.6.2.6. optIfOCh Sink Interval Table

This table contains information on historic performance of optIfOCh interfaces contained in the ifTable.

3.6.2.7. optIfOCh Sink Current Day Table

This table contains a snapshot of information for the current 24-hour period for optIfOCh interfaces contained in the ifTable.

3.6.2.8. optIfOCh Sink Previous Day Table

This table contains a snapshot of information for the previous 24-hour period for optIfOCh interfaces contained in the ifTable.

3.7. The optIfOTUk groups

3.7.1. optIfOTUk Configuration group

3.7.1.1. optIfOTUk Configuration Table

This table contains information on configuration of optIfOTUk interfaces, in addition to the information on such interfaces contained in the ifTable.

3.7.2. optIfGCC0 Configuration group

3.7.2.1. optIfGCC0 Configuration Table

This table contains information on configuration of the GCC0 communication channel.

3.8. The optIfODUk groups

3.8.1. optIfODUk Configuration group

3.8.1.1. optIfODUk Configuration Table

This table contains all the objects that are common to endpoints (called trail termination points or TTPs) and connection termination points (CTPs), and also includes a flag stating whether TTP functions are present.

3.8.2. optIfODUkTtp Configuration group

3.8.2.1. optIfODUkTtp Configuration Table

This table contains TTP-specific information on configuration of optIfODUk interfaces, in addition to the information on such interfaces contained in the ifTable.

3.8.3. optIfODUk Position Seq group

3.8.3.1. optIfODUk Position Seq Table

This table contains information on the position sequence of the TCM function and/or GCC12 access that have been created within the optIfODUk interfaces, in addition to the information on such interfaces contained in the ifTable.

3.8.4. optIfODUk Nim Configuration group

3.8.4.1. optIfODUk Nim Configuration Table

This table contains information on configuration of optIfODUk Non-intrusive monitoring.

3.8.5. optIfGCC12 Configuration group

3.8.5.1. optIfGCC12 Configuration Table

This table contains information on configuration of the GCC1 and GCC2 communication channels.

3.9. The optIfODUkT groups

3.9.1. optIfODUkT Configuration group

3.9.1.1. optIfODUkT Configuration Table

This table contains information on configuration of optIfODUkT interfaces, in addition to the information on such interfaces contained in the ifTable.

3.9.2. optIfODUkT Nim Configuration group

3.9.2.1. optIfODUkT Nim Configuration Table

This table contains information on configuration of optIfODUkT Non-intrusive monitoring.

