



Optical Multiplexer / Demultiplexer Cards with LC optical CWDM interface 4 - 16 channels



CD-nQ-x

Part Numbers: CD-4Q-x, CD-8Q-x, CD-16Q-x

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1.0 Product Description

Meridian's CD-nQ-x products are all passive optical Multiplexers/Demultiplexers, available in combinations from 4 to 16 channels.

Four and Eight channel cards are basic units in any combination, will combine or separate 4, 8 or 16 individual wavelengths respectively to provide optical multiplexing over one single-mode fiber.

The Expansion Port is available on the products with LC Common Port.

All units are compatible with other Meridian's CWDM digital products.

This product series uses Meridian's standard 1-slot or 2-slot card assembly and plugs into the following Meridian chassis: SR-500, SR-1002, SR-1600 and SR-2001 & SR-2000 series equipment chassis.

Both ST and FC optical connectors are supported. Optional conformal coating provides an additional level of protection from environments with high humidity.

2.0 Installation

The CD-nQ-x products are compatible with standard Meridian's chassis and depending on part number, will occupy following number of slots in the chassis:

- One-slot (CD-4Q-x)
- One-slot (CD-8Q-x)
- Two-slots (CD-16Q-x)

To install in card in to the chassis, orient the card with the Meridian logo at the top of the module and slide onto the top and bottom card guides in the chassis. Press securely on the top and bottom of the module to ensure that it is fully seated in the chassis so that the electrical connector mates with the chassis -mounted motherboard. Once installed, manually tighten the two thumbscrews located at the top and bottom of the card. Do not use tools to secure these and do not over tighten.

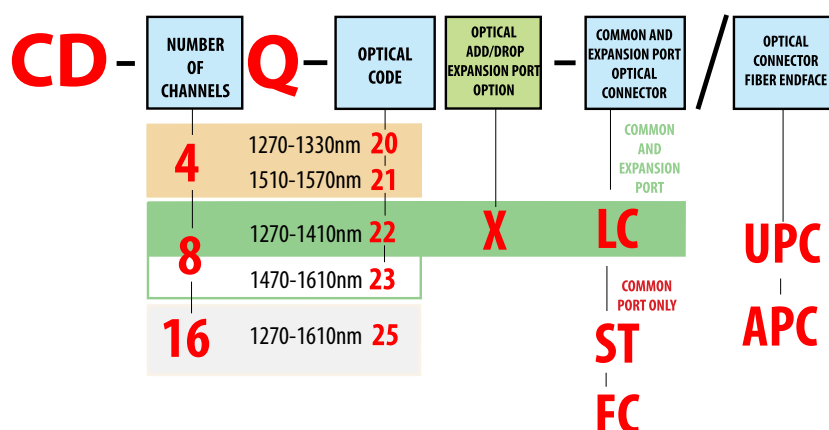
Note: A fully loaded 19" sub-rack should have forced-air cooling to avoid excessive heat generation inside the chassis. A fan assembly tray (P/N FA-2000) with three (3) fans is available and should be installed under the 19" SR-2000/1 whenever possible.

3.0 Product Specifications

Optical						
Unit	CD-4Q-x		CD-8Q-x		CD-16Q-x	
Insertion Loss	1.5 dB		2 dB		2.5 dB	
Isolation	>30 dB		>30 dB		>30 dB	
Return Loss	>45 dB		>45 dB		>45 dB	
Optical Band	Optic code	Wavelength	Optic code	Wavelength	Optic code	Wavelength
	20	1270/1290/1310/1330 nm	22	1270/1290/1310/1330/1350/1370/1390/1410 nm	25	1270/1290/1310/1330/1350/1370/1390/1410/1470/1490/1510/1530/1550/1570/1590/1610 nm
	21	1510/1530/1550/1570 nm	23	1470/1490/1510/1530/1550/1570/1590/1610 nm		

Environmental		Physical		
Operating Temperature	-34°C to +74°C	Card	One slot card	Two slot cards
Storage Temperature	-40°C to ~ +85°C	Dimensions	160 mm (6.3") L, 127 mm (5") H, 20mm (0.80") W	160 mm (6.3") L, 127 mm (5") H, 44 mm (1.7") W
Relative Humidity	0 to 95% Non-condensing	Weight	~ 450 grams (16 Oz.)	~ 550 grams (19.4 Oz.)
Connectors		No. of Slots	1	2
Optical	Common Port: FC - SM fiber (default), ST - MM fiber (default), LC - SM fiber (UPC or APC). CWDM Optical Interface: LC - SM fiber (UPC or APC).	Module	See SR-500 Brochure	See SR-1002 Brochure
Power	None - passive			

Part Numbers:



Note: The Expansion Port is available on the products with LC Common Port.

