

## NETWORK CUBE WWDM-HI-ISO Module

**C-1659-Rev. C**

### Product Description

- Passive WWDM Module for integration in one slot of the CUBO NETWORK CUBE WDM-Modular-Shell (C-1608).
- The WWDM Module contains 2 pieces of Wavelengths Division Multiplexers for the multiplexing or de-multiplexing of two bands (1310nm and 1550nm). It can be used for uni- or bi-directional transmission.
- The WWDM System provides a full interoperability with ITU G.694.2 standard-based CWDM sub-systems, systems and components and meets the Telcordia GR1221 (former Bellcore) standard.

- Product Description: NETWORK CUBE WWDM-Hi-Iso Module
- Product Code: C-1659
- Connector Code: -XY (choose from table) →
- Revision Level: -Rev.C

(X) Common ports (Y) CWDM ports	Code
SC/PC	1
FC/PC	2
SC/APC	3
FC/APC	4
LC/PC	5
MU/PC	6
E2000	7
E2000/HRL	8
ST/PC	9
SC/APC 9°	A
E2000/HRL Diamond	D

Example Order Code: **C-1659-15-Rev.C** for a module with SC/PC on all common / trunk ports and LC/PC on all WWDM channel ports



### Revision History

No	Description	Date	Created by
A	Initial release	05.03.09	Sven Krüger
B	Revised optical data	13.03.06	Thomas Paatzsch
C	Increased isolation for mux to 45 dB	26.02.07	Thomas Paatzsch
C	Included typical insertion loss value	26.01.10	Islah Touhtouh

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### General Specifications

<b>Operating Temperature</b>	+0°C to +70°C	
<b>Storage Temperature</b>	-40°C to +80°C	
<b>Max. optical Power</b>	< 250 mW	
<b>Fiber Type</b>	SMF-28 compatible $\varnothing$ 9 / 125 / 250 $\mu$ m	
<b>Optical Adapters</b>		
Common / trunk	to be selected by customer via order code	
1310nm, 1550nm channel ports	to be selected by customer via order code	

### Optical Performance of each of the 2 components of Hi-Iso WWDM

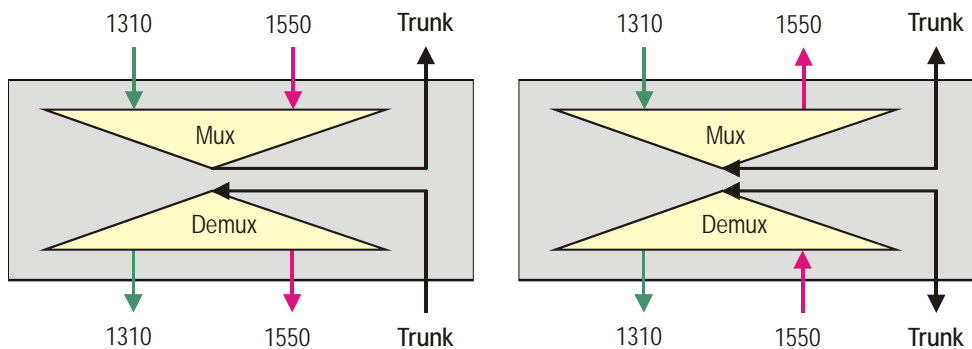
<b>Number of channels</b>	1 add channel, 1 drop channel	
1310 nm Channel	1260 - 1360 nm	
1550 nm Channel	1460 - 1620 nm	
<b>Insertion Loss</b>	<b>max</b> <sup>1</sup>	<b>typical</b> <sup>2</sup>
	< 1.2 dB	0,8 dB
<b>Isolation</b>		
for 1310nm port	> 45 dB (Demux), > 45 dB (mux)	
for 1550nm port	> 45 dB (Demux), > 45 dB (mux)	
<b>Optical Return Loss</b>	> 45 dB	
<b>Directivity</b>	> 50 dB	
<b>Polarization Dependent Loss</b>	< 0.2 dB	
<b>Polarization Mode Dispersion</b>	< 0.2 ps	

<sup>1</sup> Max. insertion loss over channel bandwidth, valid over full operating temperature range and all states of polarization with optical connectors and adapters. The typical connector loss is 0.4 dB for a pair of connectors

<sup>2</sup> Typical insertion loss is defined as typical value over channel bandwidth, full operating temperature range and methods from actual production data to reflect the majority of cases.