4. Object Definitions

```
OPT-IF-MIB DEFINITIONS ::= BEGIN

IMPORTS
    MODULE-IDENTITY, OBJECT-TYPE, Gauge32, Integer32,
      Unsigned32, transmission
          FROM SNMPv2-SMI
    TEXTUAL-CONVENTION, RowPointer, RowStatus, TruthValue
          FROM SNMPv2-TC
    SnmpAdminString
          FROM SNMP-FRAMEWORK-MIB
    MODULE-COMPLIANCE, OBJECT-GROUP
          FROM SNMPv2-CONF
    ifIndex
          FROM IF-MIB;

--  This is the MIB module for the OTN Interface objects.

optIfMibModule MODULE-IDENTITY
    LAST-UPDATED "200308130000Z"
    ORGANIZATION "IETF AToM MIB Working Group"
    CONTACT-INFO
       "WG charter:
          http://www.ietf.org/html.charters/atommib-charter.html

        Mailing Lists:
           General Discussion: atommib@research.telcordia.com
           To Subscribe: atommib-request@research.telcordia.com
```

```
        Editor: Hing-Kam Lam
        Postal: Lucent Technologies, Room 4C-616
                101 Crawfords Corner Road
                Holmdel, NJ 07733
           Tel: +1 732 949 8338
         Email: hklam@lucent.com"
    DESCRIPTION
       "The MIB module to describe pre-OTN and OTN interfaces.

        Copyright (C) The Internet Society (2003).  This version
        of this MIB module is part of RFC 3591;  see the RFC
        itself for full legal notices."
    REVISION  "200308130000Z"
    DESCRIPTION
       "Initial version, published as RFC 3591."
    ::={ transmission 133 }

-- textual conventions

OptIfAcTI ::= TEXTUAL-CONVENTION
  STATUS  current
  DESCRIPTION
    "The trace identifier (TI) accepted at the receiver."
  SYNTAX  OCTET STRING (SIZE(64))

OptIfBitRateK ::= TEXTUAL-CONVENTION
  STATUS  current
  DESCRIPTION
    "Indicates the index 'k' that is used to
     represent a supported bit rate and the different
     versions of OPUk, ODUk and OTUk.
     Allowed values of k are defined in ITU-T G.709.
     Currently allowed values in G.709 are:
        k=1 represents an approximate bit rate of 2.5 Gbit/s,
        k=2 represents an approximate bit rate of 10 Gbit/s,
        k=3 represents an approximate bit rate of 40 Gbit/s."
  SYNTAX  Integer32

OptIfDEGM ::= TEXTUAL-CONVENTION
  STATUS  current
  DESCRIPTION
    "Indicates the threshold level for declaring a Degraded Signal
     defect (dDEG).  A dDEG shall be declared if OptIfDEGM
     consecutive bad PM Seconds are detected."
  SYNTAX  Unsigned32 (2..10)
```

```
OptIfDEGThr ::= TEXTUAL-CONVENTION
  STATUS  current
  DESCRIPTION
    "Indicates the threshold level for declaring a performance
     monitoring (PM) Second to be bad.  A PM Second is declared bad if
     the percentage of detected errored blocks in that second is
     greater than or equal to OptIfDEGThr."
  SYNTAX  Unsigned32 (1..100)

OptIfDirectionality ::= TEXTUAL-CONVENTION
  STATUS  current
  DESCRIPTION
    "Indicates the directionality of an entity."
  SYNTAX  INTEGER {
    sink(1),
    source(2),
    bidirectional(3)
    }

OptIfSinkOrSource ::= TEXTUAL-CONVENTION
  STATUS  current
  DESCRIPTION
    "Indicates the directionality of an entity
     that is allowed only to be a source or sink."
  SYNTAX  INTEGER {
    sink(1),
    source(2)
    }

OptIfExDAPI ::= TEXTUAL-CONVENTION
  STATUS  current
  DESCRIPTION
    "The Destination Access Point Identifier (DAPI)
     expected by the receiver."
  SYNTAX  OCTET STRING (SIZE(16))

OptIfExSAPI ::= TEXTUAL-CONVENTION
  STATUS  current
  DESCRIPTION
    "The Source Access Point Identifier (SAPI)
     expected by the receiver."
  SYNTAX  OCTET STRING (SIZE(16))

OptIfIntervalNumber ::= TEXTUAL-CONVENTION
  STATUS  current
  DESCRIPTION
    "Uniquely identifies a 15-minute interval.  The interval
     identified by 1 is the most recently completed interval, and
```

```
     the interval identified by n is the interval immediately
     preceding the one identified by n-1."
  SYNTAX  Unsigned32 (1..96)

OptIfTIMDetMode ::= TEXTUAL-CONVENTION
  STATUS  current
  DESCRIPTION
    "Indicates the mode of the Trace Identifier Mismatch (TIM)
     Detection function."
  SYNTAX  INTEGER {
    off(1),
    dapi(2),
    sapi(3),
    both(4)
    }

OptIfTxTI ::= TEXTUAL-CONVENTION
  STATUS  current
  DESCRIPTION
    "The trace identifier (TI) transmitted."
  SYNTAX  OCTET STRING (SIZE(64))

-- object groups

optIfObjects OBJECT IDENTIFIER ::= { optIfMibModule 1 }
optIfConfs OBJECT IDENTIFIER ::= { optIfMibModule 2 }

optIfOTMn OBJECT IDENTIFIER ::= { optIfObjects 1 }
optIfPerfMon OBJECT IDENTIFIER ::= { optIfObjects 2 }
optIfOTSn OBJECT IDENTIFIER ::= { optIfObjects 3 }
optIfOMSn OBJECT IDENTIFIER ::= { optIfObjects 4 }
optIfOChGroup OBJECT IDENTIFIER ::= { optIfObjects 5 }
optIfOCh OBJECT IDENTIFIER ::= { optIfObjects 6 }

optIfOTUk OBJECT IDENTIFIER ::= { optIfObjects 7 }
optIfODUk OBJECT IDENTIFIER ::= { optIfObjects 8 }
optIfODUkT OBJECT IDENTIFIER ::= { optIfObjects 9 }

optIfGroups OBJECT IDENTIFIER ::= { optIfConfs 1 }
optIfCompl OBJECT IDENTIFIER ::= { optIfConfs 2 }

-- the optIfOTMn group
-- This group defines the OTM structure information of an
-- optical interface.

-- OTMn Table

optIfOTMnTable OBJECT-TYPE
```

```
  SYNTAX  SEQUENCE OF OptIfOTMnEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OTMn structure information."
  ::= { optIfOTMn 1 }

optIfOTMnEntry OBJECT-TYPE
  SYNTAX  OptIfOTMnEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains the OTMn structure
     information of an optical interface."
  INDEX  { ifIndex }
  ::= { optIfOTMnTable 1 }

OptIfOTMnEntry ::=
  SEQUENCE {
    optIfOTMnOrder         Unsigned32,
    optIfOTMnReduced       TruthValue,
    optIfOTMnBitRates      BITS,
    optIfOTMnInterfaceType SnmpAdminString,
    optIfOTMnTcmMax        Unsigned32,
    optIfOTMnOpticalReach  INTEGER
    }

optIfOTMnOrder OBJECT-TYPE
  SYNTAX  Unsigned32 (1..900)
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "This object indicates the order of the OTM, which
     represents the maximum number of wavelengths that can be
     supported at the bit rate(s) supported on the interface."
  ::= { optIfOTMnEntry 1 }

optIfOTMnReduced OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "This object indicates whether a reduced or full
     functionality is supported at the interface.  A value of
     true means reduced.  A value of false means full."
  ::= { optIfOTMnEntry 2 }

optIfOTMnBitRates OBJECT-TYPE
```

```
  SYNTAX  BITS { bitRateK1(0), bitRateK2(1), bitRateK3(2) }
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "This attribute is a bit map representing the bit
     rate or set of bit rates supported on the interface.
     The meaning of each bit position is as follows:
       bitRateK1(0) is set if the 2.5 Gbit/s rate is supported
       bitRateK2(1) is set if the 10 Gbit/s rate is supported
       bitRateK3(2) is set if the 40 Gbit/s rate is supported
     Note that each bit position corresponds to one possible
     value of the type OptIfBitRateK.
     The default value of this attribute is system specific."
  ::= { optIfOTMnEntry 3 }

optIfOTMnInterfaceType OBJECT-TYPE
  SYNTAX  SnmpAdminString
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "This object identifies the type of interface.  The value of
     this attribute will affect the behavior of the OTM with
     respect to presence/absence of OTM Overhead Signal (OOS)
     processing and TCM activation.  For an IrDI interface,
     there is no OOS processing and TCM activation is limited
     to n levels as specified by a TCM level threshold.

     This object contains two fields that are separated by
     whitespace.  The possible values are:
          field 1: one of the 4-character ASCII strings
                    'IrDI' or 'IaDI'
          field 2: free-form text consisting of printable
                   UTF-8 encoded characters

     Note that field 2 is optional.  If it is not present then there
     is no requirement for trailing whitespace after field 1.

     The default values are as follows:
          field 1:  'IaDI'
          field 2: an empty string."

  ::= { optIfOTMnEntry 4 }

optIfOTMnTcmMax OBJECT-TYPE
  SYNTAX  Unsigned32 (0..6)
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
```

```
    "This object identifies the maximum number of TCM
     levels allowed for any Optical Channel contained
     in this OTM.  A new TCM activation will be rejected
     if the requested level is greater than the threshold.
     If InterfaceType object specifies a type of 'IaDI'
     for this OTM, then this attribute is irrelevant.

     Possible values:  unsigned integers in the range
                       from 0 to 6 inclusive.
     Default value:    3."

  ::= { optIfOTMnEntry 5 }

optIfOTMnOpticalReach OBJECT-TYPE
  SYNTAX  INTEGER { intraOffice(1), shortHaul(2), longHaul(3),
                    veryLongHaul(4), ultraLongHaul(5) }
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "This object indicates the length the optical signal
     may travel before requiring termination or regeneration.
     The meaning of the enumeration are:
       intraOffice(1)  - intra-office (as defined in ITU-T G.957)
       shortHaul(2)    - short haul (as defined in ITU-T G.957)
       longHaul(3)     - long haul (as defined in ITU-T G.957)
       veryLongHaul(4) - very long haul (as defined in ITU-T G.691)
       ultraLongHaul(5)- ultra long haul (as defined in ITU-T G.691)"
  ::= { optIfOTMnEntry 6 }

-- the optIfPerfMon group
-- This group defines performance monitoring objects for all
-- layers.

-- PM interval table

optIfPerfMonIntervalTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfPerfMonIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of 15-minute performance monitoring interval
     information."
  ::= { optIfPerfMon 1 }

optIfPerfMonIntervalEntry OBJECT-TYPE
  SYNTAX  OptIfPerfMonIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
```

```
  DESCRIPTION
    "A conceptual row that contains 15-minute performance
     monitoring interval information of an interface."
  INDEX  { ifIndex }
  ::= { optIfPerfMonIntervalTable 1 }

OptIfPerfMonIntervalEntry ::=
  SEQUENCE {
    optIfPerfMonCurrentTimeElapsed   Gauge32,
    optIfPerfMonCurDayTimeElapsed    Gauge32,
    optIfPerfMonIntervalNumIntervals         Unsigned32,
    optIfPerfMonIntervalNumInvalidIntervals  Unsigned32
    }

optIfPerfMonCurrentTimeElapsed OBJECT-TYPE
  SYNTAX  Gauge32 (0..900)
  UNITS  "seconds"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Number of seconds elapsed in the current 15-minute
     performance monitoring interval.
     If, for some reason, such as an adjustment in the NE's
     time-of-day clock, the number of seconds elapsed exceeds
     the maximum value, then the maximum value will be returned."
  ::= { optIfPerfMonIntervalEntry 1 }

optIfPerfMonCurDayTimeElapsed OBJECT-TYPE
  SYNTAX  Gauge32 (0..86400)
  UNITS  "seconds"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Number of seconds elapsed in the current 24-hour interval
     performance monitoring period.
     If, for some reason, such as an adjustment in the NE's
     time-of-day clock, the number of seconds elapsed exceeds
     the maximum value, then the maximum value will be returned."
  ::= { optIfPerfMonIntervalEntry 2 }

optIfPerfMonIntervalNumIntervals OBJECT-TYPE
  SYNTAX  Unsigned32 (0..96)
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The number of 15-minute intervals for which performance
     monitoring data is available.  The number is the same for all
     the associated sub layers of the interface.
```

```
     An optical interface must be capable of supporting at least
     n intervals, where n is defined as follows:
         The minimum value of n is 4.
         The default of n is 32.
         The maximum value of n is 96.

     The value of this object will be n unless performance
     monitoring was (re-)started for the interface within the last
     (n*15) minutes, in which case the value will be the number of
     complete 15-minute intervals since measurement was
     (re-)started."
  ::= { optIfPerfMonIntervalEntry 3 }

optIfPerfMonIntervalNumInvalidIntervals OBJECT-TYPE
  SYNTAX  Unsigned32 (0..96)
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The number of intervals in the range from 0 to
     optIfPerfMonIntervalNumIntervals for which no performance
     monitoring data is available and/or the data is invalid."
  ::= { optIfPerfMonIntervalEntry 4 }

-- the optIfOTSn group
-- This group handles the configuration and performance
-- monitoring objects for OTS layers.

-- OTSn config table

optIfOTSnConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOTSnConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OTSn configuration information."
  ::= { optIfOTSn 1 }

optIfOTSnConfigEntry OBJECT-TYPE
  SYNTAX  OptIfOTSnConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OTSn configuration
     information of an interface."
  INDEX  { ifIndex }
  ::= { optIfOTSnConfigTable 1 }

OptIfOTSnConfigEntry ::=
```

```
  SEQUENCE {
    optIfOTSnDirectionality              OptIfDirectionality,
    optIfOTSnAprStatus                   SnmpAdminString,
    optIfOTSnAprControl                  SnmpAdminString,
    optIfOTSnTraceIdentifierTransmitted  OptIfTxTI,
    optIfOTSnDAPIExpected                OptIfExDAPI,
    optIfOTSnSAPIExpected                OptIfExSAPI,
    optIfOTSnTraceIdentifierAccepted     OptIfAcTI,
    optIfOTSnTIMDetMode                  OptIfTIMDetMode,
    optIfOTSnTIMActEnabled               TruthValue,
    optIfOTSnCurrentStatus               BITS
    }

optIfOTSnDirectionality OBJECT-TYPE
  SYNTAX  OptIfDirectionality
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the directionality of the entity."
  ::= { optIfOTSnConfigEntry 1 }

optIfOTSnAprStatus OBJECT-TYPE
  SYNTAX  SnmpAdminString
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "This attribute indicates the status of the Automatic
     Power Reduction (APR) function of the entity.  Valid
     values are 'on' and 'off'."
  ::= { optIfOTSnConfigEntry 2 }

optIfOTSnAprControl OBJECT-TYPE
  SYNTAX  SnmpAdminString
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "This object is a UTF-8 encoded string that specifies Automatic
     Power Reduction (APR) control actions requested of this entity
     (when written) and that returns the current APR control state
     of this entity (when read).  The values are implementation-defined.
     Any implementation that instantiates this object must document the
     set of values that it allows to be written, the set of values
     that it will return, and what each of those values means."
  ::= { optIfOTSnConfigEntry 3 }

optIfOTSnTraceIdentifierTransmitted OBJECT-TYPE
  SYNTAX  OptIfTxTI
  MAX-ACCESS  read-write
```

```
  STATUS  current
  DESCRIPTION
    "The trace identifier transmitted.
     This object is applicable when optIfOTSnDirectionality has the
     value source(2) or bidirectional(3).
     This object does not apply to reduced-capability systems (i.e.,
     those for which optIfOTMnReduced has the value true(1)) or
     at IrDI interfaces (i.e., when optIfOTMnInterfaceType field 1
     has the value 'IrDI').
     If no value is ever set by a management entity for the object
     optIfOTSnTraceIdentifierTransmitted, system-specific default
     value will be used.  Any implementation that instantiates this
     object must document the system-specific default value or how it
     is derived."
  ::= { optIfOTSnConfigEntry 4 }

optIfOTSnDAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExDAPI
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The DAPI expected by the receiver.
     This object is applicable when optIfOTSnDirectionality has the
     value sink(1) or bidirectional(3).  It has no effect if
     optIfOTSnTIMDetMode has the value off(1) or sapi(3).
     This object does not apply to reduced-capability systems (i.e.,
     those for which optIfOTMnReduced has the value true(1)) or
     at IrDI interfaces (i.e., when optIfOTMnInterfaceType field 1
     has the value 'IrDI')."
  ::= { optIfOTSnConfigEntry 5 }

optIfOTSnSAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExSAPI
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The SAPI expected by the receiver.
     This object is applicable when optIfOTSnDirectionality has the
     value sink(1) or bidirectional(3).  It has no effect if
     optIfOTSnTIMDetMode has the value off(1) or dapi(2).
     This object does not apply to reduced-capability systems (i.e.,
     those for which optIfOTMnReduced has the value true(1)) or
     at IrDI interfaces (i.e., when optIfOTMnInterfaceType field 1
     has the value 'IrDI')."
  ::= { optIfOTSnConfigEntry 6 }

optIfOTSnTraceIdentifierAccepted OBJECT-TYPE
  SYNTAX  OptIfAcTI
```

```
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The actual trace identifier received.
     This object is applicable when optIfOTSnDirectionality has the
     value sink(1) or bidirectional(3).  Its value is unspecified
     if optIfOTSnCurrentStatus has either or both of the
     losO(5) and los(6) bits set.
     This object does not apply to reduced-capability systems (i.e.,
     those for which optIfOTMnReduced has the value true(1)) or
     at IrDI interfaces (i.e., when optIfOTMnInterfaceType field 1
     has the value 'IrDI')."
  ::= { optIfOTSnConfigEntry 7 }

optIfOTSnTIMDetMode OBJECT-TYPE
  SYNTAX  OptIfTIMDetMode
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "Indicates the mode of the Trace Identifier Mismatch (TIM)
     Detection function.  This object is applicable
     when optIfOTSnDirectionality has the value sink(1)
     or bidirectional(3).  The default value is off(1).
     This object does not apply to reduced-capability systems (i.e.,
     those for which optIfOTMnReduced has the value true(1)) or
     at IrDI interfaces (i.e., when optIfOTMnInterfaceType field 1
     has the value 'IrDI').
     The default value of this object is off(1)."
  ::= { optIfOTSnConfigEntry 8 }

optIfOTSnTIMActEnabled OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "Indicates whether the Trace Identifier Mismatch (TIM)
     Consequent Action function is enabled.  This object
     is applicable when optIfOTSnDirectionality has the
     value sink(1) or bidirectional(3).  It has no effect
     when the value of optIfOTSnTIMDetMode is off(1).
     This object does not apply to reduced-capability systems (i.e.,
     those for which optIfOTMnReduced has the value true(1)) or
     at IrDI interfaces (i.e., when optIfOTMnInterfaceType field 1
     has the value 'IrDI').
     The default value of this object is false(2)."
  ::= { optIfOTSnConfigEntry 9 }

optIfOTSnCurrentStatus OBJECT-TYPE
```

```
  SYNTAX  BITS {
    bdiP(0),
    bdiO(1),
    bdi(2),
    tim(3),
    losP(4),
    losO(5),
    los(6)
    }
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the defect condition of the entity, if any.
     This object is applicable when optIfOTSnDirectionality
     has the value sink(1) or bidirectional(3).  In
     reduced-capability systems or at IrDI interfaces
     the only bit position that may be set is los(6)."
  ::= { optIfOTSnConfigEntry 10 }

-- OTSn sink current table
-- Contains data for the current 15-minute performance monitoring
-- interval.

optIfOTSnSinkCurrentTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOTSnSinkCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OTSn sink performance monitoring information for
     the current 15-minute interval."
  ::= { optIfOTSn 2 }

optIfOTSnSinkCurrentEntry OBJECT-TYPE
  SYNTAX  OptIfOTSnSinkCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OTSn sink performance
     monitoring information of an interface for the current
     15-minute interval."
  INDEX  { ifIndex }
  ::= { optIfOTSnSinkCurrentTable 1 }

OptIfOTSnSinkCurrentEntry ::=
  SEQUENCE {
    optIfOTSnSinkCurrentSuspectedFlag             TruthValue,
    optIfOTSnSinkCurrentInputPower                Integer32,
    optIfOTSnSinkCurrentLowInputPower             Integer32,
```

```
    optIfOTSnSinkCurrentHighInputPower            Integer32,
    optIfOTSnSinkCurrentLowerInputPowerThreshold  Integer32,
    optIfOTSnSinkCurrentUpperInputPowerThreshold  Integer32,
    optIfOTSnSinkCurrentOutputPower               Integer32,
    optIfOTSnSinkCurrentLowOutputPower            Integer32,
    optIfOTSnSinkCurrentHighOutputPower           Integer32,
    optIfOTSnSinkCurrentLowerOutputPowerThreshold Integer32,
    optIfOTSnSinkCurrentUpperOutputPowerThreshold Integer32
    }

optIfOTSnSinkCurrentSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOTSnSinkCurrentEntry 1 }

optIfOTSnSinkCurrentInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The optical power monitored at the input."
  ::= { optIfOTSnSinkCurrentEntry 2 }

optIfOTSnSinkCurrentLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the input during the
     current 15-minute interval."
  ::= { optIfOTSnSinkCurrentEntry 3 }

optIfOTSnSinkCurrentHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the input during the
     current 15-minute interval."
  ::= { optIfOTSnSinkCurrentEntry 4 }

optIfOTSnSinkCurrentLowerInputPowerThreshold OBJECT-TYPE
```

```
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on input power.  If
     optIfOTSnSinkCurrentInputPower drops to this value or below,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOTSnSinkCurrentEntry 5 }

optIfOTSnSinkCurrentUpperInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on input power.  If
     optIfOTSnSinkCurrentInputPower reaches or exceeds this value,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOTSnSinkCurrentEntry 6 }

optIfOTSnSinkCurrentOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The optical power monitored at the output."
  ::= { optIfOTSnSinkCurrentEntry 7 }

optIfOTSnSinkCurrentLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     current 15-minute interval."
  ::= { optIfOTSnSinkCurrentEntry 8 }

optIfOTSnSinkCurrentHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     current 15-minute interval."
```

```
  ::= { optIfOTSnSinkCurrentEntry 9 }

optIfOTSnSinkCurrentLowerOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on output power.  If
     optIfOTSnSinkCurrentOutputPower drops to this value or below,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOTSnSinkCurrentEntry 10 }

optIfOTSnSinkCurrentUpperOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on output power.  If
     optIfOTSnSinkCurrentOutputPower reaches or exceeds this value,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOTSnSinkCurrentEntry 11 }

-- OTSn sink interval table
-- Contains data for previous 15-minute performance monitoring
-- intervals.

optIfOTSnSinkIntervalTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOTSnSinkIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of historical OTSn sink performance monitoring
     information."
  ::= { optIfOTSn 3 }

optIfOTSnSinkIntervalEntry OBJECT-TYPE
  SYNTAX  OptIfOTSnSinkIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OTSn sink performance
     monitoring information of an interface during a particular
     historical interval."
  INDEX  { ifIndex, optIfOTSnSinkIntervalNumber }
  ::= { optIfOTSnSinkIntervalTable 1 }
```

```
OptIfOTSnSinkIntervalEntry ::=
  SEQUENCE {
    optIfOTSnSinkIntervalNumber           OptIfIntervalNumber,
    optIfOTSnSinkIntervalSuspectedFlag    TruthValue,
    optIfOTSnSinkIntervalLastInputPower   Integer32,
    optIfOTSnSinkIntervalLowInputPower    Integer32,
    optIfOTSnSinkIntervalHighInputPower   Integer32,
    optIfOTSnSinkIntervalLastOutputPower  Integer32,
    optIfOTSnSinkIntervalLowOutputPower   Integer32,
    optIfOTSnSinkIntervalHighOutputPower  Integer32

    }

optIfOTSnSinkIntervalNumber OBJECT-TYPE
  SYNTAX  OptIfIntervalNumber
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Uniquely identifies the interval."
  ::= { optIfOTSnSinkIntervalEntry 1 }

optIfOTSnSinkIntervalSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOTSnSinkIntervalEntry 2 }

optIfOTSnSinkIntervalLastInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the input during the
     interval."
  ::= { optIfOTSnSinkIntervalEntry 3 }

optIfOTSnSinkIntervalLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the input during the
     interval."
  ::= { optIfOTSnSinkIntervalEntry 4 }
```

```
optIfOTSnSinkIntervalHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the input during the
     interval."
  ::= { optIfOTSnSinkIntervalEntry 5 }

optIfOTSnSinkIntervalLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the output during the
     interval."
  ::= { optIfOTSnSinkIntervalEntry 6 }

optIfOTSnSinkIntervalLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     interval."
  ::= { optIfOTSnSinkIntervalEntry 7 }

optIfOTSnSinkIntervalHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     interval."
  ::= { optIfOTSnSinkIntervalEntry 8 }

-- OTSn sink current day table
-- Contains data for the current 24-hour performance
-- monitoring interval.

optIfOTSnSinkCurDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOTSnSinkCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
```

```
  DESCRIPTION
    "A table of OTSn sink performance monitoring information for
     the current 24-hour interval."
  ::= { optIfOTSn 4 }

optIfOTSnSinkCurDayEntry OBJECT-TYPE
  SYNTAX  OptIfOTSnSinkCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OTSn sink performance
     monitoring information of an interface for the current
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOTSnSinkCurDayTable 1 }

OptIfOTSnSinkCurDayEntry ::=
  SEQUENCE {
    optIfOTSnSinkCurDaySuspectedFlag    TruthValue,
    optIfOTSnSinkCurDayLowInputPower    Integer32,
    optIfOTSnSinkCurDayHighInputPower   Integer32,
    optIfOTSnSinkCurDayLowOutputPower   Integer32,
    optIfOTSnSinkCurDayHighOutputPower  Integer32
    }

optIfOTSnSinkCurDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOTSnSinkCurDayEntry 1 }

optIfOTSnSinkCurDayLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the input during the
     current 24-hour interval."
  ::= { optIfOTSnSinkCurDayEntry 2 }

optIfOTSnSinkCurDayHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
```

```
  DESCRIPTION
    "The highest optical power monitored at the input during the
     current 24-hour interval."
  ::= { optIfOTSnSinkCurDayEntry 3 }

optIfOTSnSinkCurDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     current 24-hour interval."
  ::= { optIfOTSnSinkCurDayEntry 4 }

optIfOTSnSinkCurDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     current 24-hour interval."
  ::= { optIfOTSnSinkCurDayEntry 5 }

-- OTSn sink previous day table
-- Contains data for the previous 24-hour performance
-- monitoring interval.

optIfOTSnSinkPrevDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOTSnSinkPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OTSn sink performance monitoring information for
     the previous 24-hour interval."
  ::= { optIfOTSn 5 }

optIfOTSnSinkPrevDayEntry OBJECT-TYPE
  SYNTAX  OptIfOTSnSinkPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OTSn sink performance
     monitoring information of an interface for the previous
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOTSnSinkPrevDayTable 1 }
```

```
OptIfOTSnSinkPrevDayEntry ::=
  SEQUENCE {
    optIfOTSnSinkPrevDaySuspectedFlag    TruthValue,
    optIfOTSnSinkPrevDayLastInputPower   Integer32,
    optIfOTSnSinkPrevDayLowInputPower    Integer32,
    optIfOTSnSinkPrevDayHighInputPower   Integer32,
    optIfOTSnSinkPrevDayLastOutputPower  Integer32,
    optIfOTSnSinkPrevDayLowOutputPower   Integer32,
    optIfOTSnSinkPrevDayHighOutputPower  Integer32
    }

optIfOTSnSinkPrevDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOTSnSinkPrevDayEntry 1 }

optIfOTSnSinkPrevDayLastInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the input during the
     previous 24-hour interval."
  ::= { optIfOTSnSinkPrevDayEntry 2 }

optIfOTSnSinkPrevDayLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the input during the
     previous 24-hour interval."
  ::= { optIfOTSnSinkPrevDayEntry 3 }

optIfOTSnSinkPrevDayHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the input during the
     previous 24-hour interval."
  ::= { optIfOTSnSinkPrevDayEntry 4 }
```

```
optIfOTSnSinkPrevDayLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOTSnSinkPrevDayEntry 5 }

optIfOTSnSinkPrevDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOTSnSinkPrevDayEntry 6 }

optIfOTSnSinkPrevDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOTSnSinkPrevDayEntry 7 }

-- OTSn source current table
-- Contains data for the current 15-minute performance monitoring
-- interval.

optIfOTSnSrcCurrentTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOTSnSrcCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OTSn source performance monitoring information for
     the current 15-minute interval."
  ::= { optIfOTSn 6 }

optIfOTSnSrcCurrentEntry OBJECT-TYPE
  SYNTAX  OptIfOTSnSrcCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
```

```
    "A conceptual row that contains OTSn source performance
     monitoring information of an interface for the current
     15-minute interval."
  INDEX  { ifIndex }
  ::= { optIfOTSnSrcCurrentTable 1 }

OptIfOTSnSrcCurrentEntry ::=
  SEQUENCE {
    optIfOTSnSrcCurrentSuspectedFlag              TruthValue,
    optIfOTSnSrcCurrentOutputPower                Integer32,
    optIfOTSnSrcCurrentLowOutputPower             Integer32,
    optIfOTSnSrcCurrentHighOutputPower            Integer32,
    optIfOTSnSrcCurrentLowerOutputPowerThreshold  Integer32,
    optIfOTSnSrcCurrentUpperOutputPowerThreshold  Integer32,
    optIfOTSnSrcCurrentInputPower                 Integer32,
    optIfOTSnSrcCurrentLowInputPower              Integer32,
    optIfOTSnSrcCurrentHighInputPower             Integer32,
    optIfOTSnSrcCurrentLowerInputPowerThreshold   Integer32,
    optIfOTSnSrcCurrentUpperInputPowerThreshold   Integer32
    }

optIfOTSnSrcCurrentSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOTSnSrcCurrentEntry 1 }

optIfOTSnSrcCurrentOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The optical power monitored at the output."
  ::= { optIfOTSnSrcCurrentEntry 2 }

optIfOTSnSrcCurrentLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current

  DESCRIPTION
    "The lowest optical power monitored at the output during the