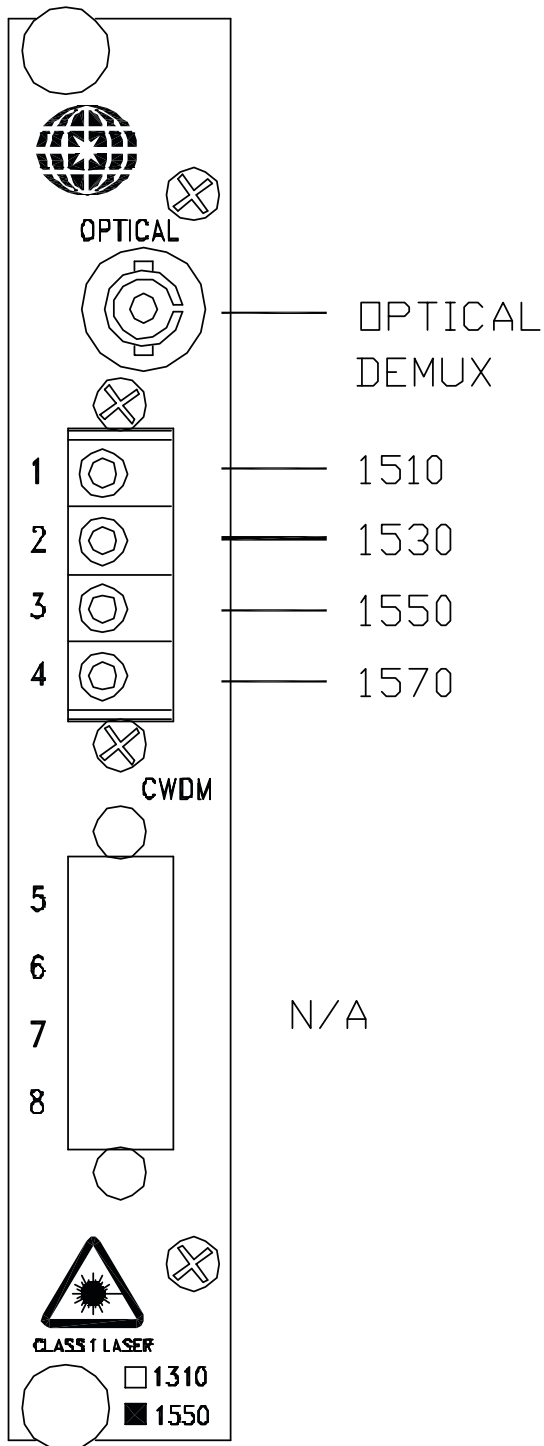
3.1 Optical Signal wavelength assignments

The tables below show optical signal wavelength distribution by part number.

