

Coarse Wavelength Division Multiplexing - CWDM



Description

Coarse Wavelength Division Multiplexing is a type of optical wavelength management device that are based on proven thin-film filter technology. It features small size, high reliability, high extensibility, simultaneous transmission multi-wavelength; CWDM has gained prevalence in multi-wavelength digital transport architectures because it enables the use of very low cost un-cooled DFB laser transmitters. Moreover, powering requirements are reduced and reliability is increased.

RIK-com provides whole series of 1xN CWDM products that are tailored for specific applications. All products meet GR-1209-CORE, GR-1221-CORE and ITU-T G.694.2 requirements.

Features

- ☒ Low Insertion Loss
- ☒ High Isolation
- ☒ Low PDL
- ☒ Compact Design
- ☒ Good channel-to-channel uniformity
- ☒ Wide Operating Wavelength: From 1260nm to 1620nm
- ☒ Wide Operating Temperature: From -40°C to 85°C
- ☒ High Reliability and Stability

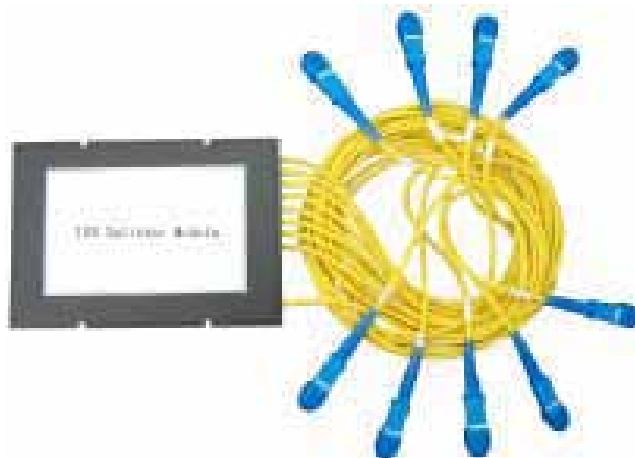


Applications

- ☒ CWDM System
- ☒ PON Networks
- ☒ CATV Links

Compliance

- ☒ Telcordia GR-1209-CORE
- ☒ Telcordia GR-1221-CORE
- ☒



Specifications

1x2 CWDM Devices

Parameters		DISCRIPTION
Centre Wavelength (nm)		ITU,ITU+1
Operating Wavelength (nm)		1460~1620
Channel Space (nm)		20
Fibre Type		SMF-28e or customer specified
IL dB (P/A Grade)	Transmission band	0.5/0.6
	Reflection band	0.3/0.4
Isolation (dB)	Transmission band	30
	Reflection band	12
Ripple (dB)		0.3
PDL (dB)		0.1
PMD (PS)		0.1
RL (dB)		45
Directivity (dB)		50
Maximum Optical Power (mw)		500
Operating Temperature (°C)		0~70
Storage Temperature (°C)		-40~85
Package Dimension (mm) (Φ×L)		Φ5.5*L35

Notes: Specified without connectors. Add an additional 0.2dB loss per connector.

1×N CWDM Mux/Demux Module

Parameters		1x2	1x4	1x8
Centre Wavelength (nm)		ITU,ITU+1		
Operating Wavelength (nm)		1460~1620		
Channel Space (nm)		20		
Fibre Type		SMF-28e or customer specified		
IL dB (P/A Grade)		0.7/1.0	1.4/1.7	2.0/2.5
Isolation (dB)	Adjacent Channel	30		
	Non-Adjacent Channel	50		
Ripple (dB)		0.3	0.4	0.5
PDL (dB)		0.1		
PMD (PS)		0.1		
RL (dB)		45		
Directivity (dB)		50		
Maximum Optical Power (mw)		500		
Operating Temperature (°C)		0~70		
Storage Temperature (°C)		-40~85		
BOX Package (mm)		100*80*10		
LGX Package		1U、2U、4U		
19" Rack mount Package		1U		

Notes: Specified without connectors. Add an additional 0.2dB loss per connector.