     current 15-minute interval."
  ::= { optIfOTSnSrcCurrentEntry 3 }
```

```
optIfOTSnSrcCurrentHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     current 15-minute interval."
  ::= { optIfOTSnSrcCurrentEntry 4 }

optIfOTSnSrcCurrentLowerOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on output power.  If
     optIfOTSnSrcCurrentOutputPower drops to this value or below,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOTSnSrcCurrentEntry 5 }

optIfOTSnSrcCurrentUpperOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on output power.  If
     optIfOTSnSrcCurrentOutputPower reaches or exceeds this value,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOTSnSrcCurrentEntry 6 }

optIfOTSnSrcCurrentInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The optical power monitored at the input."
  ::= { optIfOTSnSrcCurrentEntry 7 }

optIfOTSnSrcCurrentLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current

  DESCRIPTION
```

```
    "The lowest optical power monitored at the input during the
     current 15-minute interval."
  ::= { optIfOTSnSrcCurrentEntry 8 }

optIfOTSnSrcCurrentHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the input during the
     current 15-minute interval."
  ::= { optIfOTSnSrcCurrentEntry 9 }

optIfOTSnSrcCurrentLowerInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on input power.  If
     optIfOTSnSrcCurrentInputPower drops to this value or below,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOTSnSrcCurrentEntry 10 }

optIfOTSnSrcCurrentUpperInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on input power.  If
     optIfOTSnSrcCurrentInputPower reaches or exceeds this value,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOTSnSrcCurrentEntry 11 }

-- OTSn source interval table
-- Contains data for previous 15-minute performance monitoring
-- intervals.

optIfOTSnSrcIntervalTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOTSnSrcIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of historical OTSn source performance monitoring
     information."
  ::= { optIfOTSn 7 }
```

```
optIfOTSnSrcIntervalEntry OBJECT-TYPE
  SYNTAX  OptIfOTSnSrcIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OTSn source performance
     monitoring information of an interface during a particular
     historical interval."
  INDEX  { ifIndex, optIfOTSnSrcIntervalNumber }
  ::= { optIfOTSnSrcIntervalTable 1 }

OptIfOTSnSrcIntervalEntry ::=
  SEQUENCE {
    optIfOTSnSrcIntervalNumber           OptIfIntervalNumber,
    optIfOTSnSrcIntervalSuspectedFlag    TruthValue,
    optIfOTSnSrcIntervalLastOutputPower  Integer32,
    optIfOTSnSrcIntervalLowOutputPower   Integer32,
    optIfOTSnSrcIntervalHighOutputPower  Integer32,
    optIfOTSnSrcIntervalLastInputPower   Integer32,
    optIfOTSnSrcIntervalLowInputPower    Integer32,
    optIfOTSnSrcIntervalHighInputPower   Integer32
    }

optIfOTSnSrcIntervalNumber OBJECT-TYPE
  SYNTAX  OptIfIntervalNumber
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Uniquely identifies the interval."
  ::= { optIfOTSnSrcIntervalEntry 1 }

optIfOTSnSrcIntervalSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOTSnSrcIntervalEntry 2 }

optIfOTSnSrcIntervalLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the output during the
     interval."
  ::= { optIfOTSnSrcIntervalEntry 3 }
```

```
optIfOTSnSrcIntervalLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     interval."
  ::= { optIfOTSnSrcIntervalEntry 4 }

optIfOTSnSrcIntervalHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     interval."
  ::= { optIfOTSnSrcIntervalEntry 5 }

optIfOTSnSrcIntervalLastInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the input during the
     interval."
  ::= { optIfOTSnSrcIntervalEntry 6 }

optIfOTSnSrcIntervalLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the input during the
     interval."
  ::= { optIfOTSnSrcIntervalEntry 7 }

optIfOTSnSrcIntervalHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the input during the
     interval."
```

```
  ::= { optIfOTSnSrcIntervalEntry 8 }


-- OTSn source current day table
-- Contains data for the current 24-hour performance
-- monitoring interval.

optIfOTSnSrcCurDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOTSnSrcCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OTSn source performance monitoring information for
     the current 24-hour interval."
  ::= { optIfOTSn 8 }

optIfOTSnSrcCurDayEntry OBJECT-TYPE
  SYNTAX  OptIfOTSnSrcCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OTSn source performance
     monitoring information of an interface for the current
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOTSnSrcCurDayTable 1 }

OptIfOTSnSrcCurDayEntry ::=
  SEQUENCE {
    optIfOTSnSrcCurDaySuspectedFlag    TruthValue,
    optIfOTSnSrcCurDayLowOutputPower   Integer32,
    optIfOTSnSrcCurDayHighOutputPower  Integer32,
    optIfOTSnSrcCurDayLowInputPower    Integer32,
    optIfOTSnSrcCurDayHighInputPower   Integer32
    }

optIfOTSnSrcCurDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOTSnSrcCurDayEntry 1 }

optIfOTSnSrcCurDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
```

```
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     current 24-hour interval."
  ::= { optIfOTSnSrcCurDayEntry 2 }

optIfOTSnSrcCurDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     current 24-hour interval."
  ::= { optIfOTSnSrcCurDayEntry 3 }

optIfOTSnSrcCurDayLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the input during the
     current 24-hour interval."
  ::= { optIfOTSnSrcCurDayEntry 4 }

optIfOTSnSrcCurDayHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the input during the
     current 24-hour interval."
  ::= { optIfOTSnSrcCurDayEntry 5 }

-- OTSn source previous day table
-- Contains data for the previous 24-hour performance
-- monitoring interval.

optIfOTSnSrcPrevDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOTSnSrcPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OTSn source performance monitoring information for
     the previous 24-hour interval."
  ::= { optIfOTSn 9 }
```

```
optIfOTSnSrcPrevDayEntry OBJECT-TYPE
  SYNTAX  OptIfOTSnSrcPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OTSn source performance
     monitoring information of an interface for the previous
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOTSnSrcPrevDayTable 1 }

OptIfOTSnSrcPrevDayEntry ::=
  SEQUENCE {
    optIfOTSnSrcPrevDaySuspectedFlag    TruthValue,
    optIfOTSnSrcPrevDayLastOutputPower  Integer32,
    optIfOTSnSrcPrevDayLowOutputPower   Integer32,
    optIfOTSnSrcPrevDayHighOutputPower  Integer32,
    optIfOTSnSrcPrevDayLastInputPower   Integer32,
    optIfOTSnSrcPrevDayLowInputPower    Integer32,
    optIfOTSnSrcPrevDayHighInputPower   Integer32
    }

optIfOTSnSrcPrevDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOTSnSrcPrevDayEntry 1 }

optIfOTSnSrcPrevDayLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOTSnSrcPrevDayEntry 2 }

optIfOTSnSrcPrevDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     previous 24-hour interval."
```

```
  ::= { optIfOTSnSrcPrevDayEntry 3 }

optIfOTSnSrcPrevDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOTSnSrcPrevDayEntry 4 }

optIfOTSnSrcPrevDayLastInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the input during the
     previous 24-hour interval."
  ::= { optIfOTSnSrcPrevDayEntry 5 }

optIfOTSnSrcPrevDayLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the input during the
     previous 24-hour interval."
  ::= { optIfOTSnSrcPrevDayEntry 6 }

optIfOTSnSrcPrevDayHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the input during the
     previous 24-hour interval."
  ::= { optIfOTSnSrcPrevDayEntry 7 }


-- the optIfOMSn group
-- This group handles the configuration and performance monitoring
-- information for OMS layers.

-- OMSn config table
```

```
optIfOMSnConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOMSnConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OMSn configuration information."
  ::= { optIfOMSn 1 }

optIfOMSnConfigEntry OBJECT-TYPE
  SYNTAX  OptIfOMSnConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OMSn configuration
     information of an interface."
  INDEX  { ifIndex }
  ::= { optIfOMSnConfigTable 1 }

OptIfOMSnConfigEntry ::=
  SEQUENCE {
    optIfOMSnDirectionality OptIfDirectionality,
    optIfOMSnCurrentStatus  BITS
    }

optIfOMSnDirectionality OBJECT-TYPE
  SYNTAX  OptIfDirectionality
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the directionality of the entity."
  ::= { optIfOMSnConfigEntry 1 }

optIfOMSnCurrentStatus OBJECT-TYPE
  SYNTAX  BITS {
    ssfP(0),
    ssfO(1),
    ssf(2),
    bdiP(3),
    bdiO(4),
    bdi(5),
    losP(6)
    }
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the defect condition of the entity, if any.
     This object is applicable only to full capability
     systems whose interface type is IaDI and for which
```

```
     optIfOMSnDirectionality has the value sink(1) or
     bidirectional(3)."
  ::= { optIfOMSnConfigEntry 2 }

-- OMSn sink current table
-- Contains data for the current 15-minute performance monitoring
-- interval.

optIfOMSnSinkCurrentTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOMSnSinkCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OMSn sink performance monitoring information for
     the current 15-minute interval."
  ::= { optIfOMSn 2 }

optIfOMSnSinkCurrentEntry OBJECT-TYPE
  SYNTAX  OptIfOMSnSinkCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OMSn sink performance
     monitoring information of an interface for the current
     15-minute interval."
  INDEX  { ifIndex }
  ::= { optIfOMSnSinkCurrentTable 1 }

OptIfOMSnSinkCurrentEntry ::=
  SEQUENCE {
    optIfOMSnSinkCurrentSuspectedFlag              TruthValue,
    optIfOMSnSinkCurrentAggregatedInputPower       Integer32,
    optIfOMSnSinkCurrentLowAggregatedInputPower    Integer32,
    optIfOMSnSinkCurrentHighAggregatedInputPower   Integer32,
    optIfOMSnSinkCurrentLowerInputPowerThreshold   Integer32,
    optIfOMSnSinkCurrentUpperInputPowerThreshold   Integer32,
    optIfOMSnSinkCurrentOutputPower                Integer32,
    optIfOMSnSinkCurrentLowOutputPower             Integer32,
    optIfOMSnSinkCurrentHighOutputPower            Integer32,
    optIfOMSnSinkCurrentLowerOutputPowerThreshold  Integer32,
    optIfOMSnSinkCurrentUpperOutputPowerThreshold  Integer32
    }

optIfOMSnSinkCurrentSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
```

```
    "If true, the data in this entry may be unreliable."
  ::= { optIfOMSnSinkCurrentEntry 1 }

optIfOMSnSinkCurrentAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The aggregated optical power of all the DWDM input
     channels."
  ::= { optIfOMSnSinkCurrentEntry 2 }

optIfOMSnSinkCurrentLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power of all the DWDM input
     channels during the current 15-minute interval."
  ::= { optIfOMSnSinkCurrentEntry 3 }

optIfOMSnSinkCurrentHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power of all the DWDM input
     channels during the current 15-minute interval."
  ::= { optIfOMSnSinkCurrentEntry 4 }

optIfOMSnSinkCurrentLowerInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on aggregated input power.  If
     optIfOMSnSinkCurrentAggregatedInputPower drops to this value
     or below, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOMSnSinkCurrentEntry 5 }

optIfOMSnSinkCurrentUpperInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
```

```
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on aggregated input power.  If
     optIfOMSnSinkCurrentAggregatedInputPower reaches or exceeds
     this value, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOMSnSinkCurrentEntry 6 }

optIfOMSnSinkCurrentOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The optical power monitored at the output."
  ::= { optIfOMSnSinkCurrentEntry 7 }

optIfOMSnSinkCurrentLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output
     during the current 15-minute interval."
  ::= { optIfOMSnSinkCurrentEntry 8 }

optIfOMSnSinkCurrentHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output
     during the current 15-minute interval."
  ::= { optIfOMSnSinkCurrentEntry 9 }

optIfOMSnSinkCurrentLowerOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on output power.  If
     optIfOMSnSinkCurrentOutputPower drops to this value
     or below, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOMSnSinkCurrentEntry 10 }

optIfOMSnSinkCurrentUpperOutputPowerThreshold OBJECT-TYPE
```

```
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on output power.  If
     optIfOMSnSinkCurrentOutputPower reaches or exceeds
     this value, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOMSnSinkCurrentEntry 11 }

-- OMSn sink interval table
-- Contains data for previous 15-minute performance monitoring
-- intervals.

optIfOMSnSinkIntervalTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOMSnSinkIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of historical OMSn sink performance monitoring
     information."
  ::= { optIfOMSn 3 }

optIfOMSnSinkIntervalEntry OBJECT-TYPE
  SYNTAX  OptIfOMSnSinkIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OMSn sink performance
     monitoring information of an interface during a particular
     historical interval."
  INDEX  { ifIndex, optIfOMSnSinkIntervalNumber }
  ::= { optIfOMSnSinkIntervalTable 1 }

OptIfOMSnSinkIntervalEntry ::=
  SEQUENCE {
    optIfOMSnSinkIntervalNumber                    OptIfIntervalNumber,
    optIfOMSnSinkIntervalSuspectedFlag             TruthValue,
    optIfOMSnSinkIntervalLastAggregatedInputPower  Integer32,
    optIfOMSnSinkIntervalLowAggregatedInputPower   Integer32,
    optIfOMSnSinkIntervalHighAggregatedInputPower  Integer32,
    optIfOMSnSinkIntervalLastOutputPower           Integer32,
    optIfOMSnSinkIntervalLowOutputPower            Integer32,
    optIfOMSnSinkIntervalHighOutputPower           Integer32
    }

optIfOMSnSinkIntervalNumber OBJECT-TYPE
  SYNTAX  OptIfIntervalNumber
```

```
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Uniquely identifies the interval."
  ::= { optIfOMSnSinkIntervalEntry 1 }

optIfOMSnSinkIntervalSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOMSnSinkIntervalEntry 2 }

optIfOMSnSinkIntervalLastAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last aggregated optical power of all the DWDM input
     channels during the interval."
  ::= { optIfOMSnSinkIntervalEntry 3 }

optIfOMSnSinkIntervalLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power of all the DWDM input
     channels during the interval."
  ::= { optIfOMSnSinkIntervalEntry 4 }

optIfOMSnSinkIntervalHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power of all the DWDM input
     channels during the interval."
  ::= { optIfOMSnSinkIntervalEntry 5 }

optIfOMSnSinkIntervalLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
```

```
  STATUS  current
  DESCRIPTION
    "The last optical power at the output
     during the interval."
  ::= { optIfOMSnSinkIntervalEntry 6 }

optIfOMSnSinkIntervalLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power at the output
     during the interval."
  ::= { optIfOMSnSinkIntervalEntry 7 }

optIfOMSnSinkIntervalHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power at the output
     during the interval."
  ::= { optIfOMSnSinkIntervalEntry 8 }

-- OMSn sink current day table
-- Contains data for the current 24-hour performance
-- monitoring interval.

optIfOMSnSinkCurDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOMSnSinkCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OMSn sink performance monitoring information for
     the current 24-hour interval."
  ::= { optIfOMSn 4 }

optIfOMSnSinkCurDayEntry OBJECT-TYPE
  SYNTAX  OptIfOMSnSinkCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OMSn sink performance
     monitoring information of an interface for the current
     24-hour interval."
  INDEX  { ifIndex }
```

```
  ::= { optIfOMSnSinkCurDayTable 1 }

OptIfOMSnSinkCurDayEntry ::=
  SEQUENCE {
    optIfOMSnSinkCurDaySuspectedFlag             TruthValue,
    optIfOMSnSinkCurDayLowAggregatedInputPower   Integer32,
    optIfOMSnSinkCurDayHighAggregatedInputPower  Integer32,
    optIfOMSnSinkCurDayLowOutputPower            Integer32,
    optIfOMSnSinkCurDayHighOutputPower           Integer32
    }

optIfOMSnSinkCurDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOMSnSinkCurDayEntry 1 }

optIfOMSnSinkCurDayLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power of all the DWDM input
     channels during the current 24-hour interval."
  ::= { optIfOMSnSinkCurDayEntry 2 }

optIfOMSnSinkCurDayHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power of all the DWDM input
     channels during the current 24-hour interval."
  ::= { optIfOMSnSinkCurDayEntry 3 }

optIfOMSnSinkCurDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power at the output
     during the current 24-hour interval."
  ::= { optIfOMSnSinkCurDayEntry 4 }
```

```
optIfOMSnSinkCurDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest  optical power at the output
     during the current 24-hour interval."
  ::= { optIfOMSnSinkCurDayEntry 5 }

-- OMSn sink previous day table
-- Contains data for the previous 24-hour performance
-- monitoring interval.

optIfOMSnSinkPrevDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOMSnSinkPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OMSn sink performance monitoring information for
     the previous 24-hour interval."
  ::= { optIfOMSn 5 }

optIfOMSnSinkPrevDayEntry OBJECT-TYPE
  SYNTAX  OptIfOMSnSinkPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OMSn sink performance
     monitoring information of an interface for the previous
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOMSnSinkPrevDayTable 1 }

OptIfOMSnSinkPrevDayEntry ::=
  SEQUENCE {
    optIfOMSnSinkPrevDaySuspectedFlag             TruthValue,
    optIfOMSnSinkPrevDayLastAggregatedInputPower  Integer32,
    optIfOMSnSinkPrevDayLowAggregatedInputPower   Integer32,
    optIfOMSnSinkPrevDayHighAggregatedInputPower  Integer32,
    optIfOMSnSinkPrevDayLastOutputPower           Integer32,
    optIfOMSnSinkPrevDayLowOutputPower            Integer32,
    optIfOMSnSinkPrevDayHighOutputPower           Integer32
    }

optIfOMSnSinkPrevDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
```

```
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOMSnSinkPrevDayEntry 1 }

optIfOMSnSinkPrevDayLastAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last aggregated optical power of all the DWDM input
     channels during the previous 24-hour interval."
  ::= { optIfOMSnSinkPrevDayEntry 2 }

optIfOMSnSinkPrevDayLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power of all the DWDM input
     channels during the previous 24-hour interval."
  ::= { optIfOMSnSinkPrevDayEntry 3 }

optIfOMSnSinkPrevDayHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power of all the DWDM input
     channels during the previous 24-hour interval."
  ::= { optIfOMSnSinkPrevDayEntry 4 }

optIfOMSnSinkPrevDayLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last  optical power at the output
     during the previous 24-hour interval."
  ::= { optIfOMSnSinkPrevDayEntry 5 }

optIfOMSnSinkPrevDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
```

```
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power at the output
     during the previous 24-hour interval."
  ::= { optIfOMSnSinkPrevDayEntry 6 }

optIfOMSnSinkPrevDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power at the output
     during the previous 24-hour interval."
  ::= { optIfOMSnSinkPrevDayEntry 7 }

-- OMSn source current table
-- Contains data for the current 15-minute performance monitoring
-- interval.

optIfOMSnSrcCurrentTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOMSnSrcCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OMSn source performance monitoring information for
     the current 15-minute interval."
  ::= { optIfOMSn 6 }

optIfOMSnSrcCurrentEntry OBJECT-TYPE
  SYNTAX  OptIfOMSnSrcCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OMSn source performance
     monitoring information of an interface for the current
     15-minute interval."
  INDEX  { ifIndex }
  ::= { optIfOMSnSrcCurrentTable 1 }

OptIfOMSnSrcCurrentEntry ::=
  SEQUENCE {
    optIfOMSnSrcCurrentSuspectedFlag              TruthValue,
    optIfOMSnSrcCurrentOutputPower                Integer32,
    optIfOMSnSrcCurrentLowOutputPower             Integer32,
    optIfOMSnSrcCurrentHighOutputPower            Integer32,
    optIfOMSnSrcCurrentLowerOutputPowerThreshold  Integer32,
```

```
    optIfOMSnSrcCurrentUpperOutputPowerThreshold  Integer32,
    optIfOMSnSrcCurrentAggregatedInputPower       Integer32,
    optIfOMSnSrcCurrentLowAggregatedInputPower    Integer32,
    optIfOMSnSrcCurrentHighAggregatedInputPower   Integer32,
    optIfOMSnSrcCurrentLowerInputPowerThreshold   Integer32,
    optIfOMSnSrcCurrentUpperInputPowerThreshold   Integer32
    }

optIfOMSnSrcCurrentSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOMSnSrcCurrentEntry 1 }

optIfOMSnSrcCurrentOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The optical power monitored at the output."
  ::= { optIfOMSnSrcCurrentEntry 2 }

optIfOMSnSrcCurrentLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     current 15-minute interval."
  ::= { optIfOMSnSrcCurrentEntry 3 }

optIfOMSnSrcCurrentHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     current 15-minute interval."
  ::= { optIfOMSnSrcCurrentEntry 4 }

optIfOMSnSrcCurrentLowerOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
```

```
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on output power.  If
     optIfOMSnSrcCurrentOutputPower drops to this value or below,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOMSnSrcCurrentEntry 5 }

optIfOMSnSrcCurrentUpperOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on output power.  If
     optIfOMSnSrcCurrentOutputPower reaches or exceeds this value,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOMSnSrcCurrentEntry 6 }

optIfOMSnSrcCurrentAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The aggregated optical power at the input."
  ::= { optIfOMSnSrcCurrentEntry 7 }

optIfOMSnSrcCurrentLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power at the input
     during the current 15-minute interval."
  ::= { optIfOMSnSrcCurrentEntry 8 }

optIfOMSnSrcCurrentHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power at the input
     during the current 15-minute interval."
  ::= { optIfOMSnSrcCurrentEntry 9 }
```

```
optIfOMSnSrcCurrentLowerInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on aggregated input power.  If
     optIfOMSnSrcCurrentAggregatedInputPower drops to this value
     or below, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOMSnSrcCurrentEntry 10 }

optIfOMSnSrcCurrentUpperInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on aggregated input power.  If
     optIfOMSnSrcCurrentAggregatedInputPower reaches or exceeds
     this value, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOMSnSrcCurrentEntry 11 }


-- OMSn source interval table
-- Contains data for previous 15-minute performance monitoring
-- intervals.

optIfOMSnSrcIntervalTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOMSnSrcIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of historical OMSn source performance monitoring
     information."
  ::= { optIfOMSn 7 }

optIfOMSnSrcIntervalEntry OBJECT-TYPE
  SYNTAX  OptIfOMSnSrcIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OMSn source performance
     monitoring information of an interface during a particular
     historical interval."
  INDEX  { ifIndex, optIfOMSnSrcIntervalNumber }
  ::= { optIfOMSnSrcIntervalTable 1 }

OptIfOMSnSrcIntervalEntry ::=
```

```
  SEQUENCE {
    optIfOMSnSrcIntervalNumber                    OptIfIntervalNumber,
    optIfOMSnSrcIntervalSuspectedFlag             TruthValue,
    optIfOMSnSrcIntervalLastOutputPower           Integer32,
    optIfOMSnSrcIntervalLowOutputPower            Integer32,
    optIfOMSnSrcIntervalHighOutputPower           Integer32,
    optIfOMSnSrcIntervalLastAggregatedInputPower  Integer32,
    optIfOMSnSrcIntervalLowAggregatedInputPower   Integer32,
    optIfOMSnSrcIntervalHighAggregatedInputPower  Integer32
    }

optIfOMSnSrcIntervalNumber OBJECT-TYPE
  SYNTAX  OptIfIntervalNumber
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Uniquely identifies the interval."
  ::= { optIfOMSnSrcIntervalEntry 1 }

optIfOMSnSrcIntervalSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOMSnSrcIntervalEntry 2 }

optIfOMSnSrcIntervalLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the output during the
     interval."
  ::= { optIfOMSnSrcIntervalEntry 3 }

optIfOMSnSrcIntervalLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     interval."
  ::= { optIfOMSnSrcIntervalEntry 4 }

optIfOMSnSrcIntervalHighOutputPower OBJECT-TYPE
```

```
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     interval."
  ::= { optIfOMSnSrcIntervalEntry 5 }

optIfOMSnSrcIntervalLastAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last aggregated optical power at the input
     during the interval."
  ::= { optIfOMSnSrcIntervalEntry 6 }

optIfOMSnSrcIntervalLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power at the input
     during the interval."
  ::= { optIfOMSnSrcIntervalEntry 7 }

optIfOMSnSrcIntervalHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power at the input
     during the interval."
  ::= { optIfOMSnSrcIntervalEntry 8 }

-- OMSn source current day table
-- Contains data for the current 24-hour performance
-- monitoring interval.

optIfOMSnSrcCurDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOMSnSrcCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
```

```
    "A table of OMSn source performance monitoring information for
     the current 24-hour interval."
  ::= { optIfOMSn 8 }

optIfOMSnSrcCurDayEntry OBJECT-TYPE
  SYNTAX  OptIfOMSnSrcCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OMSn source performance
     monitoring information of an interface for the current
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOMSnSrcCurDayTable 1 }

OptIfOMSnSrcCurDayEntry ::=
  SEQUENCE {
    optIfOMSnSrcCurDaySuspectedFlag             TruthValue,
    optIfOMSnSrcCurDayLowOutputPower            Integer32,
    optIfOMSnSrcCurDayHighOutputPower           Integer32,
    optIfOMSnSrcCurDayLowAggregatedInputPower   Integer32,
    optIfOMSnSrcCurDayHighAggregatedInputPower  Integer32
    }

optIfOMSnSrcCurDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOMSnSrcCurDayEntry 1 }

optIfOMSnSrcCurDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     current 24-hour interval."
  ::= { optIfOMSnSrcCurDayEntry 2 }

optIfOMSnSrcCurDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
```

```
    "The highest optical power monitored at the output during the
     current 24-hour interval."
  ::= { optIfOMSnSrcCurDayEntry 3 }

optIfOMSnSrcCurDayLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power at the input
     during the current 24-hour interval."
  ::= { optIfOMSnSrcCurDayEntry 4 }

optIfOMSnSrcCurDayHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power at the input
     during the current 24-hour interval."
  ::= { optIfOMSnSrcCurDayEntry 5 }

-- OMSn source previous day table
-- Contains data for the previous 24-hour performance
-- monitoring interval.

optIfOMSnSrcPrevDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOMSnSrcPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OMSn source performance monitoring information for
     the previous 24-hour interval."
  ::= { optIfOMSn 9 }

optIfOMSnSrcPrevDayEntry OBJECT-TYPE
  SYNTAX  OptIfOMSnSrcPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OMSn source performance
     monitoring information of an interface for the previous
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOMSnSrcPrevDayTable 1 }
```

```
OptIfOMSnSrcPrevDayEntry ::=
  SEQUENCE {
    optIfOMSnSrcPrevDaySuspectedFlag             TruthValue,
    optIfOMSnSrcPrevDayLastOutputPower           Integer32,
    optIfOMSnSrcPrevDayLowOutputPower            Integer32,
    optIfOMSnSrcPrevDayHighOutputPower           Integer32,
    optIfOMSnSrcPrevDayLastAggregatedInputPower  Integer32,
    optIfOMSnSrcPrevDayLowAggregatedInputPower   Integer32,
    optIfOMSnSrcPrevDayHighAggregatedInputPower  Integer32
    }

optIfOMSnSrcPrevDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOMSnSrcPrevDayEntry 1 }

optIfOMSnSrcPrevDayLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOMSnSrcPrevDayEntry 2 }

optIfOMSnSrcPrevDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOMSnSrcPrevDayEntry 3 }

optIfOMSnSrcPrevDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOMSnSrcPrevDayEntry 4 }
```

```
optIfOMSnSrcPrevDayLastAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last aggregated optical power at the input during the
     previous 24-hour interval."
  ::= { optIfOMSnSrcPrevDayEntry 5 }

optIfOMSnSrcPrevDayLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power at the input during the
     previous 24-hour interval."
  ::= { optIfOMSnSrcPrevDayEntry 6 }

optIfOMSnSrcPrevDayHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power at the input during the
     previous 24-hour interval."
  ::= { optIfOMSnSrcPrevDayEntry 7 }

-- the optIfOChGroup group
-- This group handles the configuration and performance monitoring
-- information for OChGroup layers.

-- OChGroup config table

optIfOChGroupConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChGroupConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OChGroup configuration information."
  ::= { optIfOChGroup 1 }

optIfOChGroupConfigEntry OBJECT-TYPE
  SYNTAX  OptIfOChGroupConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
```

```
  DESCRIPTION
    "A conceptual row that contains OChGroup configuration
     information of an interface."
  INDEX  { ifIndex }
  ::= { optIfOChGroupConfigTable 1 }

OptIfOChGroupConfigEntry ::=
  SEQUENCE {
    optIfOChGroupDirectionality OptIfDirectionality
    }

optIfOChGroupDirectionality OBJECT-TYPE
  SYNTAX  OptIfDirectionality
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the directionality of the entity."