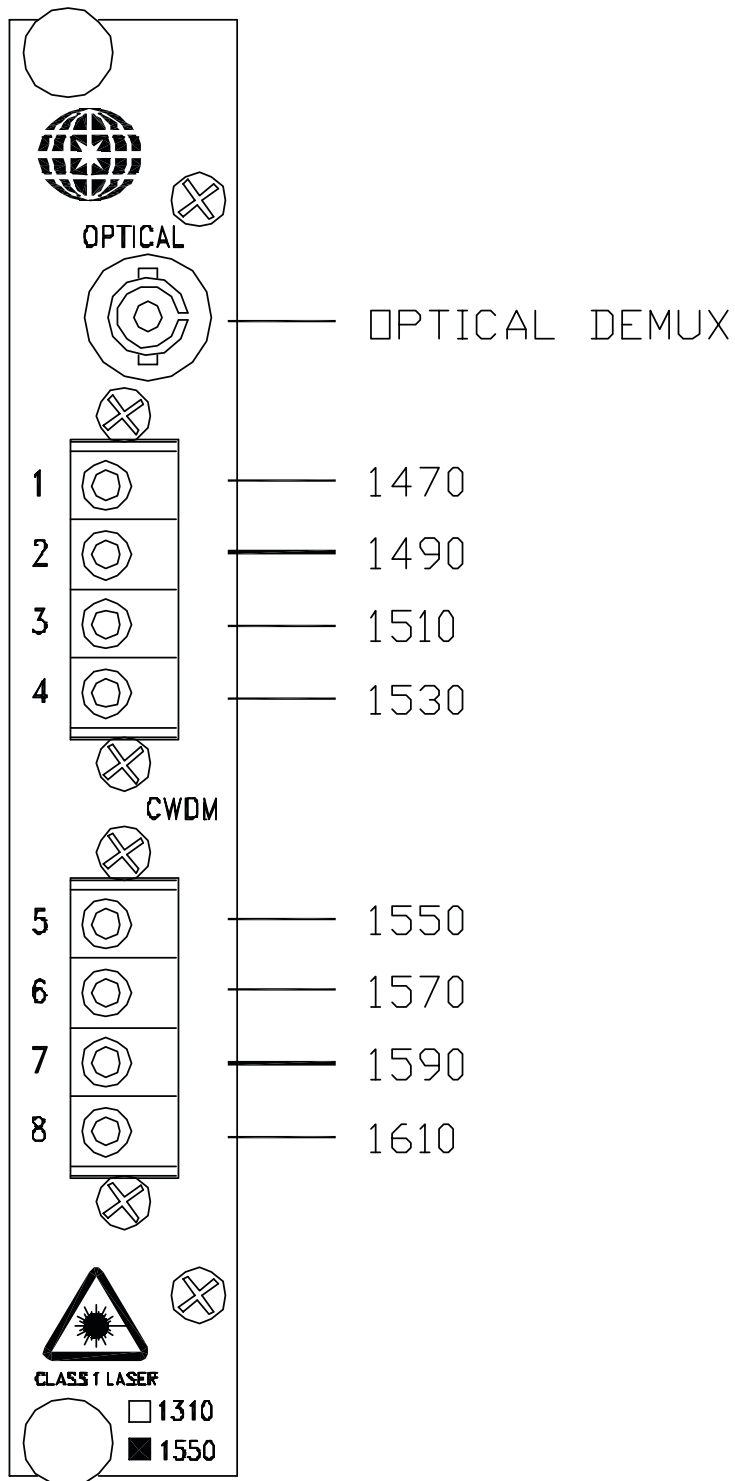
CD-4Q-20		CD-4Q-21	
Input / Output 1	1270nm	Input / Output 1	1510nm
Input / Output 2	1290nm	Input / Output 2	1530nm
Input / Output 3	1310nm	Input / Output 3	1550nm
Input / Output 4	1330nm	Input / Output 4	1570nm
CD-8Q-22		CD-8Q-23	
Input / Output 1	1270nm	Input / Output 1	1470nm
Input / Output 2	1290nm	Input / Output 2	1490nm
Input / Output 3	1310nm	Input / Output 3	1510nm
Input / Output 4	1330nm	Input / Output 4	1530nm
Input / Output 5	1350nm	Input / Output 5	1550nm
Input / Output 6	1370nm	Input / Output 6	1570nm
Input / Output 7	1390nm	Input / Output 7	1590nm
Input / Output 8	1410nm	Input / Output 8	1610nm