#### Package Dimensions and Front Plate design

##### Logical setup

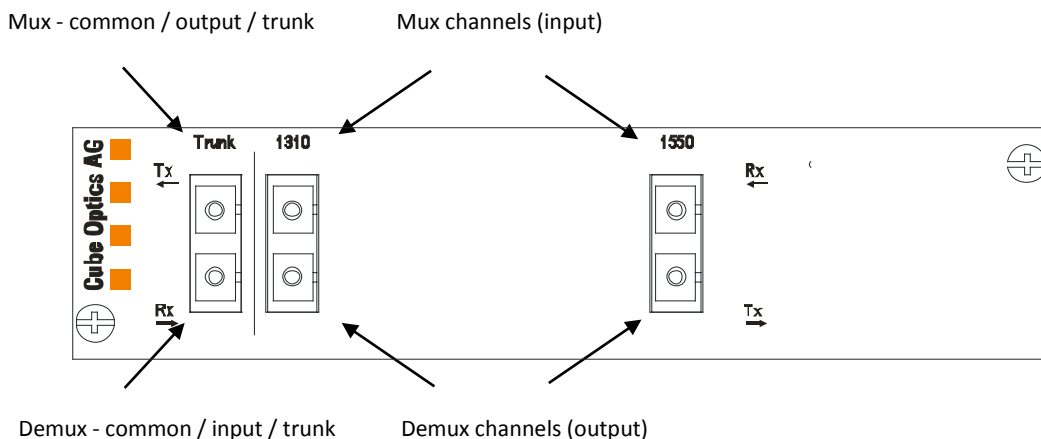


uni-directional transmission

bi-directional transmission

##### Connection Scheme

- The module contains the adapters for one multiplexer on the top and one demultiplexer on the bottom.
- The channels are marked with "1310" and "1550" corresponding to the wavelength bands..
- The common ports are marked as "Trunk".



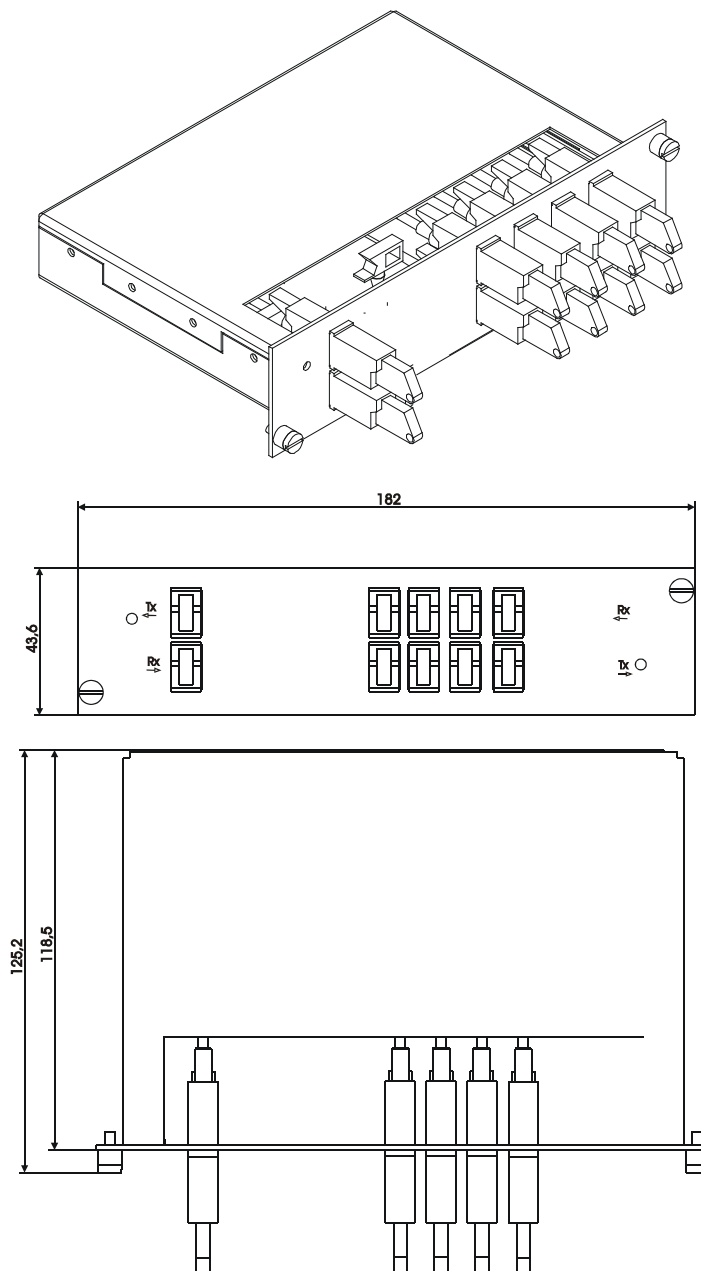
Please, note that the actual layout depends on the chosen connector type as well as other factors. However, the principal scheme stays the same.

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### Layout and dimensions

- Width: 166 / 182 mm
- Height: 25.75 / 44 mm
- Depth: 118.5 / 125.2 mm
- The color of the module is light gray
- All fonts and labels are printed in black.



Please, note that the drawings shown here only show the dimensions and do not the specific configuration of the module!

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is certified according to ISO 9001.

#### WAIVER

It is exclusively in written agreements that we provide our customers with warrants and representations as to the technical specifications and/or the fitness for any particular purpose. The facts and figures contained herein are carefully compiled to the best of our knowledge, but they are intended for general informational purposes only.

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