  ::= { optIfOChGroupConfigEntry 1 }

-- OChGroup sink current table
-- Contains data for the current 15-minute performance monitoring
-- interval.

optIfOChGroupSinkCurrentTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChGroupSinkCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OChGroup sink performance monitoring information for
     the current 15-minute interval."
  ::= { optIfOChGroup 2 }

optIfOChGroupSinkCurrentEntry OBJECT-TYPE
  SYNTAX  OptIfOChGroupSinkCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OChGroup sink performance
     monitoring information of an interface for the current
     15-minute interval."
  INDEX  { ifIndex }
  ::= { optIfOChGroupSinkCurrentTable 1 }

OptIfOChGroupSinkCurrentEntry ::=
  SEQUENCE {
    optIfOChGroupSinkCurrentSuspectedFlag             TruthValue,
    optIfOChGroupSinkCurrentAggregatedInputPower      Integer32,
    optIfOChGroupSinkCurrentLowAggregatedInputPower   Integer32,
```

```
    optIfOChGroupSinkCurrentHighAggregatedInputPower   Integer32,
    optIfOChGroupSinkCurrentLowerInputPowerThreshold   Integer32,
    optIfOChGroupSinkCurrentUpperInputPowerThreshold   Integer32,
    optIfOChGroupSinkCurrentOutputPower                Integer32,
    optIfOChGroupSinkCurrentLowOutputPower             Integer32,
    optIfOChGroupSinkCurrentHighOutputPower            Integer32,
    optIfOChGroupSinkCurrentLowerOutputPowerThreshold  Integer32,
    optIfOChGroupSinkCurrentUpperOutputPowerThreshold  Integer32
    }

optIfOChGroupSinkCurrentSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChGroupSinkCurrentEntry 1 }

optIfOChGroupSinkCurrentAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The aggregated optical power of all the DWDM input
     channels in the OChGroup."
  ::= { optIfOChGroupSinkCurrentEntry 2 }

optIfOChGroupSinkCurrentLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power of all the DWDM input
     channels in the OChGroup during the current 15-minute interval."
  ::= { optIfOChGroupSinkCurrentEntry 3 }

optIfOChGroupSinkCurrentHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power of all the DWDM input
     channels in the OChGroup during the current 15-minute interval."
  ::= { optIfOChGroupSinkCurrentEntry 4 }
```

```
optIfOChGroupSinkCurrentLowerInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on aggregated input power.  If
     optIfOChGroupSinkCurrentAggregatedInputPower drops to this value
     or below, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChGroupSinkCurrentEntry 5 }

optIfOChGroupSinkCurrentUpperInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on aggregated input power.  If
     optIfOChGroupSinkCurrentAggregatedInputPower reaches or exceeds
     this value, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChGroupSinkCurrentEntry 6 }

optIfOChGroupSinkCurrentOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The optical power monitored at the output
     in the OChGroup."
  ::= { optIfOChGroupSinkCurrentEntry 7 }

optIfOChGroupSinkCurrentLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output
     in the OChGroup during the current 15-minute interval."
  ::= { optIfOChGroupSinkCurrentEntry 8 }

optIfOChGroupSinkCurrentHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
```

```
    "The highest optical power monitored at the output
     in the OChGroup during the current 15-minute interval."
  ::= { optIfOChGroupSinkCurrentEntry 9 }

optIfOChGroupSinkCurrentLowerOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on the output power.  If
     optIfOChGroupSinkCurrentOutputPower drops to this value
     or below, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChGroupSinkCurrentEntry 10 }

optIfOChGroupSinkCurrentUpperOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on the output power.  If
     optIfOChGroupSinkCurrentOutputPower reaches or exceeds
     this value, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChGroupSinkCurrentEntry 11 }

-- OChGroup sink interval table
-- Contains data for previous 15-minute performance monitoring
-- intervals.

optIfOChGroupSinkIntervalTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChGroupSinkIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of historical OChGroup sink performance monitoring
     information."
  ::= { optIfOChGroup 3 }

optIfOChGroupSinkIntervalEntry OBJECT-TYPE
  SYNTAX  OptIfOChGroupSinkIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OChGroup sink performance
     monitoring information of an interface during a particular
     historical interval."
  INDEX  { ifIndex, optIfOChGroupSinkIntervalNumber }
```

```
  ::= { optIfOChGroupSinkIntervalTable 1 }

OptIfOChGroupSinkIntervalEntry ::=
  SEQUENCE {
   optIfOChGroupSinkIntervalNumber                  OptIfIntervalNumber,
   optIfOChGroupSinkIntervalSuspectedFlag            TruthValue,
   optIfOChGroupSinkIntervalLastAggregatedInputPower Integer32,
   optIfOChGroupSinkIntervalLowAggregatedInputPower  Integer32,
   optIfOChGroupSinkIntervalHighAggregatedInputPower Integer32,
   optIfOChGroupSinkIntervalLastOutputPower          Integer32,
   optIfOChGroupSinkIntervalLowOutputPower           Integer32,
   optIfOChGroupSinkIntervalHighOutputPower          Integer32
   }

optIfOChGroupSinkIntervalNumber OBJECT-TYPE
  SYNTAX  OptIfIntervalNumber
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Uniquely identifies the interval."
  ::= { optIfOChGroupSinkIntervalEntry 1 }

optIfOChGroupSinkIntervalSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChGroupSinkIntervalEntry 2 }

optIfOChGroupSinkIntervalLastAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last aggregated optical power of all the DWDM input
     channels in the OChGroup during the interval."
  ::= { optIfOChGroupSinkIntervalEntry 3 }

optIfOChGroupSinkIntervalLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power of all the DWDM input
     channels in the OChGroup during the interval."
```

```
  ::= { optIfOChGroupSinkIntervalEntry 4 }

optIfOChGroupSinkIntervalHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power of all the DWDM input
     channels in the OChGroup during the interval."
  ::= { optIfOChGroupSinkIntervalEntry 5 }

optIfOChGroupSinkIntervalLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the output
     in the OChGroup during the interval."
  ::= { optIfOChGroupSinkIntervalEntry 6 }

optIfOChGroupSinkIntervalLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output
     in the OChGroup during the interval."
  ::= { optIfOChGroupSinkIntervalEntry 7 }

optIfOChGroupSinkIntervalHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output
     in the OChGroup during the interval."
  ::= { optIfOChGroupSinkIntervalEntry 8 }

-- OChGroup sink current day table
-- Contains data for the current 24-hour performance
-- monitoring interval.

optIfOChGroupSinkCurDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChGroupSinkCurDayEntry
```

```
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OChGroup sink performance monitoring information for
     the current 24-hour interval."
  ::= { optIfOChGroup 4 }

optIfOChGroupSinkCurDayEntry OBJECT-TYPE
  SYNTAX  OptIfOChGroupSinkCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OChGroup sink performance
     monitoring information of an interface for the current
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOChGroupSinkCurDayTable 1 }

OptIfOChGroupSinkCurDayEntry ::=
  SEQUENCE {
    optIfOChGroupSinkCurDaySuspectedFlag             TruthValue,
    optIfOChGroupSinkCurDayLowAggregatedInputPower   Integer32,
    optIfOChGroupSinkCurDayHighAggregatedInputPower  Integer32,
    optIfOChGroupSinkCurDayLowOutputPower            Integer32,
    optIfOChGroupSinkCurDayHighOutputPower           Integer32
    }

optIfOChGroupSinkCurDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChGroupSinkCurDayEntry 1 }

optIfOChGroupSinkCurDayLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power of all the DWDM input
     channels in the OChGroup during the current 24-hour interval."
  ::= { optIfOChGroupSinkCurDayEntry 2 }

optIfOChGroupSinkCurDayHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
```

```
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power of all the DWDM input
     channels in the OChGroup during the current 24-hour interval."
  ::= { optIfOChGroupSinkCurDayEntry 3 }

optIfOChGroupSinkCurDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output
     in the OChGroup during the current 24-hour interval."
  ::= { optIfOChGroupSinkCurDayEntry 4 }

optIfOChGroupSinkCurDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output
     in the OChGroup during the current 24-hour interval."
  ::= { optIfOChGroupSinkCurDayEntry 5 }

-- OChGroup sink previous day table
-- Contains data for the previous 24-hour performance
-- monitoring interval.

optIfOChGroupSinkPrevDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChGroupSinkPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OChGroup sink performance monitoring information for
     the previous 24-hour interval."
  ::= { optIfOChGroup 5 }

optIfOChGroupSinkPrevDayEntry OBJECT-TYPE
  SYNTAX  OptIfOChGroupSinkPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OChGroup sink performance
     monitoring information of an interface for the previous
     24-hour interval."
```

```
  INDEX  { ifIndex }
  ::= { optIfOChGroupSinkPrevDayTable 1 }

OptIfOChGroupSinkPrevDayEntry ::=
  SEQUENCE {
    optIfOChGroupSinkPrevDaySuspectedFlag             TruthValue,
    optIfOChGroupSinkPrevDayLastAggregatedInputPower  Integer32,
    optIfOChGroupSinkPrevDayLowAggregatedInputPower   Integer32,
    optIfOChGroupSinkPrevDayHighAggregatedInputPower  Integer32,
    optIfOChGroupSinkPrevDayLastOutputPower           Integer32,
    optIfOChGroupSinkPrevDayLowOutputPower            Integer32,
    optIfOChGroupSinkPrevDayHighOutputPower           Integer32
    }

optIfOChGroupSinkPrevDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChGroupSinkPrevDayEntry 1 }

optIfOChGroupSinkPrevDayLastAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last aggregated optical power of all the DWDM input
     channels in the OChGroup during the previous 24-hour interval."
  ::= { optIfOChGroupSinkPrevDayEntry 2 }

optIfOChGroupSinkPrevDayLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power of all the DWDM input
     channels in the OChGroup during the previous 24-hour interval."
  ::= { optIfOChGroupSinkPrevDayEntry 3 }

optIfOChGroupSinkPrevDayHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
```

```
    "The highest aggregated optical power of all the DWDM input
     channels in the OChGroup during the previous 24-hour interval."
  ::= { optIfOChGroupSinkPrevDayEntry 4 }

optIfOChGroupSinkPrevDayLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the output
     in the OChGroup during the previous 24-hour interval."
  ::= { optIfOChGroupSinkPrevDayEntry 5 }

optIfOChGroupSinkPrevDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output
     in the OChGroup during the previous 24-hour interval."
  ::= { optIfOChGroupSinkPrevDayEntry 6 }

optIfOChGroupSinkPrevDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output
     in the OChGroup during the previous 24-hour interval."
  ::= { optIfOChGroupSinkPrevDayEntry 7 }

-- OChGroup source current table
-- Contains data for the current 15-minute performance monitoring
-- interval.

optIfOChGroupSrcCurrentTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChGroupSrcCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OChGroup source performance monitoring information for
     the current 15-minute interval."
  ::= { optIfOChGroup 6 }

optIfOChGroupSrcCurrentEntry OBJECT-TYPE
```

```
  SYNTAX  OptIfOChGroupSrcCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OChGroup source performance
     monitoring information of an interface for the current
     15-minute interval."
  INDEX  { ifIndex }
  ::= { optIfOChGroupSrcCurrentTable 1 }

OptIfOChGroupSrcCurrentEntry ::=
  SEQUENCE {
    optIfOChGroupSrcCurrentSuspectedFlag              TruthValue,
    optIfOChGroupSrcCurrentOutputPower                Integer32,
    optIfOChGroupSrcCurrentLowOutputPower             Integer32,
    optIfOChGroupSrcCurrentHighOutputPower            Integer32,
    optIfOChGroupSrcCurrentLowerOutputPowerThreshold  Integer32,
    optIfOChGroupSrcCurrentUpperOutputPowerThreshold  Integer32,
    optIfOChGroupSrcCurrentAggregatedInputPower       Integer32,
    optIfOChGroupSrcCurrentLowAggregatedInputPower    Integer32,
    optIfOChGroupSrcCurrentHighAggregatedInputPower   Integer32,
    optIfOChGroupSrcCurrentLowerInputPowerThreshold   Integer32,
    optIfOChGroupSrcCurrentUpperInputPowerThreshold   Integer32
    }

optIfOChGroupSrcCurrentSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChGroupSrcCurrentEntry 1 }

optIfOChGroupSrcCurrentOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The optical power monitored at the output."
  ::= { optIfOChGroupSrcCurrentEntry 2 }

optIfOChGroupSrcCurrentLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
```

```
    "The lowest optical power monitored at the output during the
     current 15-minute interval."
  ::= { optIfOChGroupSrcCurrentEntry 3 }

optIfOChGroupSrcCurrentHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     current 15-minute interval."
  ::= { optIfOChGroupSrcCurrentEntry 4 }

optIfOChGroupSrcCurrentLowerOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on output power.  If
     optIfOChGroupSrcCurrentOutputPower drops to this value or below,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChGroupSrcCurrentEntry 5 }

optIfOChGroupSrcCurrentUpperOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on output power.  If
     optIfOChGroupSrcCurrentOutputPower reaches or exceeds this value,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChGroupSrcCurrentEntry 6 }

optIfOChGroupSrcCurrentAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The aggregated optical power monitored at the input."
  ::= { optIfOChGroupSrcCurrentEntry 7 }

optIfOChGroupSrcCurrentLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
```

```
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power monitored at the input
     during the current 15-minute interval."
  ::= { optIfOChGroupSrcCurrentEntry 8 }

optIfOChGroupSrcCurrentHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power monitored at the input
     during the current 15-minute interval."
  ::= { optIfOChGroupSrcCurrentEntry 9 }

optIfOChGroupSrcCurrentLowerInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on input power.  If
     optIfOChGroupSrcCurrentAggregatedInputPower drops to this value
     or below, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChGroupSrcCurrentEntry 10 }

optIfOChGroupSrcCurrentUpperInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on input power.  If
     optIfOChGroupSrcCurrentAggregatedInputPower reaches or exceeds
     this value, a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChGroupSrcCurrentEntry 11 }

-- OChGroup source interval table
-- Contains data for previous 15-minute performance monitoring
-- intervals.

optIfOChGroupSrcIntervalTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChGroupSrcIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
```

```
    "A table of historical OChGroup source performance monitoring
     information."
  ::= { optIfOChGroup 7 }

optIfOChGroupSrcIntervalEntry OBJECT-TYPE
  SYNTAX  OptIfOChGroupSrcIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OChGroup source performance
     monitoring information of an interface during a particular
     historical interval."
  INDEX  { ifIndex, optIfOChGroupSrcIntervalNumber }
  ::= { optIfOChGroupSrcIntervalTable 1 }

OptIfOChGroupSrcIntervalEntry ::=
  SEQUENCE {
   optIfOChGroupSrcIntervalNumber                   OptIfIntervalNumber,
   optIfOChGroupSrcIntervalSuspectedFlag             TruthValue,
   optIfOChGroupSrcIntervalLastOutputPower           Integer32,
   optIfOChGroupSrcIntervalLowOutputPower            Integer32,
   optIfOChGroupSrcIntervalHighOutputPower           Integer32,
   optIfOChGroupSrcIntervalLastAggregatedInputPower  Integer32,
   optIfOChGroupSrcIntervalLowAggregatedInputPower   Integer32,
   optIfOChGroupSrcIntervalHighAggregatedInputPower  Integer32
   }

optIfOChGroupSrcIntervalNumber OBJECT-TYPE
  SYNTAX  OptIfIntervalNumber
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Uniquely identifies the interval."
  ::= { optIfOChGroupSrcIntervalEntry 1 }

optIfOChGroupSrcIntervalSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChGroupSrcIntervalEntry 2 }

optIfOChGroupSrcIntervalLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
```

```
  DESCRIPTION
    "The last optical power monitored at the output during the
     interval."
  ::= { optIfOChGroupSrcIntervalEntry 3 }

optIfOChGroupSrcIntervalLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     interval."
  ::= { optIfOChGroupSrcIntervalEntry 4 }

optIfOChGroupSrcIntervalHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     interval."
  ::= { optIfOChGroupSrcIntervalEntry 5 }

optIfOChGroupSrcIntervalLastAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last aggregated optical power monitored at the input
     during the interval."
  ::= { optIfOChGroupSrcIntervalEntry 6 }

optIfOChGroupSrcIntervalLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power monitored at the input
     during the interval."
  ::= { optIfOChGroupSrcIntervalEntry 7 }

optIfOChGroupSrcIntervalHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
```

```
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power monitored at the input
     during the interval."
  ::= { optIfOChGroupSrcIntervalEntry 8 }

-- OChGroup source current day table
-- Contains data for the current 24-hour performance
-- monitoring interval.

optIfOChGroupSrcCurDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChGroupSrcCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OChGroup source performance monitoring information for
     the current 24-hour interval."
  ::= { optIfOChGroup 8 }

optIfOChGroupSrcCurDayEntry OBJECT-TYPE
  SYNTAX  OptIfOChGroupSrcCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OChGroup source performance
     monitoring information of an interface for the current
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOChGroupSrcCurDayTable 1 }

OptIfOChGroupSrcCurDayEntry ::=
  SEQUENCE {
    optIfOChGroupSrcCurDaySuspectedFlag             TruthValue,
    optIfOChGroupSrcCurDayLowOutputPower            Integer32,
    optIfOChGroupSrcCurDayHighOutputPower           Integer32,
    optIfOChGroupSrcCurDayLowAggregatedInputPower   Integer32,
    optIfOChGroupSrcCurDayHighAggregatedInputPower  Integer32
    }

optIfOChGroupSrcCurDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChGroupSrcCurDayEntry 1 }
```

```
optIfOChGroupSrcCurDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     current 24-hour interval."
  ::= { optIfOChGroupSrcCurDayEntry 2 }

optIfOChGroupSrcCurDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     current 24-hour interval."
  ::= { optIfOChGroupSrcCurDayEntry 3 }

optIfOChGroupSrcCurDayLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power monitored at the input
     during the current 24-hour interval."
  ::= { optIfOChGroupSrcCurDayEntry 4 }

optIfOChGroupSrcCurDayHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power monitored at the input
     during the current 24-hour interval."
  ::= { optIfOChGroupSrcCurDayEntry 5 }

-- OChGroup source previous day table
-- Contains data for the previous 24-hour performance
-- monitoring interval.

optIfOChGroupSrcPrevDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChGroupSrcPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
```

```
  DESCRIPTION
    "A table of OChGroup source performance monitoring information for
     the previous 24-hour interval."
  ::= { optIfOChGroup 9 }

optIfOChGroupSrcPrevDayEntry OBJECT-TYPE
  SYNTAX  OptIfOChGroupSrcPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OChGroup source performance
     monitoring information of an interface for the previous
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOChGroupSrcPrevDayTable 1 }

OptIfOChGroupSrcPrevDayEntry ::=
  SEQUENCE {
    optIfOChGroupSrcPrevDaySuspectedFlag             TruthValue,
    optIfOChGroupSrcPrevDayLastOutputPower           Integer32,
    optIfOChGroupSrcPrevDayLowOutputPower            Integer32,
    optIfOChGroupSrcPrevDayHighOutputPower           Integer32,
    optIfOChGroupSrcPrevDayLastAggregatedInputPower  Integer32,
    optIfOChGroupSrcPrevDayLowAggregatedInputPower   Integer32,
    optIfOChGroupSrcPrevDayHighAggregatedInputPower  Integer32
    }

optIfOChGroupSrcPrevDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChGroupSrcPrevDayEntry 1 }

optIfOChGroupSrcPrevDayLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOChGroupSrcPrevDayEntry 2 }

optIfOChGroupSrcPrevDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
```

```
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOChGroupSrcPrevDayEntry 3 }

optIfOChGroupSrcPrevDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOChGroupSrcPrevDayEntry 4 }

optIfOChGroupSrcPrevDayLastAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last aggregated optical power monitored at the input
     during the previous 24-hour interval."
  ::= { optIfOChGroupSrcPrevDayEntry 5 }

optIfOChGroupSrcPrevDayLowAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest aggregated optical power monitored at the input
     during the previous 24-hour interval."
  ::= { optIfOChGroupSrcPrevDayEntry 6 }

optIfOChGroupSrcPrevDayHighAggregatedInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest aggregated optical power monitored at the input
     during the previous 24-hour interval."
  ::= { optIfOChGroupSrcPrevDayEntry 7 }

-- the optIfOCh group
```

```
-- This group handles the configuration and
-- performance monitoring information for OCh layers.

-- OCh config table

optIfOChConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OCh configuration information."
  ::= { optIfOCh 1 }

optIfOChConfigEntry OBJECT-TYPE
  SYNTAX  OptIfOChConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OCh configuration
     information of an interface."
  INDEX  { ifIndex }
  ::= { optIfOChConfigTable 1 }

OptIfOChConfigEntry ::=
  SEQUENCE {
    optIfOChDirectionality     OptIfDirectionality,
    optIfOChCurrentStatus      BITS
    }

optIfOChDirectionality OBJECT-TYPE
  SYNTAX  OptIfDirectionality
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the directionality of the entity."
  ::= { optIfOChConfigEntry 1 }

optIfOChCurrentStatus OBJECT-TYPE
  SYNTAX  BITS {
    losP(0),
    los(1),
    oci(2),
    ssfP(3),
    ssfO(4),
    ssf(5)
    }
  MAX-ACCESS  read-only
  STATUS  current
```

```
  DESCRIPTION
    "Indicates the defect condition of the entity, if any.
     This object is applicable when optIfOChDirectionality
     has the value sink(1) or bidirectional(3).
     In full-capability systems the bit position los(1) is not used.
     In reduced-capability systems or at IrDI interfaces only
     the bit positions los(1) and ssfP(3) are used."
  ::= { optIfOChConfigEntry 2 }

-- OCh sink current table
-- Contains data for the current 15-minute performance monitoring
-- interval.

optIfOChSinkCurrentTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChSinkCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OCh sink performance monitoring information for
     the current 15-minute interval."
  ::= { optIfOCh 2 }

optIfOChSinkCurrentEntry OBJECT-TYPE
  SYNTAX  OptIfOChSinkCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OCh sink performance
     monitoring information for an interface for the current
     15-minute interval."
  INDEX  { ifIndex }
  ::= { optIfOChSinkCurrentTable 1 }

OptIfOChSinkCurrentEntry ::=
  SEQUENCE {
    optIfOChSinkCurrentSuspectedFlag             TruthValue,
    optIfOChSinkCurrentInputPower                Integer32,
    optIfOChSinkCurrentLowInputPower             Integer32,
    optIfOChSinkCurrentHighInputPower            Integer32,
    optIfOChSinkCurrentLowerInputPowerThreshold  Integer32,
    optIfOChSinkCurrentUpperInputPowerThreshold  Integer32
    }

optIfOChSinkCurrentSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
```

```
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChSinkCurrentEntry 1 }

optIfOChSinkCurrentInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The optical power monitored at the input."
  ::= { optIfOChSinkCurrentEntry 2 }

optIfOChSinkCurrentLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the input during the
     current 15-minute interval."
  ::= { optIfOChSinkCurrentEntry 3 }

optIfOChSinkCurrentHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the input during the
     current 15-minute interval."
  ::= { optIfOChSinkCurrentEntry 4 }

optIfOChSinkCurrentLowerInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on input power.  If
     optIfOChSinkCurrentInputPower drops to this value or below,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChSinkCurrentEntry 5 }

optIfOChSinkCurrentUpperInputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
```

```
  DESCRIPTION
    "The upper limit threshold on input power.  If
     optIfOChSinkCurrentInputPower reaches or exceeds this value,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChSinkCurrentEntry 6 }

-- OCh sink interval table
-- Contains data for previous 15-minute performance monitoring
-- intervals.

optIfOChSinkIntervalTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChSinkIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of historical OCh sink performance monitoring
     information."
  ::= { optIfOCh 3 }

optIfOChSinkIntervalEntry OBJECT-TYPE
  SYNTAX  OptIfOChSinkIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OCh sink performance
     monitoring information of an interface during a particular
     historical interval."
  INDEX  { ifIndex, optIfOChSinkIntervalNumber }
  ::= { optIfOChSinkIntervalTable 1 }

OptIfOChSinkIntervalEntry ::=
  SEQUENCE {
    optIfOChSinkIntervalNumber          OptIfIntervalNumber,
    optIfOChSinkIntervalSuspectedFlag   TruthValue,
    optIfOChSinkIntervalLastInputPower  Integer32,
    optIfOChSinkIntervalLowInputPower   Integer32,
    optIfOChSinkIntervalHighInputPower  Integer32
    }

optIfOChSinkIntervalNumber OBJECT-TYPE
  SYNTAX  OptIfIntervalNumber
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Uniquely identifies the interval."
  ::= { optIfOChSinkIntervalEntry 1 }

optIfOChSinkIntervalSuspectedFlag OBJECT-TYPE
```

```
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChSinkIntervalEntry 2 }

optIfOChSinkIntervalLastInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the input during the
     interval."
  ::= { optIfOChSinkIntervalEntry 3 }

optIfOChSinkIntervalLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the input during the
     interval."
  ::= { optIfOChSinkIntervalEntry 4 }

optIfOChSinkIntervalHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the input during the
     interval."
  ::= { optIfOChSinkIntervalEntry 5 }

-- OCh sink current day table
-- Contains data for the current 24-hour performance
-- monitoring interval.

optIfOChSinkCurDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChSinkCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OCh sink performance monitoring information for
     the current 24-hour interval."
```

```
  ::= { optIfOCh 4 }

optIfOChSinkCurDayEntry OBJECT-TYPE
  SYNTAX  OptIfOChSinkCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OCh sink performance
     monitoring information of an interface for the current
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOChSinkCurDayTable 1 }

OptIfOChSinkCurDayEntry ::=
  SEQUENCE {
    optIfOChSinkCurDaySuspectedFlag   TruthValue,
    optIfOChSinkCurDayLowInputPower   Integer32,
    optIfOChSinkCurDayHighInputPower  Integer32
    }

optIfOChSinkCurDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChSinkCurDayEntry 1 }

optIfOChSinkCurDayLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the input during the
     current 24-hour interval."
  ::= { optIfOChSinkCurDayEntry 2 }

optIfOChSinkCurDayHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the input during the
     current 24-hour interval."
  ::= { optIfOChSinkCurDayEntry 3 }
```

```
-- OCh sink previous day table
-- Contains data for the previous 24-hour performance
-- monitoring interval.

optIfOChSinkPrevDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChSinkPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OCh sink performance monitoring information for
     the previous 24-hour interval."
  ::= { optIfOCh 5 }

optIfOChSinkPrevDayEntry OBJECT-TYPE
  SYNTAX  OptIfOChSinkPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OCh sink performance
     monitoring information of an interface for the previous
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOChSinkPrevDayTable 1 }

OptIfOChSinkPrevDayEntry ::=
  SEQUENCE {
    optIfOChSinkPrevDaySuspectedFlag   TruthValue,
    optIfOChSinkPrevDayLastInputPower  Integer32,
    optIfOChSinkPrevDayLowInputPower   Integer32,
    optIfOChSinkPrevDayHighInputPower  Integer32
    }

optIfOChSinkPrevDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChSinkPrevDayEntry 1 }

optIfOChSinkPrevDayLastInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the input during the
     previous 24-hour interval."
```

```
  ::= { optIfOChSinkPrevDayEntry 2 }

optIfOChSinkPrevDayLowInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the input during the
     previous 24-hour interval."
  ::= { optIfOChSinkPrevDayEntry 3 }

optIfOChSinkPrevDayHighInputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the input during the
     previous 24-hour interval."
  ::= { optIfOChSinkPrevDayEntry 4 }

-- OCh source current table
-- Contains data for the current 15-minute performance monitoring
-- interval.

optIfOChSrcCurrentTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChSrcCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OCh source performance monitoring information for
     the current 15-minute interval."
  ::= { optIfOCh 6 }

optIfOChSrcCurrentEntry OBJECT-TYPE
  SYNTAX  OptIfOChSrcCurrentEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OCh source performance
     monitoring information of an interface for the current
     15-minute interval."
  INDEX  { ifIndex }
  ::= { optIfOChSrcCurrentTable 1 }

OptIfOChSrcCurrentEntry ::=
  SEQUENCE {
```

```
    optIfOChSrcCurrentSuspectedFlag              TruthValue,
    optIfOChSrcCurrentOutputPower                Integer32,
    optIfOChSrcCurrentLowOutputPower             Integer32,
    optIfOChSrcCurrentHighOutputPower            Integer32,
    optIfOChSrcCurrentLowerOutputPowerThreshold  Integer32,
    optIfOChSrcCurrentUpperOutputPowerThreshold  Integer32
    }

optIfOChSrcCurrentSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChSrcCurrentEntry 1 }

optIfOChSrcCurrentOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The optical power monitored at the output."
  ::= { optIfOChSrcCurrentEntry 2 }

optIfOChSrcCurrentLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     current 15-minute interval."
  ::= { optIfOChSrcCurrentEntry 3 }

optIfOChSrcCurrentHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     current 15-minute interval."
  ::= { optIfOChSrcCurrentEntry 4 }

optIfOChSrcCurrentLowerOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
```

```
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The lower limit threshold on output power.  If
     optIfOChSrcCurrentOutputPower drops to this value or below,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChSrcCurrentEntry 5 }

optIfOChSrcCurrentUpperOutputPowerThreshold OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The upper limit threshold on output power.  If
     optIfOChSrcCurrentOutputPower reaches or exceeds this value,
     a Threshold Crossing Alert (TCA) should be sent."
  ::= { optIfOChSrcCurrentEntry 6 }

-- OCh source interval table
-- Contains data for previous 15-minute performance monitoring
-- intervals.

optIfOChSrcIntervalTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChSrcIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of historical OCh source performance monitoring
     information."
  ::= { optIfOCh 7 }

optIfOChSrcIntervalEntry OBJECT-TYPE
  SYNTAX  OptIfOChSrcIntervalEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OCh source performance
     monitoring information of an interface during a particular
     historical interval."
  INDEX  { ifIndex, optIfOChSrcIntervalNumber }
  ::= { optIfOChSrcIntervalTable 1 }

OptIfOChSrcIntervalEntry ::=
  SEQUENCE {
    optIfOChSrcIntervalNumber           OptIfIntervalNumber,
    optIfOChSrcIntervalSuspectedFlag    TruthValue,
    optIfOChSrcIntervalLastOutputPower  Integer32,
```

```
    optIfOChSrcIntervalLowOutputPower   Integer32,
    optIfOChSrcIntervalHighOutputPower  Integer32
    }

optIfOChSrcIntervalNumber OBJECT-TYPE
  SYNTAX  OptIfIntervalNumber
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Uniquely identifies the interval."
  ::= { optIfOChSrcIntervalEntry 1 }

optIfOChSrcIntervalSuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChSrcIntervalEntry 2 }

optIfOChSrcIntervalLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the output during the
     interval."
  ::= { optIfOChSrcIntervalEntry 3 }

optIfOChSrcIntervalLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     interval."
  ::= { optIfOChSrcIntervalEntry 4 }

optIfOChSrcIntervalHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     interval."
```

```
  ::= { optIfOChSrcIntervalEntry 5 }

-- OCh source current day table
-- Contains data for the current 24-hour performance
-- monitoring interval.

optIfOChSrcCurDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChSrcCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OCh source performance monitoring information for
     the current 24-hour interval."
  ::= { optIfOCh 8 }

optIfOChSrcCurDayEntry OBJECT-TYPE
  SYNTAX  OptIfOChSrcCurDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OCh source performance
     monitoring information of an interface for the current
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOChSrcCurDayTable 1 }

OptIfOChSrcCurDayEntry ::=
  SEQUENCE {
    optIfOChSrcCurDaySuspectedFlag    TruthValue,
    optIfOChSrcCurDayLowOutputPower   Integer32,
    optIfOChSrcCurDayHighOutputPower  Integer32
    }

optIfOChSrcCurDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChSrcCurDayEntry 1 }

optIfOChSrcCurDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
```

```
     current 24-hour interval."
  ::= { optIfOChSrcCurDayEntry 2 }

optIfOChSrcCurDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     current 24-hour interval."
  ::= { optIfOChSrcCurDayEntry 3 }

-- OCh source previous day table
-- Contains data for the previous 24-hour performance
-- monitoring interval.

optIfOChSrcPrevDayTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOChSrcPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OCh source performance monitoring information for
     the previous 24-hour interval."
  ::= { optIfOCh 9 }

optIfOChSrcPrevDayEntry OBJECT-TYPE
  SYNTAX  OptIfOChSrcPrevDayEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OCh source performance
     monitoring information of an interface for the previous
     24-hour interval."
  INDEX  { ifIndex }
  ::= { optIfOChSrcPrevDayTable 1 }

OptIfOChSrcPrevDayEntry ::=
  SEQUENCE {
    optIfOChSrcPrevDaySuspectedFlag    TruthValue,
    optIfOChSrcPrevDayLastOutputPower  Integer32,
    optIfOChSrcPrevDayLowOutputPower   Integer32,
    optIfOChSrcPrevDayHighOutputPower  Integer32
    }

optIfOChSrcPrevDaySuspectedFlag OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
```

```
  STATUS  current
  DESCRIPTION
    "If true, the data in this entry may be unreliable."
  ::= { optIfOChSrcPrevDayEntry 1 }

optIfOChSrcPrevDayLastOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The last optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOChSrcPrevDayEntry 2 }

optIfOChSrcPrevDayLowOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The lowest optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOChSrcPrevDayEntry 3 }

optIfOChSrcPrevDayHighOutputPower OBJECT-TYPE
  SYNTAX  Integer32
  UNITS  "0.1 dbm"
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The highest optical power monitored at the output during the
     previous 24-hour interval."
  ::= { optIfOChSrcPrevDayEntry 4 }

-- the optIfOTUk group
-- This group handles the configuration
-- information for OTUk layers.

-- OTUk config table

optIfOTUkConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfOTUkConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of OTUk configuration information."
  ::= { optIfOTUk 1 }
```

```
optIfOTUkConfigEntry OBJECT-TYPE
  SYNTAX  OptIfOTUkConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains OTUk configuration
     information of an interface."
  INDEX  { ifIndex }
  ::= { optIfOTUkConfigTable 1 }

OptIfOTUkConfigEntry ::=
  SEQUENCE {
    optIfOTUkDirectionality             OptIfDirectionality,
    optIfOTUkBitRateK                   OptIfBitRateK,
    optIfOTUkTraceIdentifierTransmitted OptIfTxTI,
    optIfOTUkDAPIExpected               OptIfExDAPI,
    optIfOTUkSAPIExpected               OptIfExSAPI,
    optIfOTUkTraceIdentifierAccepted    OptIfAcTI,
    optIfOTUkTIMDetMode                 OptIfTIMDetMode,
    optIfOTUkTIMActEnabled              TruthValue,
    optIfOTUkDEGThr                     OptIfDEGThr,
    optIfOTUkDEGM                       OptIfDEGM,
    optIfOTUkSinkAdaptActive            TruthValue,
    optIfOTUkSourceAdaptActive          TruthValue,
    optIfOTUkSinkFECEnabled             TruthValue,
    optIfOTUkCurrentStatus              BITS
    }

optIfOTUkDirectionality OBJECT-TYPE
  SYNTAX  OptIfDirectionality
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the directionality of the entity."
  ::= { optIfOTUkConfigEntry 1 }

optIfOTUkBitRateK OBJECT-TYPE
  SYNTAX  OptIfBitRateK
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the bit rate of the entity."
  ::= { optIfOTUkConfigEntry 2 }

optIfOTUkTraceIdentifierTransmitted OBJECT-TYPE
  SYNTAX  OptIfTxTI
  MAX-ACCESS  read-write
  STATUS  current
```

```
  DESCRIPTION
    "The trace identifier transmitted.
     This object is applicable when optIfOTUkDirectionality
     has the value source(2) or bidirectional(3).  It must not
     be instantiated in rows where optIfOTUkDirectionality
     has the value sink(1).
     If no value is ever set by a management entity for this
     object, system-specific default value will be used.
     Any implementation that instantiates this object must
     document the system-specific default value or how it
     is derived."
  ::= { optIfOTUkConfigEntry 3 }

optIfOTUkDAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExDAPI
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The DAPI expected by the receiver.
     This object is only applicable to the sink function, i.e.,
     only when optIfOTUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfOTUkDirectionality has the value source(2).
     This object has no effect when optIfOTUkTIMDetMode has
     the value off(1)."
  ::= { optIfOTUkConfigEntry 4 }

optIfOTUkSAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExSAPI
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The SAPI expected by the receiver.
     This object is only applicable to the sink function, i.e.,
     only when optIfOTUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfOTUkDirectionality has the value source(2).
     This object has no effect when optIfOTUkTIMDetMode has
     the value off(1)."
  ::= { optIfOTUkConfigEntry 5 }

optIfOTUkTraceIdentifierAccepted OBJECT-TYPE
  SYNTAX  OptIfAcTI
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The actual trace identifier accepted.
     This object is only applicable to the sink function, i.e.,
```

```
     only when optIfOTUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfOTUkDirectionality has the value source(2).
     The value of this object is unspecified when
     optIfOTUkCurrentStatus indicates a near-end defect
     (i.e., ssf(3), lof(4), ais(5), lom(6)) that prevents
     extraction of the trace message."
  ::= { optIfOTUkConfigEntry 6 }

optIfOTUkTIMDetMode OBJECT-TYPE
  SYNTAX  OptIfTIMDetMode
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "Indicates the mode of the Trace Identifier Mismatch (TIM)
     Detection function.
     This object is only applicable to the sink function, i.e.,
     only when optIfOTUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfOTUkDirectionality has the value source(2).
     The default value of this object is off(1)."
  ::= { optIfOTUkConfigEntry 7 }

optIfOTUkTIMActEnabled OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "Indicates whether the Trace Identifier Mismatch (TIM)
     Consequent Action function is enabled.
     This object is only applicable to the sink function, i.e.,
     only when optIfOTUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfOTUkDirectionality has the value source(2).
     This object has no effect when optIfOTUkTIMDetMode has
     the value off(1).
     The default value of this object is false(2)."
  ::= { optIfOTUkConfigEntry 8 }

optIfOTUkDEGThr OBJECT-TYPE
  SYNTAX  OptIfDEGThr
  UNITS   "percentage"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "Indicates the threshold level for declaring a performance
     monitoring (PM) Second to be bad.  A PM Second is declared bad if
     the percentage of detected errored blocks in that second is
```

```
     greater than or equal to optIfOTUkDEGThr.
     This object is only applicable to the sink function, i.e.,
     only when optIfOTUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfOTUkDirectionality has the value source(2).
     The default value of this object is Severely Errored Second
     (SES) Estimator (See ITU-T G.7710)."
  ::= { optIfOTUkConfigEntry 9 }

optIfOTUkDEGM OBJECT-TYPE
  SYNTAX  OptIfDEGM
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "Indicates the threshold level for declaring a Degraded Signal
     defect (dDEG).  A dDEG shall be declared if optIfOTUkDEGM
     consecutive bad PM Seconds are detected.
     This object is only applicable to the sink function, i.e.,
     only when optIfOTUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfOTUkDirectionality has the value source(2).
     The default value of this object is 7 (See ITU-T G.7710)."
  ::= { optIfOTUkConfigEntry 10 }

optIfOTUkSinkAdaptActive OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "Indicates whether the sink adaptation function is activated or
     not.
     This object is only applicable to the sink function, i.e.,
     only when optIfOTUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfOTUkDirectionality has the value source(2).
     The default value of this object is false(2)."
  ::= { optIfOTUkConfigEntry 11 }

optIfOTUkSourceAdaptActive OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "Indicates whether the source adaptation function is activated or
     not.
     This object is only applicable to the source function, i.e.,
     only when optIfOTUkDirectionality has the value source(2)
     or bidirectional(3).  It must not be instantiated in rows
```

```
     where optIfOTUkDirectionality has the value sink(1).
     The default value of this object is false(2)."
  ::= { optIfOTUkConfigEntry 12 }

optIfOTUkSinkFECEnabled OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "If Forward Error Correction (FEC) is supported, this object
     indicates whether FEC at the OTUk sink adaptation function is
     enabled or not.
     This object is only applicable to the sink function, i.e.,
     only when optIfOTUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfOTUkDirectionality has the value source(2).
     The default value of this object is true(1)."
  ::= { optIfOTUkConfigEntry 13 }

optIfOTUkCurrentStatus OBJECT-TYPE
  SYNTAX  BITS {
    tim(0),
    deg(1),
    bdi(2),
    ssf(3),
    lof(4),
    ais(5),
    lom(6)
    }
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the defect condition of the entity, if any.
     This object is only applicable to the sink function, i.e.,
     only when optIfOTUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfOTUkDirectionality has the value source(2)."
  ::= { optIfOTUkConfigEntry 14 }

-- GCC0 config table

optIfGCC0ConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfGCC0ConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of GCC0 configuration information."
  ::= { optIfOTUk 2 }
```

```
optIfGCC0ConfigEntry OBJECT-TYPE
  SYNTAX  OptIfGCC0ConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains GCC0 configuration
     information of an interface.  Each instance must
     correspond to an instance of optIfOTUkConfigEntry.
     Separate source and/or sink instances may exist
     for a given ifIndex value, or a single bidirectional
     instance may exist, but a bidirectional instance may
     not coexist with a source or sink instance.
     Instances of this conceptual row persist across
     agent restarts."
  INDEX  { ifIndex, optIfGCC0Directionality }
  ::= { optIfGCC0ConfigTable 1 }

OptIfGCC0ConfigEntry ::=
  SEQUENCE {
    optIfGCC0Directionality           OptIfDirectionality,
    optIfGCC0Application              SnmpAdminString,
    optIfGCC0RowStatus                RowStatus
    }

optIfGCC0Directionality OBJECT-TYPE
  SYNTAX  OptIfDirectionality
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Indicates the directionality of the entity.
     The values source(2) and bidirectional(3) are
     not allowed if the corresponding instance of
     optIfOTUkDirectionality has the value sink(1).
     The values sink(1) and bidirectional(3) are
     not allowed if the corresponding instance of
     optIfOTUkDirectionality has the value source(2)."
  ::= { optIfGCC0ConfigEntry 1 }

optIfGCC0Application OBJECT-TYPE
  SYNTAX  SnmpAdminString
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates the application transported by the GCC0 entity.
     Example applications are ECC, User data channel.

     The value of this object may not be changed when
     optIfGCC0RowStatus has the value active(1)."
```

```
  ::= { optIfGCC0ConfigEntry 2 }

optIfGCC0RowStatus OBJECT-TYPE
  SYNTAX  RowStatus
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "This columnar object is used for creating and deleting a
     conceptual row of the optIfGCC0 config table.
     It is used to model the addGCC0Access and removeGCC0Access
     operations of an OTUk_TTP for GCC0 access control as defined
     in G.874.1.  Setting RowStatus to createAndGo or createAndWait
     implies addGCC0Access.  Setting RowStatus to destroy implies
     removeGCC0Access."
  ::= { optIfGCC0ConfigEntry 3 }

-- the optIfODUk group
-- This group handles the configuration information
-- for the ODUk layers.

-- ODUk config table

optIfODUkConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfODUkConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of ODUk configuration information."
  ::= { optIfODUk 1 }

optIfODUkConfigEntry OBJECT-TYPE
  SYNTAX  OptIfODUkConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains ODUk configuration
     information of an interface."
  INDEX  { ifIndex }
  ::= { optIfODUkConfigTable 1 }

OptIfODUkConfigEntry ::=
  SEQUENCE {
    optIfODUkDirectionality             OptIfDirectionality,
    optIfODUkBitRateK                   OptIfBitRateK,
    optIfODUkTcmFieldsInUse             BITS,
    optIfODUkPositionSeqCurrentSize     Unsigned32,
    optIfODUkTtpPresent                 TruthValue
    }
```

```
optIfODUkDirectionality OBJECT-TYPE
  SYNTAX  OptIfDirectionality
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the directionality of the entity."
  ::= { optIfODUkConfigEntry 1 }

optIfODUkBitRateK OBJECT-TYPE
  SYNTAX  OptIfBitRateK
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the bit rate of the entity."
  ::= { optIfODUkConfigEntry 2 }

optIfODUkTcmFieldsInUse OBJECT-TYPE
  SYNTAX  BITS {
    tcmField1(0),
    tcmField2(1),
    tcmField3(2),
    tcmField4(3),
    tcmField5(4),
    tcmField6(5)
    }
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the TCM field(s) that are currently in use.
     The positions of the bits correspond to the TCM fields.
     A bit that is set to 1 means that the corresponding TCM
     field is used.  This object will be updated when rows are
     created in or deleted from the optIfODUkTConfigTable, or
     the optIfODUkTNimConfigTable."
  ::= { optIfODUkConfigEntry 3 }

optIfODUkPositionSeqCurrentSize OBJECT-TYPE
  SYNTAX  Unsigned32
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "This variable indicates the current size of the position
     sequence (i.e., number of TCM function and/or GCC12
     access that have been created in the ODUk interface).
     When the value of this variable is greater than zero,
     it means that one or more TCM function and/or GCC12
     access have been created in the ODUk interface.  In this
     case, there will be as many rows in the
```

```
     optIfODUkPositionSeqTable as the value of
     optIfODUkPositionSeqCurrentSize  corresponding to this
     ODUk interface, one row for each TCM function or GCC12
     access.  The position of the TCM function and/or
     GCC12 access within the sequence is indicated by the
     optIfODUkPositionSeqPosition variable in
     optIfODUkPositionSeqTable.
     The optIfODUkPositionSeqTable also provides pointers
     to the corresponding TCM function (optIfODUkT) and
     GCC12 access (optIfGCC12) entities."
  ::= { optIfODUkConfigEntry 4 }

optIfODUkTtpPresent OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "This object has the value true(1) if the ifEntry under which
     it is instantiated contains an ODUk Trail Termination Point,
     i.e., is the endpoint of an ODUk path.  In that case there
     will be a corresponding row in the ODUk TTP config table and
     it will not be possible to create corresponding rows in the
     ODUk NIM config table.  This object has the value false(2)
     if the ifEntry under which it is instantiated contains an
     intermediate ODUk Connection Termination Point.  In that case
     there is no corresponding row in the ODUk TTP config table,
     but it will be possible to create corresponding rows in the
     ODUk NIM config table.  This object also affects the allowable
     options in rows created in the GCC12 config table and in the
     ODUkT config table, as specified in the DESCRIPTION clauses
     of the columns in those tables."
  ::= { optIfODUkConfigEntry 5 }

-- ODUk Trail Termination Point (TTP) config table

optIfODUkTtpConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfODUkTtpConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of ODUk TTP configuration information."
  ::= { optIfODUk 2 }

optIfODUkTtpConfigEntry OBJECT-TYPE
  SYNTAX  OptIfODUkTtpConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
```

```
    "A conceptual row that contains ODUk TTP configuration
     information of an interface."
  INDEX  { ifIndex }
  ::= { optIfODUkTtpConfigTable 1 }

OptIfODUkTtpConfigEntry ::=
  SEQUENCE {
    optIfODUkTtpTraceIdentifierTransmitted  OptIfTxTI,
    optIfODUkTtpDAPIExpected                OptIfExDAPI,
    optIfODUkTtpSAPIExpected                OptIfExSAPI,
    optIfODUkTtpTraceIdentifierAccepted     OptIfAcTI,
    optIfODUkTtpTIMDetMode                  OptIfTIMDetMode,
    optIfODUkTtpTIMActEnabled               TruthValue,
    optIfODUkTtpDEGThr                      OptIfDEGThr,
    optIfODUkTtpDEGM                        OptIfDEGM,
    optIfODUkTtpCurrentStatus               BITS
    }

optIfODUkTtpTraceIdentifierTransmitted OBJECT-TYPE
  SYNTAX  OptIfTxTI
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The trace identifier transmitted.
     This object is applicable when optIfODUkDirectionality
     has the value source(2) or bidirectional(3).  It must not
     be instantiated in rows where optIfODUkDirectionality
     has the value sink(1).
     If no value is ever set by a management entity for this
     object, system-specific default value will be used.
     Any implementation that instantiates this object must
     document the system-specific default value or how it
     is derived."
  ::= { optIfODUkTtpConfigEntry 1 }

optIfODUkTtpDAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExDAPI
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The DAPI expected by the receiver.
     This object is only applicable to the sink function, i.e.,
     only when optIfODUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfODUkDirectionality has the value source(2).
     This object has no effect when optIfODUkTtpTIMDetMode has
     the value off(1)."
  ::= { optIfODUkTtpConfigEntry 2 }
```

```
optIfODUkTtpSAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExSAPI
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "The SAPI expected by the receiver.
     This object is only applicable to the sink function, i.e.,
     only when optIfODUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfODUkDirectionality has the value source(2).
     This object has no effect when optIfODUkTtpTIMDetMode has
     the value off(1)."
  ::= { optIfODUkTtpConfigEntry 3 }

optIfODUkTtpTraceIdentifierAccepted OBJECT-TYPE
  SYNTAX  OptIfAcTI
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The actual trace identifier accepted.
     This object is only applicable to the sink function, i.e.,
     only when optIfODUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfODUkDirectionality has the value source(2).
     The value of this object is unspecified when
     optIfODUkTtpCurrentStatus indicates a near-end defect
     (i.e., oci(0), lck(1), ssf(5)) that prevents extraction
     of the trace message."
  ::= { optIfODUkTtpConfigEntry 4 }

optIfODUkTtpTIMDetMode OBJECT-TYPE
  SYNTAX  OptIfTIMDetMode
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "Indicates the mode of the Trace Identifier Mismatch (TIM)
     Detection function.
     This object is only applicable to the sink function, i.e.,
     only when optIfODUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfODUkDirectionality has the value source(2).
     The default value of this object is off(1)."
  ::= { optIfODUkTtpConfigEntry 5 }

optIfODUkTtpTIMActEnabled OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-write
  STATUS  current
```

```
  DESCRIPTION
    "Indicates whether the Trace Identifier Mismatch (TIM)
     Consequent Action function is enabled.
     This object is only applicable to the sink function, i.e.,
     only when optIfODUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfODUkDirectionality has the value source(2).
     This object has no effect when optIfODUkTtpTIMDetMode has
     the value off(1).
     The default value of this object is false(2)."
  ::= { optIfODUkTtpConfigEntry 6 }

optIfODUkTtpDEGThr OBJECT-TYPE
  SYNTAX  OptIfDEGThr
  UNITS   "percentage"
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "Indicates the threshold level for declaring a performance
     monitoring (PM) Second to be bad.  A PM Second is declared bad if
     the percentage of detected errored blocks in that second is
     greater than or equal to optIfODUkDEGThr.
     This object is only applicable to the sink function, i.e.,
     only when optIfODUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfODUkDirectionality has the value source(2).
     The default value of this object is Severely Errored Second
     (SES) Estimator (See ITU-T G.7710)."
  ::= { optIfODUkTtpConfigEntry 7 }

optIfODUkTtpDEGM OBJECT-TYPE
  SYNTAX  OptIfDEGM
  MAX-ACCESS  read-write
  STATUS  current
  DESCRIPTION
    "Indicates the threshold level for declaring a Degraded Signal
     defect (dDEG).  A dDEG shall be declared if optIfODUkDEGM
     consecutive bad PM Seconds are detected.
     This object is only applicable to the sink function, i.e.,
     only when optIfODUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfODUkDirectionality has the value source(2).
     The default value of this object is 7 (See ITU-T G.7710)."
  ::= { optIfODUkTtpConfigEntry 8 }

optIfODUkTtpCurrentStatus OBJECT-TYPE
  SYNTAX  BITS {
    oci(0),
```

```
    lck(1),
    tim(2),
    deg(3),
    bdi(4),
    ssf(5)
    }
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the defect condition of the entity, if any.
     This object is only applicable to the sink function, i.e.,
     only when optIfODUkDirectionality has the value sink(1)
     or bidirectional(3).  It must not be instantiated in rows
     where optIfODUkDirectionality has the value source(2)."
  ::= { optIfODUkTtpConfigEntry 9 }

-- ODUk Position Sequence table

optIfODUkPositionSeqTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfODUkPositionSeqEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of ODUk Position Sequence information."
  ::= { optIfODUk 3 }

optIfODUkPositionSeqEntry OBJECT-TYPE
  SYNTAX  OptIfODUkPositionSeqEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains ODUk position sequence
     information of an ODUk interface.  The ODUk interface
     is identified by the ifIndex.  Associated with each
     ODUk interface there may be one of more conceptual
     rows in the optIfODUkPositionSeqTable.  Each row
     represents a TCM or GCC12 access function within the
     associated ODUk interface.  Rows of the
     optIfODUkPositionSeqTable table are created/deleted
     as the result of the creation/deletion of the optIfODUkT
     or optIfGCC12 entities."
  INDEX  { ifIndex, optIfODUkPositionSeqIndex }
  ::= { optIfODUkPositionSeqTable 1 }

OptIfODUkPositionSeqEntry ::=
  SEQUENCE {
    optIfODUkPositionSeqIndex           Unsigned32,
    optIfODUkPositionSeqPosition        Unsigned32,
```

```
    optIfODUkPositionSeqPointer          RowPointer
    }

optIfODUkPositionSeqIndex OBJECT-TYPE
  SYNTAX  Unsigned32 (1..4294967295)
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "This variable identifies a row in the
     optIfODUkPositionSeqTable Table.
     Each row of the optIfODUkPositionSeqTable Table
     represents a TCM or GCC12 access function within the
     associated ODUk interface."
  ::= { optIfODUkPositionSeqEntry 1 }

optIfODUkPositionSeqPosition OBJECT-TYPE
  SYNTAX  Unsigned32
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "This variable indicates the position of the TCM or
     GCC12 access function within the sequence of TCMs &
     GCC12 access functions of the associated ODUk
     interface.  The TCM or GCC12 presented by this row is
     referenced by the optIfODUkPositionSeqPointer variable."
  ::= { optIfODUkPositionSeqEntry 2 }

optIfODUkPositionSeqPointer OBJECT-TYPE
  SYNTAX  RowPointer
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "This variable identifies the TCM or GCC12 access function
     by pointing to the corresponding optIfODUkT or optIfGCC12
     entity."
  ::= { optIfODUkPositionSeqEntry 3 }

-- ODUk Non-intrusive monitoring (Nim) config table

optIfODUkNimConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfODUkNimConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of ODUkNim configuration information."
  ::= { optIfODUk 4 }

optIfODUkNimConfigEntry OBJECT-TYPE
```

```
  SYNTAX  OptIfODUkNimConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains ODUkNim configuration
     information of an interface.  Each instance must
     correspond to an instance of optIfODUkConfigEntry
     for which optIfODUkTtpPresent has the value false(2).

     Instances of this conceptual row persist across
     agent restarts, and read-create columns other
     than the status column may be modified while the
     row is active."
  INDEX  { ifIndex, optIfODUkNimDirectionality }
  ::= { optIfODUkNimConfigTable 1 }

OptIfODUkNimConfigEntry ::=
  SEQUENCE {
    optIfODUkNimDirectionality              OptIfSinkOrSource,
    optIfODUkNimDAPIExpected                OptIfExDAPI,
    optIfODUkNimSAPIExpected                OptIfExSAPI,
    optIfODUkNimTraceIdentifierAccepted     OptIfAcTI,
    optIfODUkNimTIMDetMode                  OptIfTIMDetMode,
    optIfODUkNimTIMActEnabled               TruthValue,
    optIfODUkNimDEGThr                      OptIfDEGThr,
    optIfODUkNimDEGM                        OptIfDEGM,
    optIfODUkNimCurrentStatus               BITS,