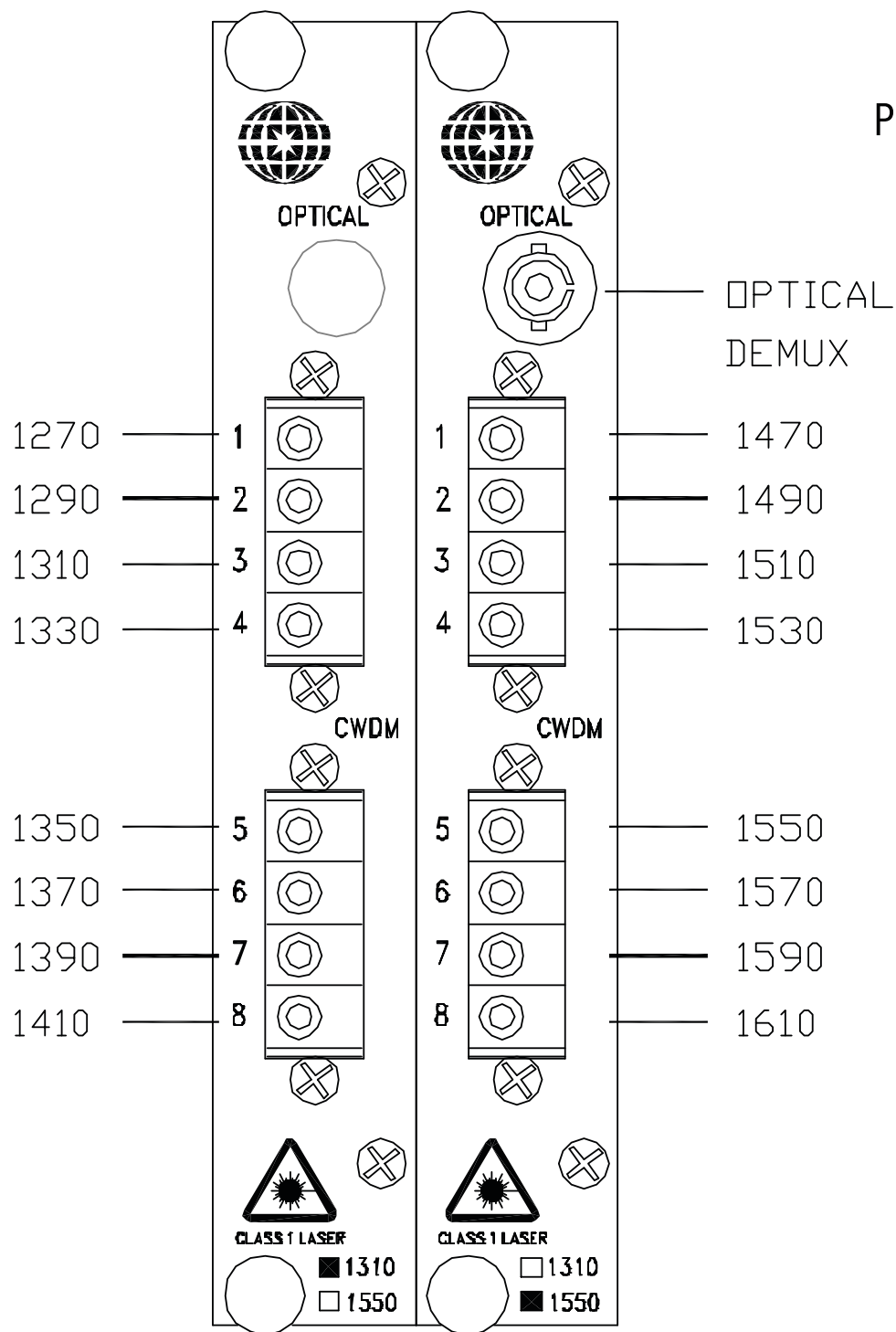
CD-16Q-25	
Input / Output 1	1270nm
Input / Output 2	1290nm
Input / Output 3	1310nm
Input / Output 4	1330nm
Input / Output 5	1350nm
Input / Output 6	1370nm
Input / Output 7	1390nm
Input / Output 8	1410nm
Input / Output 1	1470nm
Input / Output 2	1490nm
Input / Output 3	1510nm
Input / Output 4	1530nm
Input / Output 5	1550nm
Input / Output 6	1570nm
Input / Output 7	1590nm
Input / Output 8	1610nm

