JABIL photonics

DATA SHEET

PASSIVE CWDM 4 CHANNEL FILTER

DESCRIPTION

Jabil Photonics CWDM optical filters have low insertion loss and high isolation.

Different filters are available for the add/drop of 1, 2, 4, 8, 16 channels (in any combination as per customer requirements). In addition it is possible to monitor the signal at the ingress or at the egress of the line system, and to provide additional features like the possibility to add/drop a bandwidth or to manage at the same time CWDM and DWDM wavelengths.

The filter can be packaged in an LGX compatible module but also customization is possible. It is designed to be used in extreme temperature environments within a temperature range of –40° to +85°C.

Standard version Standard version is the two fiber pair (one fibers for RX and one fiber for TX), with LC/APC connectors, monitoring port and upgrade port. Customized versions are available.

KEY FEATURES

- MUX/DMUX/OADM
- Low insertion loss and high isolation
- High stability and high reliability
- Epoxy-free optical path
- Fully customized to customer requirements
- Telcordia GR-1209, GR-1221-CORE qualified
- Mini-cassette, Fiber Tray, LGX & Rackmount

APPLICATIONS

- Enterprise networking
- Access networks
- CATV fiber optic links

COMPLIANCES

- Compliant with Telcordia GR-1221-CORE
- Compliant with RoHS-6

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ENVIRONMENTAL SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Unit
Operation Temperature	-40		+85	°C
Storage Temperature	-40	------	+85	°C
Operation Humidity*	5	------	95	%
Storage Humidity	5	------	95	%

(*) not condensing

OPTICAL SPECIFICATIONS

Parameter	Value	Note	Unit
Operating Wavelength	ITU-T Grid		
Channel Pass Band@0.5dB	>14		nm
Passband	ITU-T +/- 6.5		nm
Passband flatness	≤ 0.5		dB
Insertion Loss (Max)	2		dB
Adjacent Channel Isolation	≥ 30		dB
Non-Adjacent Channel Isolation	≥ 45		dB
Wavelength thermal stability	≤ 0.002		nm/°C
IL thermal stability	≤ 0.005		dB/°C
Return Loss	≥ 45		dB
PMD	≤ 0.15		ps
PDL	≤ 0.15		dB
Directivity	≥ 50		dB

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ORDERING INFORMATION

WDM	TYPE	#CHANNELS	GRID	FORM	TECHNOLOGY	CH PLAN	CONNECTOR
CWDM	MUX/DEMUX	4CH			TFF		

SINGLE / DUAL FIBER	EXPRESS	UPGRADE	MON	FIBE LENGTH	FIBER DIA	OTHERS
DUAL		UPG	TXRXMON			

1. WDM
   - DWDM for Dense WDM
   - CWDM for Coarse WDM

2. TYPE
   MUX/DEMUX: it can also act as OADM function, requiring UPG port (see dedicated field)
   MUX: unidirectional application with only MUX function
   DEMUX: unidirectional application with only DEMUX function

3. #Channels:
   - Number of add/dropped channels **2CH**,**4CH**,**8CH**,**16CH**,**40CH** etc.

4. Grid: (applicable only to DWDM)
   50GHZ -**100GHZ** -**200GHZ**

5. Form: form factor (available **CGM**, **LGX 1RU**, **LGX 2RU**, **HDLGX1**, **HDLGX2**)

6. Technology:
   TFF (typically for 4,8,16)
   AAWGM (typically for 40,48,64)

7. Channel Plan:
   - It can indicate the first and the last channel in case of consecutive channels or the specific channels to be managed
   CHxx-CHyy
   CHxx, CHyy, CHzz

8. Connector:
   LCA (LC/APC) -**SCA** (SC/APC)
   LCU (LC/UPC) -**FCU** (FC/UPC)
   SCU (SC/UPC) -**FCA** (FC/APC)

9. Single/Dual Fiber:
   SINGLE: Single Fiber application: it means that only one connector is provided for each port, and some channels are used for TX and others for RX
   DUAL: Dual Fiber application: pair of connector (IN/OUT) for each port.

The following are instead optional fields needed to specify additional requests:

10. EXPRESS: it indicates if additional bandwidth is extracted before filtering the channels. This typically applies to cases where mix of CWDM and DWDM network is managed:
    EXP: it indicates that EXPRESS port (or port pair) is requested.

11. UPGRADE: it indicates that the rest of the channels (not dropped) is sent to an UPGRADE port. This applies to OADM configurations and to Terminal MUX with the possibility of expanding the number of terminated channels
    EXP: it indicates that EXPRESS port (or port pair) is requested.

12. MONITORING: it indicates that monitoring port is requested. There are some options possible:
    RXMON: monitoring associated to the Ingress COM interface (ingress line)
    TXMON: monitoring associated to the Egress COM interface (egress line)
    TXRXMON: pair of monitoring ports associated to both the Ingress COM interface (ingress line) and to Egress COM interface (egress line)
    BIDMON: monitoring associated to the single COK interface (single fiber application)

13. Fiber Length:
    0.5M : 50cm
    1M : 1 meter
    2M : 2 meter

14. Fiber Diameter:
    900um
    250um
    1.2mm
    2mm
    3mm

15. Others: it is also possible to specify other characteristics

For additional information, visit jabil.com/photonics

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CHANNEL PLAN

Wavelength	Channel Number
1271	27
1291	29
1311	31
1331	33
1351	35
1371	37
1391	39
1411	41
1431	43
1451	45
1471	47
1491	49
1511	51
1531	53
1551	55
1571	57
1591	59
1611	61

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