    optIfODUkNimRowStatus                   RowStatus
    }

optIfODUkNimDirectionality OBJECT-TYPE
  SYNTAX  OptIfSinkOrSource
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Specifies the monitor point for the ODUk Path non-intrusive
     monitoring function.  The value source(2) is not allowed
     if the corresponding instance of optIfODUkDirectionality
     has the value sink(1), and the value sink(1) is not allowed
     if the corresponding instance of optIfODUkDirectionality
     has the value source(2).  Either the value sink(1) or
     source(2) is allowed if the corresponding instance of
     optIfODUkDirectionality has the value bidirectional(3).

     The value sink(1) means monitoring at the sink direction
     path signal of the ODUk CTP.

     The value source(2) means monitoring at the source direction
```

```
     path signal of the ODUk CTP.  Monitoring the source direction
     of an ODUk CTP is necessary in those cases where the ODUk CTP
     is at an SNCP (Subnetwork Connection Protection) end (e.g., see
     Figure I.1.2/G.874.1).  If one would like to get the performance
     of the protected connection, one cannot use the NIM function
     at both ODUk CTP sinks (before the matrix), instead one should
     monitor the signal at the source ODUk CTP after the matrix."
  ::= { optIfODUkNimConfigEntry 1 }

optIfODUkNimDAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExDAPI
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "The DAPI expected by the receiver.
     This object has no effect if optIfODUkNimTIMDetMode has
     the value off(1) or sapi(3)."
  ::= { optIfODUkNimConfigEntry 2 }

optIfODUkNimSAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExSAPI
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "The SAPI expected by the receiver.
     This object has no effect if optIfODUkNimTIMDetMode has
     the value off(1) or dapi(2)."
  ::= { optIfODUkNimConfigEntry 3 }

optIfODUkNimTraceIdentifierAccepted OBJECT-TYPE
  SYNTAX  OptIfAcTI
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The actual trace identifier accepted.  The value of
     this object is unspecified if optIfODUkNimCurrentStatus
     has any of the bit positions oci(0), lck(1), or ssf(5)
     set or if optIfODUkNimRowStatus has any value other
     than active(1)."
  ::= { optIfODUkNimConfigEntry 4 }

optIfODUkNimTIMDetMode OBJECT-TYPE
  SYNTAX  OptIfTIMDetMode
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates the mode of the Trace Identifier Mismatch (TIM)
     Detection function."
```

```
  ::= { optIfODUkNimConfigEntry 5 }

optIfODUkNimTIMActEnabled OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates whether the Trace Identifier Mismatch (TIM)
     Consequent Action function is enabled."
  ::= { optIfODUkNimConfigEntry 6 }

optIfODUkNimDEGThr OBJECT-TYPE
  SYNTAX  OptIfDEGThr
  UNITS   "percentage"
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates the threshold level for declaring a performance
     monitoring (PM) Second to be bad.  A PM Second is declared bad
     if the percentage of detected errored blocks in that second is
     greater than or equal to optIfODUkNimDEGThr."
  ::= { optIfODUkNimConfigEntry 7 }

optIfODUkNimDEGM OBJECT-TYPE
  SYNTAX  OptIfDEGM
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates the threshold level for declaring a Degraded Signal
     defect (dDEG).  A dDEG shall be declared if optIfODUkNimDEGM
     consecutive bad PM Seconds are detected."
  ::= { optIfODUkNimConfigEntry 8 }

optIfODUkNimCurrentStatus OBJECT-TYPE
  SYNTAX  BITS {
    oci(0),
    lck(1),
    tim(2),
    deg(3),
    bdi(4),
    ssf(5)
    }
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the defect condition of the entity, if
     any.  The value of this object is unspecified if
     optIfODUkNimRowStatus has any value other than
```

```
     active(1)."
  ::= { optIfODUkNimConfigEntry 9 }

optIfODUkNimRowStatus OBJECT-TYPE
  SYNTAX  RowStatus
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "This columnar object is used for creating and deleting
     a conceptual row of the optIfODUkNim config table.
     It is used to model the activateNim and deactivateNim
     operations of an OTUk_CTP for non-intrusive monitoring
     control as defined in G.874.1.  Setting RowStatus to
     createAndGo or createAndWait implies activateNim.
     Setting RowStatus to destroy implies deactivateNim."
  ::= { optIfODUkNimConfigEntry 10 }

-- GCC12 config table

optIfGCC12ConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfGCC12ConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of GCC12 configuration information.
     The GCC function processes the GCC overhead bytes passing
     through them but leave the remainder of the ODUk overhead
     and payload data alone."
  ::= { optIfODUk 5 }

optIfGCC12ConfigEntry OBJECT-TYPE
  SYNTAX  OptIfGCC12ConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains GCC12 configuration
     information of an interface.  Each instance must
     correspond to an instance of optIfODUkConfigEntry.
     Separate instances providing GCC1-only access and
     GCC2-only access may exist for a given ifIndex value,
     or a single instance providing GCC1 + GCC2 may exist,
     but a GCC1 + GCC2 instance may not coexist with a
     GCC1-only or GCC2-only instance.

     Instances of this conceptual row persist across agent
     restarts."
  INDEX  { ifIndex, optIfGCC12Codirectional, optIfGCC12GCCAccess }
  ::= { optIfGCC12ConfigTable 1 }
```

```
OptIfGCC12ConfigEntry ::=
  SEQUENCE {
    optIfGCC12Codirectional      TruthValue,
    optIfGCC12GCCAccess          INTEGER,
    optIfGCC12GCCPassThrough     TruthValue,
    optIfGCC12Application        SnmpAdminString,
    optIfGCC12RowStatus          RowStatus
    }

optIfGCC12Codirectional OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Indicates the directionality of the GCC12 termination with
     respect to the associated ODUk CTP.  The value true(1) means
     that the sink part of the GCC12 extracts COMMS data from the
     signal at the input to the ODUk CTP sink and the source part
     of the GCC12 inserts COMMS data into the signal at the output
     of the ODUk CTP source.  The value false(2) means that the
     sink part of the GCC12 extracts COMMS data from the signal at
     the output of the ODUk CTP source and the source part of the
     GCC12 inserts COMMS data into the signal at the input of the
     ODUk CTP sink.  This attribute may assume either value when
     the corresponding instance of optIfODUkTtpPresent has the
     value false(2).  When the value of the corresponding instance
     of optIfODUkTtpPresent is true(1) then the only value allowed
     for this attribute is true(1)."
  ::= { optIfGCC12ConfigEntry 1 }

optIfGCC12GCCAccess OBJECT-TYPE
  SYNTAX  INTEGER {
     gcc1 (1),
     gcc2 (2),
     gcc1and2 (3)
   }
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Indicates the GCC access represented by the entity."
  ::= { optIfGCC12ConfigEntry 2 }

optIfGCC12GCCPassThrough OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Controls whether the selected GCC overhead bytes are passed
```

```
     through or modified.  The value true(1) means that the selected
     GCC overhead bytes are passed through unmodified from the ODUk
     CTP input to the ODUk CTP output.  The value false(2) means that
     the selected GCC overhead bytes are set to zero at the ODUk CTP
     output after the extraction of the COMMS data.  This object has
     no effect if the corresponding instance of optIfODUkTtpPresent
     has the value true(1).

     The value of this object may not be changed when
     optIfGCC12RowStatus has the value active(1)."
  ::= { optIfGCC12ConfigEntry 3 }

optIfGCC12Application OBJECT-TYPE
  SYNTAX  SnmpAdminString
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates the application transported by the GCC12 entity.
     Example applications are ECC, User data channel.

     The value of this object may not be changed when
     optIfGCC12RowStatus has the value active(1)."
  ::= { optIfGCC12ConfigEntry 4 }

optIfGCC12RowStatus OBJECT-TYPE
  SYNTAX  RowStatus
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "This columnar object is used for creating and deleting
     a conceptual row of the optIfGCC12 config table.  It is
     used to model the addGCC12Access and removeGCC12Access
     operations of an ODUk_CTP or ODUk_TTP for GCC12 access
     control as defined in G.874.1.  Setting RowStatus to
     createAndGo or createAndWait implies addGCC12Access.
     Setting RowStatus to destroy implies removeGCC12Access.
     Successful addition/removal of the GCC12 access function
     will result in updating the
     optIfODUkPositionSeqCurrentSize variable and the
     optIfODUkPositionSeqTable table of the associated
     ODUk entry in the optIfODUkConfigTable."
  ::= { optIfGCC12ConfigEntry 5 }

-- the optIfODUkT group
-- This group handles the configuration information
-- for the ODUkT layers.

-- ODUkT config table
```

```
optIfODUkTConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfODUkTConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of ODUkT configuration information."
  ::= { optIfODUkT 1 }

optIfODUkTConfigEntry OBJECT-TYPE
  SYNTAX  OptIfODUkTConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains ODUkT configuration
     information of an interface.  Each instance must
     correspond to an instance of optIfODUkConfigEntry.
     Rows in this table are mutually exclusive with rows
     in the ODUkT NIM config table -- in other words, this
     row object may not be instantiated for a given pair
     of ifIndex and TCM field values if a corresponding
     instance of optIfODUkTNimConfigEntry already exists.

     Instances of this conceptual row persist across agent
     restarts.  Except where noted otherwise, read-create
     columns other than the status column may be modified
     while the row is active."
  INDEX  { ifIndex, optIfODUkTTcmField, optIfODUkTCodirectional }
  ::= { optIfODUkTConfigTable 1 }

OptIfODUkTConfigEntry ::=
  SEQUENCE {
    optIfODUkTTcmField                    Unsigned32,
    optIfODUkTCodirectional               TruthValue,
    optIfODUkTTraceIdentifierTransmitted  OptIfTxTI,
    optIfODUkTDAPIExpected                OptIfExDAPI,
    optIfODUkTSAPIExpected                OptIfExSAPI,
    optIfODUkTTraceIdentifierAccepted     OptIfAcTI,
    optIfODUkTTIMDetMode                  OptIfTIMDetMode,
    optIfODUkTTIMActEnabled               TruthValue,
    optIfODUkTDEGThr                      OptIfDEGThr,
    optIfODUkTDEGM                        OptIfDEGM,
    optIfODUkTSinkMode                    INTEGER,
    optIfODUkTSinkLockSignalAdminState    INTEGER,
    optIfODUkTSourceLockSignalAdminState  INTEGER,
    optIfODUkTCurrentStatus               BITS,
    optIfODUkTRowStatus                   RowStatus
    }
```

```
optIfODUkTTcmField OBJECT-TYPE
  SYNTAX  Unsigned32 (1..6)
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Indicates the tandem connection monitoring
     field of the ODUk OH.  Valid values are
     integers from 1 to 6."
  ::= { optIfODUkTConfigEntry 1 }

optIfODUkTCodirectional OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Indicates the directionality of the ODUkT termination point with
     respect to the associated ODUk CTP.  The value true(1) means
     that the sink part of the ODUkT TP extracts TCM data from the
     signal at the input to the ODUk CTP sink and the source part
     of the ODUkT TP inserts TCM data into the signal at the output
     of the ODUk CTP source.  The value false(2) means that the
     sink part of the ODUkT TP extracts TCM data from the signal at
     the output of the ODUk CTP source and the source part of the
     ODUkT TP inserts TCM data into the signal at the input of the
     ODUk CTP sink.  This attribute may assume either value when
     the corresponding instance of optIfODUkTtpPresent has the
     value false(2).  When the value of the corresponding instance
     of optIfODUkTtpPresent is true(1) then the only value allowed
     for this attribute is true(1)."
  ::= { optIfODUkTConfigEntry 2 }

optIfODUkTTraceIdentifierTransmitted OBJECT-TYPE
  SYNTAX  OptIfTxTI
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "The trace identifier transmitted.
     This object is applicable only to the following three cases.
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value false(2), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value true(1).
     It must not be instantiated in rows for all other cases."
  ::= { optIfODUkTConfigEntry 3 }

optIfODUkTDAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExDAPI
```

```
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "The DAPI expected by the receiver.
     This object is applicable only to the following three cases.
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
     It must not be instantiated in rows for all other cases.
     This object has no effect when optIfODUkTTIMDetMode has
     the value off(1)."
  ::= { optIfODUkTConfigEntry 4 }

optIfODUkTSAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExSAPI
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "The SAPI expected by the receiver.
     This object is applicable only to the following three cases.
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
     It must not be instantiated in rows for all other cases.
     This object has no effect when optIfODUkTTIMDetMode has
     the value off(1)."
  ::= { optIfODUkTConfigEntry 5 }

optIfODUkTTraceIdentifierAccepted OBJECT-TYPE
  SYNTAX  OptIfAcTI
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The actual trace identifier accepted.
     This object is applicable only to the following three cases.
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
     It must not be instantiated in rows for all other cases.
     The value of this object is unspecified when
     optIfODUkTCurrentStatus indicates a near-end defect
     (i.e., oci(0), lck(1), ssf(5)) that prevents extraction
```

```
     of the trace message."
  ::= { optIfODUkTConfigEntry 6 }

optIfODUkTTIMDetMode OBJECT-TYPE
  SYNTAX  OptIfTIMDetMode
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates the mode of the Trace Identifier Mismatch (TIM)
     Detection function.
     This object is applicable only to the following three cases.
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
     It must not be instantiated in rows for all other cases.
     The default value of this object is off(1)."
  ::= { optIfODUkTConfigEntry 7 }

optIfODUkTTIMActEnabled OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates whether the Trace Identifier Mismatch (TIM)
     Consequent Action function is enabled.
     This object is applicable only to the following three cases.
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
     It must not be instantiated in rows for all other cases.
     This object has no effect when optIfODUkTTIMDetMode has
     the value off(1).
     The default value of this object is false(2)."
  ::= { optIfODUkTConfigEntry 8 }

optIfODUkTDEGThr OBJECT-TYPE
  SYNTAX  OptIfDEGThr
  UNITS   "percentage"
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates the threshold level for declaring a performance
     monitoring (PM) Second to be bad.  A PM Second is declared bad if
     the percentage of detected errored blocks in that second is
```

```
     greater than or equal to optIfODUkTDEGThr.
     This object is applicable only to the following three cases.
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
     It must not be instantiated in rows for all other cases.
     The default value of this object is Severely Errored Second
     (SES) Estimator (See ITU-T G.7710)."
  ::= { optIfODUkTConfigEntry 9 }

optIfODUkTDEGM OBJECT-TYPE
  SYNTAX  OptIfDEGM
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates the threshold level for declaring a Degraded Signal
     defect (dDEG).  A dDEG shall be declared if optIfODUkTDEGM
     consecutive bad PM Seconds are detected.
     This object is applicable only to the following three cases.
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
     It must not be instantiated in rows for all other cases.
     The default value of this object is 7 (See ITU-T G.7710)."
  ::= { optIfODUkTConfigEntry 10 }

optIfODUkTSinkMode OBJECT-TYPE
  SYNTAX  INTEGER  {
    operational (1),
    monitor (2)
    }
  MAX-ACCESS  read-create
  STATUS      current
  DESCRIPTION
    "This variable specifies the TCM mode at the entity.
     The value operational(1) means that TCM Overhead (TCMOH)
     processes (see ITU-T G.798) shall be
     performed and consequent actions for AIS, Trail
     Signal Fail (TSF), Trail Signal Degraded (TSD) shall be
     initiated in case of defects.
     The value monitor(2) means that TCMOH processes shall be
     performed but consequent actions for AIS, Trail
     Server Failure (TSF), Trail Server Degraded (TSD) shall _not_ be
     initiated in case of defects.
```

```
     This object is applicable only when the value of
     optIfODUkTtpPresent is false(2) and also either one of the
     following three cases holds:
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
     It must not be instantiated in rows for all other cases."
  ::= { optIfODUkTConfigEntry 11 }

optIfODUkTSinkLockSignalAdminState OBJECT-TYPE
  SYNTAX  INTEGER {
    locked(1),
    normal(2)
    }
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Provides the capability to provision the LOCK signal, which
     is one of the ODUk maintenance signals, at the ODUKT sink.  When
     a Tandem Connection endpoint is set to admin state locked,
     it inserts the ODUk-LCK signal in the sink direction.

     This object is applicable only when the value of
     optIfODUkTtpPresent is false(2) and also either one of the
     following three cases holds:
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
     It must not be instantiated in rows for all other cases."
  ::= { optIfODUkTConfigEntry 12 }

optIfODUkTSourceLockSignalAdminState OBJECT-TYPE
  SYNTAX  INTEGER {
    locked(1),
    normal(2)
    }
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Provides the capability to provision the LOCK signal, which
     is one of the ODUk maintenance signals, at the source.
     When a Tandem Connection endpoint is set to admin state
     locked, it inserts the ODUk-LCK signal in the source
     direction.
```

```
     This object is applicable only when either one of the
     following three cases holds:
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value false(2), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value true(1).
     It must not be instantiated in rows for all other cases."
  ::= { optIfODUkTConfigEntry 13 }

optIfODUkTCurrentStatus OBJECT-TYPE
  SYNTAX  BITS {
    oci(0),
    lck(1),
    tim(2),
    deg(3),
    bdi(4),
    ssf(5)
    }
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the defect condition of the entity, if any.
     This object is applicable only when either one of the
     following three cases holds:
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
     It must not be instantiated in rows for all other cases."
  ::= { optIfODUkTConfigEntry 14 }

optIfODUkTRowStatus OBJECT-TYPE
  SYNTAX  RowStatus
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "This columnar object is used for creating and deleting a
     conceptual row of the optIfODUkT config table.
     It is used to model the addTCM and removeTCM operations of an
     ODUk_CTP or ODUk_TTP for Tandem connection monitoring as defined
     in ITU-T G.874.1.
     Setting RowStatus to createAndGo or createAndWait implies addTCM.
     Setting RowStatus to destroy implies removeTCM.
     Successful addition/removal of TCM will result in updating the
     optIfODUkTcmFieldsInUse and optIfODUkPositionSeqCurrentSize
     variables and the optIfODUkPositionSeqTable table of the
```

```
     associated ODUk entry in the optIfODUkConfigTable."
  ::= { optIfODUkTConfigEntry 15 }

-- ODUkT Non-intrusive monitoring (Nim) config table

optIfODUkTNimConfigTable OBJECT-TYPE
  SYNTAX  SEQUENCE OF OptIfODUkTNimConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A table of ODUkTNim configuration information."
  ::= { optIfODUkT 2 }

optIfODUkTNimConfigEntry OBJECT-TYPE
  SYNTAX  OptIfODUkTNimConfigEntry
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "A conceptual row that contains ODUkTNim configuration
     information of an interface.  Each instance must
     correspond to an instance of optIfODUkConfigEntry.
     Rows in this table are mutually exclusive with rows
     in the ODUkT config table -- in other words, this
     row object may not be instantiated for a given pair
     of ifIndex and TCM field values if a corresponding
     instance of optIfODUkTConfigEntry already exists.

     Instances of this conceptual row persist across
     agent restarts, and read-create columns other
     than the status column may be modified while the
     row is active."
  INDEX  {ifIndex, optIfODUkTNimTcmField, optIfODUkTNimDirectionality}
  ::= { optIfODUkTNimConfigTable 1 }

OptIfODUkTNimConfigEntry ::=
  SEQUENCE {
    optIfODUkTNimTcmField                   Unsigned32,
    optIfODUkTNimDirectionality             OptIfSinkOrSource,
    optIfODUkTNimDAPIExpected               OptIfExDAPI,
    optIfODUkTNimSAPIExpected               OptIfExSAPI,
    optIfODUkTNimTraceIdentifierAccepted    OptIfAcTI,
    optIfODUkTNimTIMDetMode                 OptIfTIMDetMode,
    optIfODUkTNimTIMActEnabled              TruthValue,
    optIfODUkTNimDEGThr                     OptIfDEGThr,
    optIfODUkTNimDEGM                       OptIfDEGM,
    optIfODUkTNimCurrentStatus              BITS,
    optIfODUkTNimRowStatus                  RowStatus
    }
```

```
optIfODUkTNimTcmField OBJECT-TYPE
  SYNTAX  Unsigned32 (1..6)
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Indicates the tandem connection monitoring
     field of the ODUk OH on which non-intrusive monitoring
     is performed.  Valid values are
     integers from 1 to 6."
  ::= { optIfODUkTNimConfigEntry 1 }

optIfODUkTNimDirectionality OBJECT-TYPE
  SYNTAX  OptIfSinkOrSource
  MAX-ACCESS  not-accessible
  STATUS  current
  DESCRIPTION
    "Specifies the monitor point for the ODUk TCM non-intrusive
     monitoring function.  The value source(2) is not allowed
     if the corresponding instance of optIfODUkDirectionality
     has the value sink(1), and the value sink(1) is not allowed
     if the corresponding instance of optIfODUkDirectionality
     has the value source(2).  Either the value sink(1) or
     source(2) is allowed if the corresponding instance of
     optIfODUkDirectionality has the value bidirectional(3).
     The value sink(1) means monitoring at the sink direction
     TCM signal of the ODUk CTP.
     The value source(2) means monitoring at the source direction
     path signal of the ODUk CTP."
  ::= { optIfODUkTNimConfigEntry 2 }

optIfODUkTNimDAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExDAPI
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "The DAPI expected by the receiver.
     This object has no effect if optIfODUkTNimTIMDetMode has
     the value off(1) or sapi(3)."
  ::= { optIfODUkTNimConfigEntry 3 }

optIfODUkTNimSAPIExpected OBJECT-TYPE
  SYNTAX  OptIfExSAPI
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "The SAPI expected by the receiver.
     This object has no effect if optIfODUkTNimTIMDetMode has
     the value off(1) or dapi(2)."
```

```
  ::= { optIfODUkTNimConfigEntry 4 }

optIfODUkTNimTraceIdentifierAccepted OBJECT-TYPE
  SYNTAX  OptIfAcTI
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "The actual trace identifier accepted.  The value of
     this object is unspecified if optIfODUkTNimCurrentStatus
     has any of the bit positions oci(0), lck(1), or ssf(5)
     set or if optIfODUkTNimRowStatus has any value other
     than active(1)."
  ::= { optIfODUkTNimConfigEntry 5 }

optIfODUkTNimTIMDetMode OBJECT-TYPE
  SYNTAX  OptIfTIMDetMode
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates the mode of the Trace Identifier Mismatch (TIM)
     Detection function."
  ::= { optIfODUkTNimConfigEntry 6 }

optIfODUkTNimTIMActEnabled OBJECT-TYPE
  SYNTAX  TruthValue
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates whether the Trace Identifier Mismatch (TIM)
     Consequent Action function is enabled."
  ::= { optIfODUkTNimConfigEntry 7 }

optIfODUkTNimDEGThr OBJECT-TYPE
  SYNTAX  OptIfDEGThr
  UNITS   "percentage"
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "Indicates the threshold level for declaring a performance
     monitoring (PM) Second to be bad.  A PM Second is declared bad if
     the percentage of detected errored blocks in that second is
     greater than or equal to optIfODUkTNimDEGThr."
  ::= { optIfODUkTNimConfigEntry 8 }

optIfODUkTNimDEGM OBJECT-TYPE
  SYNTAX  OptIfDEGM
  MAX-ACCESS  read-create
  STATUS  current
```

```
  DESCRIPTION
    "Indicates the threshold level for declaring a Degraded Signal
     defect (dDEG).  A dDEG shall be declared if optIfODUkTNimDEGM
     consecutive bad PM Seconds are detected."
  ::= { optIfODUkTNimConfigEntry 9 }

optIfODUkTNimCurrentStatus OBJECT-TYPE
  SYNTAX  BITS {
    oci(0),
    lck(1),
    tim(2),
    deg(3),
    bdi(4),
    ssf(5)
    }
  MAX-ACCESS  read-only
  STATUS  current
  DESCRIPTION
    "Indicates the defect condition of the entity, if any.
     The value of this object is unspecified if
     optIfODUkTNimRowStatus has any value other than
     active(1)."
  ::= { optIfODUkTNimConfigEntry 10 }

optIfODUkTNimRowStatus OBJECT-TYPE
  SYNTAX  RowStatus
  MAX-ACCESS  read-create
  STATUS  current
  DESCRIPTION
    "This columnar object is used for creating and deleting a
     conceptual row of the optIfODUkTNim config table.
     It is used to model the addTCM and removeTCM operations of an
     ODUk_CTP or ODUk_TTP for non-intrusive Tandem connection
     monitoring as defined in ITU-T G.874.1.
     Setting RowStatus to createAndGo or createAndWait implies addTCM.
     Setting RowStatus to destroy implies removeTCM.
     Successful addition/removal of Nim TCM will result in updating
     the optIfODUkPositionSeqCurrentSize variable and the
     optIfODUkPositionSeqTable table of the associated ODUk entry
     in the optIfODUkConfigTable."
  ::= { optIfODUkTNimConfigEntry 11 }

-- units of conformance

optIfOTMnGroup OBJECT-GROUP
  OBJECTS  {
    optIfOTMnOrder,
    optIfOTMnReduced,
```

```
    optIfOTMnBitRates,
    optIfOTMnInterfaceType,
    optIfOTMnTcmMax,
    optIfOTMnOpticalReach
    }
  STATUS  current
  DESCRIPTION
    "A collection of OTMn structure information objects."
  ::= { optIfGroups 1 }

optIfPerfMonGroup OBJECT-GROUP
  OBJECTS  {
    optIfPerfMonCurrentTimeElapsed,
    optIfPerfMonCurDayTimeElapsed,
    optIfPerfMonIntervalNumIntervals,
    optIfPerfMonIntervalNumInvalidIntervals
    }
  STATUS  current
  DESCRIPTION
    "A collection of performance monitoring interval objects."
  ::= { optIfGroups 2 }

optIfOTSnCommonGroup OBJECT-GROUP
  OBJECTS  {
    optIfOTSnDirectionality
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all OTSn interfaces."
  ::= { optIfGroups 3 }

optIfOTSnSourceGroupFull OBJECT-GROUP
  OBJECTS  {
    optIfOTSnTraceIdentifierTransmitted
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to full-functionality/IaDI OTSn
     interfaces that support source functions."
  ::= { optIfGroups 4 }

optIfOTSnAPRStatusGroup OBJECT-GROUP
  OBJECTS  {
    optIfOTSnAprStatus
    }
  STATUS  current
```

```
  DESCRIPTION
    "A collection of objects applicable to
     OTSn interfaces that support Automatic
     Power Reduction functions."
  ::= { optIfGroups 5 }

optIfOTSnAPRControlGroup OBJECT-GROUP
  OBJECTS  {
    optIfOTSnAprControl
    }
  STATUS  current
  DESCRIPTION
    "A collection of objects applicable to
     OTSn interfaces that provide Automatic
     Power Reduction control functions."
  ::= { optIfGroups 6 }

optIfOTSnSinkGroupBasic OBJECT-GROUP
  OBJECTS  {
    optIfOTSnCurrentStatus
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all OTSn interfaces that
     support sink functions."
  ::= { optIfGroups 7 }

optIfOTSnSinkGroupFull OBJECT-GROUP
  OBJECTS  {
    optIfOTSnDAPIExpected,
    optIfOTSnSAPIExpected,
    optIfOTSnTraceIdentifierAccepted,
    optIfOTSnTIMDetMode,
    optIfOTSnTIMActEnabled
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to full-functionality/IaDI OTSn
     interfaces that support sink functions."
  ::= { optIfGroups 8 }

optIfOTSnSinkPreOtnPMGroup OBJECT-GROUP
  OBJECTS  {
    optIfOTSnSinkCurrentSuspectedFlag,
    optIfOTSnSinkCurrentInputPower,
    optIfOTSnSinkCurrentLowInputPower,
```

```
    optIfOTSnSinkCurrentHighInputPower,
    optIfOTSnSinkCurrentOutputPower,
    optIfOTSnSinkCurrentLowOutputPower,
    optIfOTSnSinkCurrentHighOutputPower,
    optIfOTSnSinkIntervalSuspectedFlag,
    optIfOTSnSinkIntervalLastInputPower,
    optIfOTSnSinkIntervalLowInputPower,
    optIfOTSnSinkIntervalHighInputPower,
    optIfOTSnSinkIntervalLastOutputPower,
    optIfOTSnSinkIntervalLowOutputPower,
    optIfOTSnSinkIntervalHighOutputPower,
    optIfOTSnSinkCurDaySuspectedFlag,
    optIfOTSnSinkCurDayLowInputPower,
    optIfOTSnSinkCurDayHighInputPower,
    optIfOTSnSinkCurDayLowOutputPower,
    optIfOTSnSinkCurDayHighOutputPower,
    optIfOTSnSinkPrevDaySuspectedFlag,
    optIfOTSnSinkPrevDayLastInputPower,
    optIfOTSnSinkPrevDayLowInputPower,
    optIfOTSnSinkPrevDayHighInputPower,
    optIfOTSnSinkPrevDayLastOutputPower,
    optIfOTSnSinkPrevDayLowOutputPower,
    optIfOTSnSinkPrevDayHighOutputPower
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     objects applicable to OTSn interfaces that
     support sink functions."
  ::= { optIfGroups 9 }

optIfOTSnSinkPreOtnPMThresholdGroup OBJECT-GROUP
  OBJECTS  {
    optIfOTSnSinkCurrentLowerInputPowerThreshold,
    optIfOTSnSinkCurrentUpperInputPowerThreshold,
    optIfOTSnSinkCurrentLowerOutputPowerThreshold,
    optIfOTSnSinkCurrentUpperOutputPowerThreshold
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     threshold objects applicable to OTSn interfaces
     that support sink functions."
  ::= { optIfGroups 10 }