4.0 Pin-out diagrams



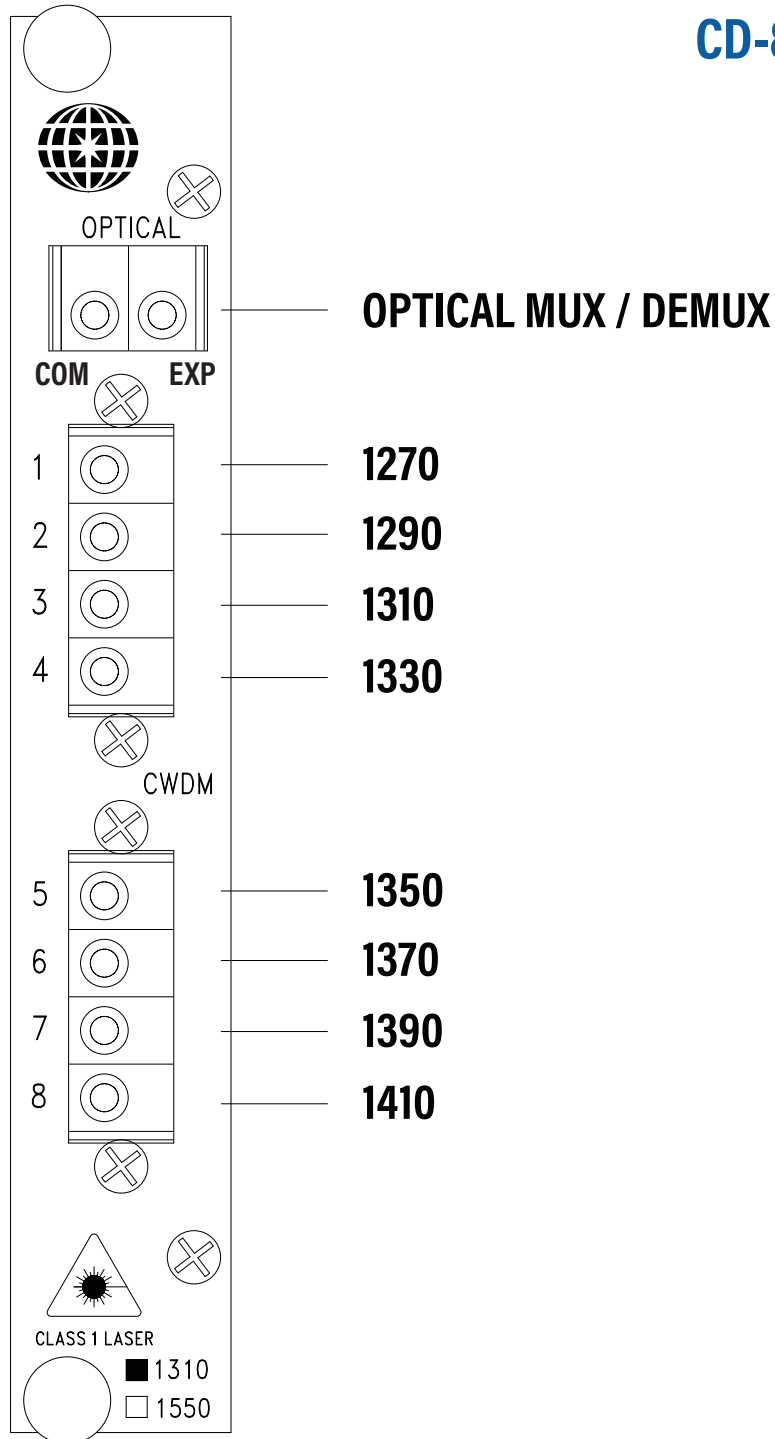
CD-4Q-21 PINOUT DIAGRAM

CD-8Q-23**PINOUT DIAGRAM**

CD-16Q-25**PINOUT DIAGRAM**

CD-8Q-22X-LC/APC

PINOUT DIAGRAM



5.0 Troubleshooting

Below is a listing of several problems that may arise during the installation & operation of the modules. If you are having difficulty installing or operating the modules please refer to this list below.

Problem: *Module does not fit in chassis slots*

Action: Check module orientation. Make sure the chassis sliding guides are aligned with the card extrusions.

Problem: *Card power LED does not lit or power indicator turns on and off*

Action: Check power supply to ensure that it is plugged in and turned on. If flashing continues, move module to another chassis or location in the same chassis, if available.

Problem: *Optical Signal Absent*

Action: Please verify Tx and Rx fibers connections at both ends of the link (Tx to Rx & Rx to Tx). Check if fiber optic cable is not damaged.

If the problem still persists after reviewing the above problems, please contact Meridian technical support at (516-285-1000).