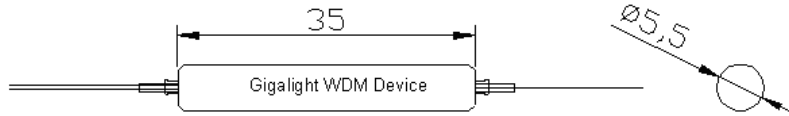
NCH CWDM Optical Add/Drop Module

Parameters		1CH	2CH	4CH	8CH
Centre Wavelength (nm)		ITU, ITU+1			
Operating Wavelength (nm)		1460~1620			
Channel Space (nm)		20			
Fibre Type		SMF-28e or customer specified			
IL dB (P/A Grade)	Add & Drop Channel	0.5/0.6	0.7/1.0	1.4/1.7	2.0/2.5
	Express Channel	0.6/0.8	1.2/1.4	1.8/2.0	3.6
Isolation (dB)	Add & Drop Adjacent Channel	30			
	Add & Drop Non-Adjacent Channel	50			
	Express Channel	25			
Ripple (dB)		0.3	0.3	0.4	0.5
PDL (dB)		0.1			
PMD (PS)		0.1			
RL (dB)		45			
Directivity (dB)		50			
Maximum Optical Power (mw)		500			
Operating Temperature (°C)		0~70			
Storage Temperature (°C)		-40~85			
BOX Package (mm)		100*80*10		140*115*18	
LGX Package		1U, 2U, 4U			
19" Rack mount Package		1U			

Notes: 1. Specified without connectors. 2. Add an additional 0.2dB loss per connector.

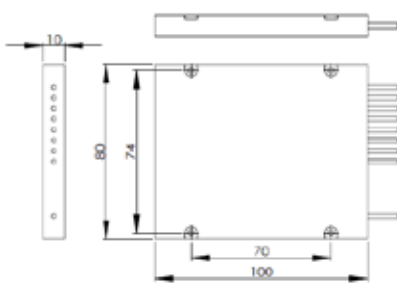
Mechanical Dimensions

WDM Device

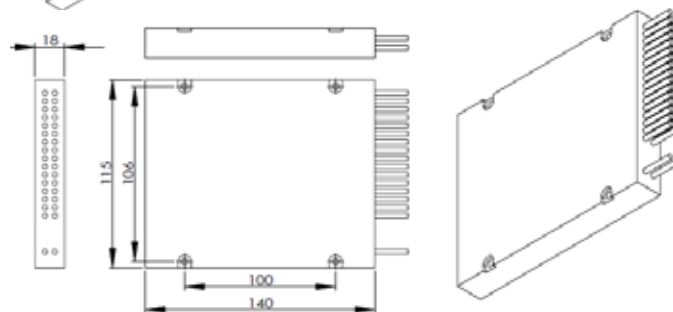


CWDM Mux/Demux Module & CWDM Optical Add/Drop Module

100X80X10



140X115X18



Ordering information

WDM Device

GWD Type	Port Config	WDM Type	Centre Wavelength	Fibre Type	Output Fibre Length	Connector Type	PASS	Reflection
WDM=W	1X2	CWDM=CW	1470/1471=47	BR= Bare Fibre	1.2m=1.2	FC=FC	ST APC=STA	SC=SC
.....	1x8	DWDM=DW	21Ch=21	LT=Loose Tube	2.5m=2.5	SC APC=SCA	None=0	FC APC=FCA
DEVICE=D	2X32	FWDM=FW	T15R13=15	TB=Tight Buffer	5m=5	Customized=X	LC=LC	Customized=X

CWDM Mux/Demux Module

GWD Type	Port Config	Module Type	Wavelength	Module Type	Fibre Type	Fibre Length	PASS	Reflection
WDM=W	1X2	Mux=MX	1470~1610=47/61	Small Plastic=SP	900um=09	2.7m=2.7	ST APC=STA	SC=SC
.....	1x8	DEMUX=DMX	1550~1610=55/61	Customized=X	2mm=2	3.5m=3.5	None=0	FC APC=FCA
MODULE=M	2X32	FWDM=FW	T15R13=15	LGX box=LGX	3mm=3	Customized=X	LC=LC	Customized=X

CWDM Optical Add/Drop Module

GWD Type	Port Config	Wavelength	Module Type	Fibre Type	Fibre Length	Input connector	Add Port Connector	Drop Port Connector
Optical Add/Drop Module	1Ch=101	1470~1610=47/61	Small Plastic=SP	900um=09	2.7m=2.7	ST APC=STA	SC=SC	LC=LC
	2Ch=102	1550~1610=55/61	Customized=X	2mm=2	3.5m=3.5	None=0	FC APC=FCA	None=0
	8Ch=108	LGX box=LGX	3mm=3	Customized=X	LC=LC	Customized=X	ST=ST