optIfOTSnSourcePreOtnPMGroup OBJECT-GROUP
  OBJECTS  {
    optIfOTSnSrcCurrentSuspectedFlag,
```

```
    optIfOTSnSrcCurrentOutputPower,
    optIfOTSnSrcCurrentLowOutputPower,
    optIfOTSnSrcCurrentHighOutputPower,
    optIfOTSnSrcCurrentInputPower,
    optIfOTSnSrcCurrentLowInputPower,
    optIfOTSnSrcCurrentHighInputPower,
    optIfOTSnSrcIntervalSuspectedFlag,
    optIfOTSnSrcIntervalLastOutputPower,
    optIfOTSnSrcIntervalLowOutputPower,
    optIfOTSnSrcIntervalHighOutputPower,
    optIfOTSnSrcIntervalLastInputPower,
    optIfOTSnSrcIntervalLowInputPower,
    optIfOTSnSrcIntervalHighInputPower,
    optIfOTSnSrcCurDaySuspectedFlag,
    optIfOTSnSrcCurDayLowOutputPower,
    optIfOTSnSrcCurDayHighOutputPower,
    optIfOTSnSrcCurDayLowInputPower,
    optIfOTSnSrcCurDayHighInputPower,
    optIfOTSnSrcPrevDaySuspectedFlag,
    optIfOTSnSrcPrevDayLastOutputPower,
    optIfOTSnSrcPrevDayLowOutputPower,
    optIfOTSnSrcPrevDayHighOutputPower,
    optIfOTSnSrcPrevDayLastInputPower,
    optIfOTSnSrcPrevDayLowInputPower,
    optIfOTSnSrcPrevDayHighInputPower
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     objects applicable to OTSn interfaces that
     support source functions."
  ::= { optIfGroups 11 }

optIfOTSnSourcePreOtnPMThresholdGroup OBJECT-GROUP
  OBJECTS  {
    optIfOTSnSrcCurrentLowerOutputPowerThreshold,
    optIfOTSnSrcCurrentUpperOutputPowerThreshold,
    optIfOTSnSrcCurrentLowerInputPowerThreshold,
    optIfOTSnSrcCurrentUpperInputPowerThreshold
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     threshold objects applicable to OTSn interfaces
     that support source functions."
  ::= { optIfGroups 12 }

optIfOMSnCommonGroup OBJECT-GROUP
```

```
  OBJECTS  {
    optIfOMSnDirectionality
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all OMSn interfaces."
  ::= { optIfGroups 13 }

optIfOMSnSinkGroupBasic OBJECT-GROUP
  OBJECTS  {
    optIfOMSnCurrentStatus
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all OMSn interfaces that
     support sink functions."
  ::= { optIfGroups 14 }

optIfOMSnSinkPreOtnPMGroup OBJECT-GROUP
  OBJECTS  {
    optIfOMSnSinkCurrentSuspectedFlag,
    optIfOMSnSinkCurrentAggregatedInputPower,
    optIfOMSnSinkCurrentLowAggregatedInputPower,
    optIfOMSnSinkCurrentHighAggregatedInputPower,
    optIfOMSnSinkCurrentOutputPower,
    optIfOMSnSinkCurrentLowOutputPower,
    optIfOMSnSinkCurrentHighOutputPower,
    optIfOMSnSinkIntervalSuspectedFlag,
    optIfOMSnSinkIntervalLastAggregatedInputPower,
    optIfOMSnSinkIntervalLowAggregatedInputPower,
    optIfOMSnSinkIntervalHighAggregatedInputPower,
    optIfOMSnSinkIntervalLastOutputPower,
    optIfOMSnSinkIntervalLowOutputPower,
    optIfOMSnSinkIntervalHighOutputPower,
    optIfOMSnSinkCurDaySuspectedFlag,
    optIfOMSnSinkCurDayLowAggregatedInputPower,
    optIfOMSnSinkCurDayHighAggregatedInputPower,
    optIfOMSnSinkCurDayLowOutputPower,
    optIfOMSnSinkCurDayHighOutputPower,
    optIfOMSnSinkPrevDaySuspectedFlag,
    optIfOMSnSinkPrevDayLastAggregatedInputPower,
    optIfOMSnSinkPrevDayLowAggregatedInputPower,
    optIfOMSnSinkPrevDayHighAggregatedInputPower,
    optIfOMSnSinkPrevDayLastOutputPower,
    optIfOMSnSinkPrevDayLowOutputPower,
    optIfOMSnSinkPrevDayHighOutputPower
```

```
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     objects applicable to OMSn interfaces that
     support sink functions."
  ::= { optIfGroups 15 }

optIfOMSnSinkPreOtnPMThresholdGroup OBJECT-GROUP
  OBJECTS  {
    optIfOMSnSinkCurrentLowerInputPowerThreshold,
    optIfOMSnSinkCurrentUpperInputPowerThreshold,
    optIfOMSnSinkCurrentLowerOutputPowerThreshold,
    optIfOMSnSinkCurrentUpperOutputPowerThreshold
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     threshold objects applicable to OMSn interfaces
     that support sink functions."
  ::= { optIfGroups 16 }

optIfOMSnSourcePreOtnPMGroup OBJECT-GROUP
  OBJECTS  {
    optIfOMSnSrcCurrentSuspectedFlag,
    optIfOMSnSrcCurrentOutputPower,
    optIfOMSnSrcCurrentLowOutputPower,
    optIfOMSnSrcCurrentHighOutputPower,
    optIfOMSnSrcCurrentAggregatedInputPower,
    optIfOMSnSrcCurrentLowAggregatedInputPower,
    optIfOMSnSrcCurrentHighAggregatedInputPower,
    optIfOMSnSrcIntervalSuspectedFlag,
    optIfOMSnSrcIntervalLastOutputPower,
    optIfOMSnSrcIntervalLowOutputPower,
    optIfOMSnSrcIntervalHighOutputPower,
    optIfOMSnSrcIntervalLastAggregatedInputPower,
    optIfOMSnSrcIntervalLowAggregatedInputPower,
    optIfOMSnSrcIntervalHighAggregatedInputPower,
    optIfOMSnSrcCurDaySuspectedFlag,
    optIfOMSnSrcCurDayLowOutputPower,
    optIfOMSnSrcCurDayHighOutputPower,
    optIfOMSnSrcCurDayLowAggregatedInputPower,
    optIfOMSnSrcCurDayHighAggregatedInputPower,
    optIfOMSnSrcPrevDaySuspectedFlag,
    optIfOMSnSrcPrevDayLastOutputPower,
    optIfOMSnSrcPrevDayLowOutputPower,
    optIfOMSnSrcPrevDayHighOutputPower,
    optIfOMSnSrcPrevDayLastAggregatedInputPower,
```

```
    optIfOMSnSrcPrevDayLowAggregatedInputPower,
    optIfOMSnSrcPrevDayHighAggregatedInputPower
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     objects applicable to OMSn interfaces that
     support source functions."
  ::= { optIfGroups 17 }

optIfOMSnSourcePreOtnPMThresholdGroup OBJECT-GROUP
  OBJECTS  {
    optIfOMSnSrcCurrentLowerOutputPowerThreshold,
    optIfOMSnSrcCurrentUpperOutputPowerThreshold,
    optIfOMSnSrcCurrentLowerInputPowerThreshold,
    optIfOMSnSrcCurrentUpperInputPowerThreshold
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     threshold objects applicable to OMSn interfaces that
     that support source functions."
  ::= { optIfGroups 18 }

optIfOChGroupCommonGroup OBJECT-GROUP
  OBJECTS  {
    optIfOChGroupDirectionality
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all OChGroup interfaces."
  ::= { optIfGroups 19 }

optIfOChGroupSinkPreOtnPMGroup OBJECT-GROUP
  OBJECTS  {
    optIfOChGroupSinkCurrentSuspectedFlag,
    optIfOChGroupSinkCurrentAggregatedInputPower,
    optIfOChGroupSinkCurrentLowAggregatedInputPower,
    optIfOChGroupSinkCurrentHighAggregatedInputPower,
    optIfOChGroupSinkCurrentOutputPower,
    optIfOChGroupSinkCurrentLowOutputPower,
    optIfOChGroupSinkCurrentHighOutputPower,
    optIfOChGroupSinkIntervalSuspectedFlag,
    optIfOChGroupSinkIntervalLastAggregatedInputPower,
    optIfOChGroupSinkIntervalLowAggregatedInputPower,
    optIfOChGroupSinkIntervalHighAggregatedInputPower,
    optIfOChGroupSinkIntervalLastOutputPower,
```

```
    optIfOChGroupSinkIntervalLowOutputPower,
    optIfOChGroupSinkIntervalHighOutputPower,
    optIfOChGroupSinkCurDaySuspectedFlag,
    optIfOChGroupSinkCurDayLowAggregatedInputPower,
    optIfOChGroupSinkCurDayHighAggregatedInputPower,
    optIfOChGroupSinkCurDayLowOutputPower,
    optIfOChGroupSinkCurDayHighOutputPower,
    optIfOChGroupSinkPrevDaySuspectedFlag,
    optIfOChGroupSinkPrevDayLastAggregatedInputPower,
    optIfOChGroupSinkPrevDayLowAggregatedInputPower,
    optIfOChGroupSinkPrevDayHighAggregatedInputPower,
    optIfOChGroupSinkPrevDayLastOutputPower,
    optIfOChGroupSinkPrevDayLowOutputPower,
    optIfOChGroupSinkPrevDayHighOutputPower
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     objects applicable to OChGroup interfaces that
     support sink functions."
  ::= { optIfGroups 20 }

optIfOChGroupSinkPreOtnPMThresholdGroup OBJECT-GROUP
  OBJECTS  {
    optIfOChGroupSinkCurrentLowerInputPowerThreshold,
    optIfOChGroupSinkCurrentUpperInputPowerThreshold,
    optIfOChGroupSinkCurrentLowerOutputPowerThreshold,
    optIfOChGroupSinkCurrentUpperOutputPowerThreshold
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     threshold objects applicable to OChGroup interfaces
     that support sink functions."
  ::= { optIfGroups 21 }

optIfOChGroupSourcePreOtnPMGroup OBJECT-GROUP
  OBJECTS  {
    optIfOChGroupSrcCurrentSuspectedFlag,
    optIfOChGroupSrcCurrentOutputPower,
    optIfOChGroupSrcCurrentLowOutputPower,
    optIfOChGroupSrcCurrentHighOutputPower,
    optIfOChGroupSrcCurrentAggregatedInputPower,
    optIfOChGroupSrcCurrentLowAggregatedInputPower,
    optIfOChGroupSrcCurrentHighAggregatedInputPower,
    optIfOChGroupSrcIntervalSuspectedFlag,
    optIfOChGroupSrcIntervalLastOutputPower,
    optIfOChGroupSrcIntervalLowOutputPower,
```

```
    optIfOChGroupSrcIntervalHighOutputPower,
    optIfOChGroupSrcIntervalLastAggregatedInputPower,
    optIfOChGroupSrcIntervalLowAggregatedInputPower,
    optIfOChGroupSrcIntervalHighAggregatedInputPower,
    optIfOChGroupSrcCurDaySuspectedFlag,
    optIfOChGroupSrcCurDayLowOutputPower,
    optIfOChGroupSrcCurDayHighOutputPower,
    optIfOChGroupSrcCurDayLowAggregatedInputPower,
    optIfOChGroupSrcCurDayHighAggregatedInputPower,
    optIfOChGroupSrcPrevDaySuspectedFlag,
    optIfOChGroupSrcPrevDayLastOutputPower,
    optIfOChGroupSrcPrevDayLowOutputPower,
    optIfOChGroupSrcPrevDayHighOutputPower,
    optIfOChGroupSrcPrevDayLastAggregatedInputPower,
    optIfOChGroupSrcPrevDayLowAggregatedInputPower,
    optIfOChGroupSrcPrevDayHighAggregatedInputPower
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     objects applicable to OChGroup interfaces that
     support source functions."
  ::= { optIfGroups 22 }

optIfOChGroupSourcePreOtnPMThresholdGroup OBJECT-GROUP
  OBJECTS  {
    optIfOChGroupSrcCurrentLowerOutputPowerThreshold,
    optIfOChGroupSrcCurrentUpperOutputPowerThreshold,
    optIfOChGroupSrcCurrentLowerInputPowerThreshold,
    optIfOChGroupSrcCurrentUpperInputPowerThreshold
    }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     threshold objects applicable to OChGroup interfaces that
     that support source functions."
  ::= { optIfGroups 23 }

optIfOChCommonGroup OBJECT-GROUP
  OBJECTS  {
    optIfOChDirectionality
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all OCh interfaces."
  ::= { optIfGroups 24 }
```

```
optIfOChSinkGroupBasic OBJECT-GROUP
  OBJECTS  {
    optIfOChCurrentStatus
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all OCh interfaces that
     support sink functions."
  ::= { optIfGroups 25 }

optIfOChSinkPreOtnPMGroup OBJECT-GROUP
  OBJECTS  {
    optIfOChSinkCurrentSuspectedFlag,
    optIfOChSinkCurrentInputPower,
    optIfOChSinkCurrentLowInputPower,
    optIfOChSinkCurrentHighInputPower,
    optIfOChSinkIntervalSuspectedFlag,
    optIfOChSinkIntervalLastInputPower,
    optIfOChSinkIntervalLowInputPower,
    optIfOChSinkIntervalHighInputPower,
    optIfOChSinkCurDaySuspectedFlag,
    optIfOChSinkCurDayLowInputPower,
    optIfOChSinkCurDayHighInputPower,
    optIfOChSinkPrevDaySuspectedFlag,
    optIfOChSinkPrevDayLastInputPower,
    optIfOChSinkPrevDayLowInputPower,
    optIfOChSinkPrevDayHighInputPower
     }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     objects applicable to OCh interfaces that
     support sink functions."
  ::= { optIfGroups 26 }

optIfOChSinkPreOtnPMThresholdGroup OBJECT-GROUP
  OBJECTS  {
    optIfOChSinkCurrentLowerInputPowerThreshold,
    optIfOChSinkCurrentUpperInputPowerThreshold
     }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     threshold objects applicable to OCh interfaces
     that support sink functions."
  ::= { optIfGroups 27 }
```

```
optIfOChSourcePreOtnPMGroup OBJECT-GROUP
  OBJECTS  {
    optIfOChSrcCurrentSuspectedFlag,
    optIfOChSrcCurrentOutputPower,
    optIfOChSrcCurrentLowOutputPower,
    optIfOChSrcCurrentHighOutputPower,
    optIfOChSrcIntervalSuspectedFlag,
    optIfOChSrcIntervalLastOutputPower,
    optIfOChSrcIntervalLowOutputPower,
    optIfOChSrcIntervalHighOutputPower,
    optIfOChSrcCurDaySuspectedFlag,
    optIfOChSrcCurDayLowOutputPower,
    optIfOChSrcCurDayHighOutputPower,
    optIfOChSrcPrevDaySuspectedFlag,
    optIfOChSrcPrevDayLastOutputPower,
    optIfOChSrcPrevDayLowOutputPower,
    optIfOChSrcPrevDayHighOutputPower
     }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     objects applicable to OCh interfaces that
     support source functions."
  ::= { optIfGroups 28 }

optIfOChSourcePreOtnPMThresholdGroup OBJECT-GROUP
  OBJECTS  {
    optIfOChSrcCurrentLowerOutputPowerThreshold,
    optIfOChSrcCurrentUpperOutputPowerThreshold
     }
  STATUS  current
  DESCRIPTION
    "A collection of pre-OTN performance monitoring
     threshold objects applicable to OCh interfaces
     that support source functions."
  ::= { optIfGroups 29 }

optIfOTUkCommonGroup OBJECT-GROUP
  OBJECTS  {
    optIfOTUkDirectionality,
    optIfOTUkBitRateK
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all OTUk interfaces."
  ::= { optIfGroups 30 }
```

```
optIfOTUkSourceGroup OBJECT-GROUP
  OBJECTS  {
    optIfOTUkTraceIdentifierTransmitted,
    optIfOTUkSourceAdaptActive
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to OTUk interfaces that
     support source functions."
  ::= { optIfGroups 31 }

optIfOTUkSinkGroup OBJECT-GROUP
  OBJECTS  {
    optIfOTUkDAPIExpected,
    optIfOTUkSAPIExpected,
    optIfOTUkTraceIdentifierAccepted,
    optIfOTUkTIMDetMode,
    optIfOTUkTIMActEnabled,
    optIfOTUkDEGThr,
    optIfOTUkDEGM,
    optIfOTUkSinkAdaptActive,
    optIfOTUkSinkFECEnabled,
    optIfOTUkCurrentStatus
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to OTUk interfaces that
     support sink functions."
  ::= { optIfGroups 32 }

optIfGCC0Group OBJECT-GROUP
  OBJECTS  {
    optIfGCC0Application,
    optIfGCC0RowStatus
    }
  STATUS  current
  DESCRIPTION
    "A collection of GCC0 configuration objects."
  ::= { optIfGroups 33 }

optIfODUkGroup OBJECT-GROUP
  OBJECTS  {
    optIfODUkDirectionality,
    optIfODUkBitRateK,
    optIfODUkTcmFieldsInUse,
    optIfODUkPositionSeqCurrentSize,
```

```
    optIfODUkPositionSeqPosition,
    optIfODUkPositionSeqPointer,
    optIfODUkTtpPresent
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all ODUk interfaces."
  ::= { optIfGroups 34 }

optIfODUkTtpSourceGroup OBJECT-GROUP
  OBJECTS  {
    optIfODUkTtpTraceIdentifierTransmitted
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all interfaces that support
     ODUk trail termination source functions."
  ::= { optIfGroups 35 }

optIfODUkTtpSinkGroup OBJECT-GROUP
  OBJECTS  {
    optIfODUkTtpDAPIExpected,
    optIfODUkTtpSAPIExpected,
    optIfODUkTtpTraceIdentifierAccepted,
    optIfODUkTtpTIMDetMode,
    optIfODUkTtpTIMActEnabled,
    optIfODUkTtpDEGThr,
    optIfODUkTtpDEGM,
    optIfODUkTtpCurrentStatus
    }
  STATUS  current
  DESCRIPTION
    "A collection of ODUk configuration objects
     applicable to all interfaces that support
     ODUk trail termination sink functions."
  ::= { optIfGroups 36 }

optIfODUkNimGroup OBJECT-GROUP
  OBJECTS  {
    optIfODUkNimDAPIExpected,
    optIfODUkNimSAPIExpected,
    optIfODUkNimTraceIdentifierAccepted,
    optIfODUkNimTIMDetMode,
    optIfODUkNimTIMActEnabled,
    optIfODUkNimDEGThr,
    optIfODUkNimDEGM,
```

```
    optIfODUkNimCurrentStatus,
    optIfODUkNimRowStatus
    }
  STATUS  current
  DESCRIPTION
    "A collection of ODUk Nim configuration objects."
  ::= { optIfGroups 37 }

optIfGCC12Group OBJECT-GROUP
  OBJECTS  {
    optIfGCC12GCCPassThrough,
    optIfGCC12Application,
    optIfGCC12RowStatus
    }
  STATUS  current
  DESCRIPTION
    "A collection of GCC12 configuration objects."
  ::= { optIfGroups 38 }

optIfODUkTCommonGroup OBJECT-GROUP
  OBJECTS  {
    optIfODUkTRowStatus
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all ODUkT instances."
  ::= { optIfGroups 39 }

optIfODUkTSourceGroup OBJECT-GROUP
  OBJECTS  {
    optIfODUkTTraceIdentifierTransmitted,
    optIfODUkTSourceLockSignalAdminState
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all ODUkT instances
     that provide source functions."
  ::= { optIfGroups 40 }

optIfODUkTSinkGroup OBJECT-GROUP
  OBJECTS  {
    optIfODUkTDAPIExpected,
    optIfODUkTSAPIExpected,
    optIfODUkTTraceIdentifierAccepted,
    optIfODUkTTIMDetMode,
    optIfODUkTTIMActEnabled,
```

```
    optIfODUkTDEGThr,
    optIfODUkTDEGM,
    optIfODUkTCurrentStatus
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to all ODUkT instances
     that provide sink functions."
  ::= { optIfGroups 41 }

optIfODUkTSinkGroupCtp OBJECT-GROUP
  OBJECTS  {
    optIfODUkTSinkMode,
    optIfODUkTSinkLockSignalAdminState
    }
  STATUS  current
  DESCRIPTION
    "A collection of configuration objects
     applicable to ODUkT instances not
     colocated with an ODUk TTP that
     provide sink functions."
  ::= { optIfGroups 42 }

optIfODUkTNimGroup OBJECT-GROUP
  OBJECTS  {
    optIfODUkTNimDAPIExpected,
    optIfODUkTNimSAPIExpected,
    optIfODUkTNimTraceIdentifierAccepted,
    optIfODUkTNimTIMDetMode,
    optIfODUkTNimTIMActEnabled,
    optIfODUkTNimDEGThr,
    optIfODUkTNimDEGM,
    optIfODUkTNimCurrentStatus,
    optIfODUkTNimRowStatus
    }
  STATUS  current
  DESCRIPTION
    "A collection of ODUkT Nim configuration objects."
  ::= { optIfGroups 43 }

-- compliance specifications

optIfOtnConfigCompl MODULE-COMPLIANCE
  STATUS  current
  DESCRIPTION
    "Implementation requirements for the OTN configuration
     functions defined in this MIB module."
```

```
  MODULE -- this module

    MANDATORY-GROUPS  {
      optIfOTMnGroup,
      optIfOTSnCommonGroup
      }

    GROUP  optIfOTSnSourceGroupFull
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalTransport(196) for which the corresponding
       instance of optIfOTSnDirectionality has the value
       source(2) or bidirectional(3), the corresponding
       instance of optIfOTMnReduced has the value false(2),
       and the corresponding instance of optIfOTMnInterfaceType
       specifies an OTMn interface type of 'IaDI'."

    GROUP  optIfOTSnAPRStatusGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalTransport(196) that support Automatic Power
       Reduction functions."

    GROUP  optIfOTSnAPRControlGroup
    DESCRIPTION
      "This group is optional, but is recommended for interfaces
       of ifType opticalTransport(196) that provide Automatic
       Power Reduction control functions."

    GROUP  optIfOTSnSinkGroupBasic
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalTransport(196) for which the corresponding
       instance of optIfOTSnDirectionality has the value
       sink(1) or bidirectional(3)."

    GROUP  optIfOTSnSinkGroupFull
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalTransport(196) for which the corresponding
       instance of optIfOTSnDirectionality has the value
       sink(1) or bidirectional(3), the corresponding
       instance of optIfOTMnReduced has the value false(2),
       and the corresponding instance of optIfOTMnInterfaceType
       specifies an OTMn interface type of 'IaDI'."

    GROUP  optIfOMSnCommonGroup
    DESCRIPTION
```

```
      "This group is mandatory for interfaces of ifType
       opticalTransport(196) that support access to the OMS
       overhead information within the OTN Supervisory Channel."

    GROUP  optIfOMSnSinkGroupBasic
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalTransport(196) that support access to the OMS Overhead
       information within the OSC (OTN Supervisory Channel)
       for which the corresponding
       instance of optIfOMSnDirectionality has the value
       sink(1) or bidirectional(3)."

    GROUP  optIfOChGroupCommonGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannelGroup(219)."

    GROUP  optIfOChCommonGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalTransport(195)."

    GROUP  optIfOChSinkGroupBasic
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) for which the corresponding
       instance of optIfOChDirectionality has the value
       sink(1) or bidirectional(3)."

    GROUP  optIfOTUkCommonGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support OTUk layer functions."

    GROUP  optIfOTUkSourceGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support OTUk layer functions
       and for which the corresponding instance of
       optIfOTUkDirectionality has the value source(2) or
       bidirectional(3)."

    GROUP  optIfOTUkSinkGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support OTUk layer functions
       and for which the corresponding instance of
```

```
       optIfOTUkDirectionality has the value sink(1) or
       bidirectional(3)."

    GROUP  optIfGCC0Group
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support GCC0 access functions.
       It may be implemented only if the optIfOTUkCommonGroup
       is also implemented."

    GROUP  optIfODUkGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support ODUk layer functions."

    GROUP  optIfODUkTtpSourceGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) for which the corresponding
       instance of optIfODUkTtpPresent has the value
       true(1) and for which the corresponding instance of
       optIfODUkDirectionality has the value source(2) or
       bidirectional(3).  It may be implemented only if the
       optIfODUkGroup is also implemented."

    GROUP  optIfODUkTtpSinkGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) for which the corresponding
       instance of optIfODUkTtpPresent has the value
       true(1) and for which the corresponding instance of
       optIfODUkDirectionality has the value sink(1) or
       bidirectional(3).  It may be implemented only if the
       optIfODUkGroup is also implemented."

    GROUP  optIfODUkNimGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) for which the corresponding
       instance of optIfODUkTtpPresent has the value
       false(2).  It may be implemented only if the
       optIfODUkGroup is also implemented."

    GROUP  optIfGCC12Group
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support GCC12 access functions.
       It may be implemented only if the optIfODUkGroup
```

```
       is also implemented."

    GROUP  optIfODUkTCommonGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support intrusive
       tandem connection monitoring.  It may be implemented
       only if the optIfODUkGroup is also implemented."

    GROUP  optIfODUkTSourceGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support intrusive
       tandem connection monitoring and for which
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value false(2), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value true(1).
       It may be implemented only if the optIfODUkGroup is
       also implemented."

    GROUP  optIfODUkTSinkGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support intrusive
       tandem connection monitoring and for which
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
       It may be implemented only if the optIfODUkGroup is
       also implemented."

    GROUP  optIfODUkTSinkGroupCtp
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support intrusive
       tandem connection monitoring and for which
       optIfODUkTtpPresent is false(2) and
       (i) optIfODUkDirectionality has the value bidirectional(3), or
       (ii) optIfODUkDirectionality has the value sink(1) and
            optIfODUkTCodirectional has the value true(1), or
       (iii) optIfODUkDirectionality has the value source(3) and
             optIfODUkTCodirectional has the value false(2).
       It may be implemented only if the optIfODUkGroup and
       optIfODUkTSinkGroup are also implemented."
```

```
    GROUP  optIfODUkTNimGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support non-intrusive
       tandem connection monitoring.  It may be implemented
       only if the optIfODUkGroup is also implemented."

  ::= { optIfCompl 1 }

optIfPreOtnPMCompl MODULE-COMPLIANCE
  STATUS  current
  DESCRIPTION
    "Implementation requirements for Pre-OTN performance
     monitoring functions defined in this MIB module."

  MODULE  -- this module

    MANDATORY-GROUPS  {
      optIfPerfMonGroup
      }

    GROUP  optIfOTSnSinkPreOtnPMGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalTransport(196) that support OTSn sink
       functions (i.e., for which the corresponding instance
       of optIfOTSnDirectionality -- if implemented -- has
       the value sink(1) or bidirectional(3))."

    GROUP  optIfOTSnSinkPreOtnPMThresholdGroup
    DESCRIPTION
      "This group is mandatory if and only if TCA notifications
       are implemented.  If the objects of this group are instantiated
       then the implementation must also provide, in an
       enterprise MIB, suitable TCA notification definitions and
       notification control objects.  Implementation of the
       optIfOTSnSinkPreOtnPMGroup is a prerequisite for
       implementing this group."

    GROUP  optIfOTSnSourcePreOtnPMGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalTransport(196) that support OTSn source
       functions (i.e., for which the corresponding instance
       of optIfOTSnDirectionality -- if implemented -- has
       the value source(2) or bidirectional(3))."

    GROUP  optIfOTSnSourcePreOtnPMThresholdGroup
```

```
    DESCRIPTION
      "This group is mandatory if and only if TCA notifications
       are implemented.  If the objects of this group are instantiated
       then the implementation must also provide, in an
       enterprise MIB, suitable TCA notification definitions and
       notification control objects.  Implementation of the
       optIfOTSnSourcePreOtnPMGroup is a prerequisite for
       implementing this group "

    GROUP  optIfOMSnSinkPreOtnPMGroup
    DESCRIPTION
      "This group is optional.  It may be implemented by systems
       with the necessary instrumentation on interfaces of ifType
       opticalTransport(196) that support OMSn sink functions
       (i.e., for which the corresponding instance of
       optIfOMSnDirectionality -- if implemented -- has the value
       sink(1) or bidirectional(3))."

    GROUP  optIfOMSnSinkPreOtnPMThresholdGroup
    DESCRIPTION
      "This group is mandatory if and only if TCA notifications
       are implemented.  If the objects of this group are instantiated
       then the implementation must also provide, in an
       enterprise MIB, suitable TCA notification definitions and
       notification control objects.  Implementation of the
       optIfOMSnSinkPreOtnPMGroup is a prerequisite for
       implementing this group "

    GROUP  optIfOMSnSourcePreOtnPMGroup
    DESCRIPTION
      "This group is optional.  It may be implemented by systems
       with the necessary instrumentation on interfaces of ifType
       opticalTransport(196) that support OMSn source functions
       (i.e., for which the corresponding instance of
       optIfOMSnDirectionality -- if implemented -- has the value
       source(2) or bidirectional(3))."

    GROUP  optIfOMSnSourcePreOtnPMThresholdGroup
    DESCRIPTION
      "This group is mandatory if and only if TCA notifications
       are implemented.  If the objects of this group are instantiated
       then the implementation must also provide, in an
       enterprise MIB, suitable TCA notification definitions and
       notification control objects.  Implementation of the
       optIfOMSnSourcePreOtnPMGroup is a prerequisite for
       implementing this group "

    GROUP  optIfOChGroupSinkPreOtnPMGroup
```

```
    DESCRIPTION
      "This group is optional.  It may be implemented by systems
       with the necessary instrumentation on interfaces of ifType
       opticalChannelGroup(219) that support OChGroup sink functions
       (i.e., for which the corresponding instance of
       optIfOChGroupDirectionality -- if implemented -- has the value
       sink(1) or bidirectional(3))."

    GROUP  optIfOChGroupSinkPreOtnPMThresholdGroup
    DESCRIPTION
      "This group is mandatory if and only if TCA notifications
       are implemented.  If the objects of this group are instantiated
       then the implementation must also provide, in an
       enterprise MIB, suitable TCA notification definitions and
       notification control objects.  Implementation of the
       optIfOChGroupSinkPreOtnPMGroup is a prerequisite for
       implementing this group "

    GROUP  optIfOChGroupSourcePreOtnPMGroup
    DESCRIPTION
      "This group is optional.  It may be implemented by systems
       with the necessary instrumentation on interfaces of ifType
       opticalChannelGroup(219) that support OChGroup source functions
       (i.e., for which the corresponding instance of
       optIfOChGroupDirectionality -- if implemented -- has the value
       source(2) or bidirectional(3))."

    GROUP  optIfOChGroupSourcePreOtnPMThresholdGroup
    DESCRIPTION
      "This group is mandatory if and only if TCA notifications
       are implemented.  If the objects of this group are instantiated
       then the implementation must also provide, in an
       enterprise MIB, suitable TCA notification definitions and
       notification control objects.  Implementation of the
       optIfOChGroupSourcePreOtnPMGroup is a prerequisite for
       implementing this group "

    GROUP  optIfOChSinkPreOtnPMGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support OCh sink functions
       (i.e., for which the corresponding instance of
       optIfOChDirectionality -- if implemented -- has the
       value sink(1) or bidirectional(3))."

    GROUP  optIfOChSinkPreOtnPMThresholdGroup
    DESCRIPTION
      "This group is mandatory if and only if TCA notifications
```

```
       are implemented.  If the objects of this group are instantiated
       then the implementation must also provide, in an
       enterprise MIB, suitable TCA notification definitions and
       notification control objects.  Implementation of the
       optIfOChSinkPreOtnPMGroup is a prerequisite for
       implementing this group "

    GROUP  optIfOChSourcePreOtnPMGroup
    DESCRIPTION
      "This group is mandatory for interfaces of ifType
       opticalChannel(195) that support OCh source functions
       (i.e., for which the corresponding instance of
       optIfOChDirectionality -- if implemented -- has the
       value source(2) or bidirectional(3))."

    GROUP  optIfOChSourcePreOtnPMThresholdGroup
    DESCRIPTION
      "This group is mandatory if and only if TCA notifications
       are implemented.  If the objects of this group are instantiated
       then the implementation must also provide, in an
       enterprise MIB, suitable TCA notification definitions and
       notification control objects.  Implementation of the
       optIfOChSourcePreOtnPMGroup is a prerequisite for
       implementing this group "

  ::= { optIfCompl 2 }

END
```

5. Security Considerations

There are a number of management objects defined in this MIB module with a MAX-ACCESS clause of read-write and/or read-create. It is possible for writes to these objects to have disruptive effects on network operation that range from invalid performance data to traffic interruptions. Users of this MIB module must therefore be aware that support for SET operations in a non-secure environment without proper protection can have a negative effect on network operations. The most sensitive objects are the read-write and read-create objects listed in the optIfOtnConfigCompl compliance statement that control the maximum number of TCM levels allowed (optIfOTMnTcmMax), automatic power reduction (optIfOTSnAprControl), transmitted trail trace (optIfOTSnTraceIdentifierTransmitted, optIfOTUkTraceIdentifierTransmitted, optIfODUkTtpTraceIdentifierTransmitted, optIfODUkTTraceIdentifierTransmitted), expected source/destination access point identifiers (optIfOTSnDAPIExpected, optIfOTSnSAPIExpected, optIfOTUkDAPIExpected, optIfOTUkSAPIExpected,

optIfODUkTtpDAPIExpected, optIfODUkTtpSAPIExpected, optIfODUkNimDAPIExpected, optIfODUkNimSAPIExpected, optIfODUkTDAPIExpected, optIfODUkTSAPIExpected, optIfODUkTNimDAPIExpected, optIfODUkTNimSAPIExpected), trace identifier mismatch detection mode (optIfOTSnTIMDetMode, optIfOTUkTIMDetMode, optIfODUkTtpTIMDetMode, optIfODUkNimTIMDetMode, optIfODUkTTIMDetMode, optIfODUkTNimTIMDetMode), trace identifier mismatch consequent action (optIfOTSnTIMActEnabled, optIfOTUkTIMActEnabled, optIfODUkTtpTIMActEnabled, optIfODUkNimTIMActEnabled, optIfODUkTTIMActEnabled, optIfODUkTNimTIMActEnabled), threshold level for declaring a PM Second to be bad (optIfOTUkDEGThr, optIfODUkTtpDEGThr, optIfODUkNimDEGThr, optIfODUkTDEGThr, optIfODUkTNimDEGThr), threshold level for declaring a Degraded Signal defect (optIfOTUkDEGM, optIfODUkTtpDEGM, optIfODUkNimDEGM, optIfODUkTDEGM, optIfODUkTNimDEGM), whether the sink/source adaptation function is activated (optIfOTUkSinkAdaptActive, optIfOTUkSourceAdaptActive), whether Forward Error Correction is supported (optIfOTUkSinkFECEnabled), the application transported by the GCC entities (optIfGCC0Application, optIfGCC12Application), creating and deleting a conceptual row of a config table (optIfGCC0RowStatus, optIfODUkNimRowStatus, optIfGCC12RowStatus, optIfODUkTRowStatus, optIfODUkTNimRowStatus), whether the selected GCC overhead bytes are passed through or modified (optIfGCC12GCCPassThrough), TCM mode (optIfODUkTSinkMode), and provisioning of the sink/source LOCK signal (optIfODUkTSinkLockSignalAdminState, optIfODUkTSourceLockSignalAdminState), as these may cause traffic interruptions if improperly set.

The readable objects in this MIB module (i.e., the objects with a MAX-ACCESS other than not-accessible) may be considered sensitive in some environments since, collectively, they provide information about the performance of interfaces in OTN equipment or networks and can reveal aspects of their configuration. In such environments it is important to control even GET and NOTIFY access to these objects and possibly to encrypt the values of these objects when sending them over the network via SNMP.

SNMP versions prior to SNMPv3 did not include adequate security. Even if the network itself is secure (for example by using IPSec), there is no control as to who on the secure network is allowed to access and GET/SET (read/change/create/delete) objects in this MIB module.

It is RECOMMENDED that implementers consider the security features provided by the SNMPv3 framework (see [RFC3410], section 8), including full support for the SNMPv3 cryptographic mechanisms (for authentication and privacy).

Further, deployment of SNMP versions prior to SNMPv3 is NOT RECOMMENDED. Instead, it is RECOMMENDED that SNMPv3 be deployed and cryptographic security be enabled. It is then a customer/operator responsibility to ensure that the SNMP entity giving access to an instance of this MIB module is properly configured to give access to the objects only to those principals (users) that have legitimate rights to indeed GET or SET (change/create/delete) them.

6. Acknowledgements

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8. Intellectual Property Statement

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