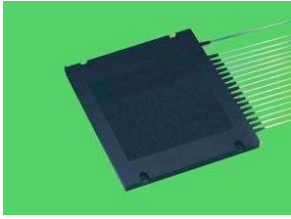


LEAD Fiber Optics PRODUCT CATALOGUE

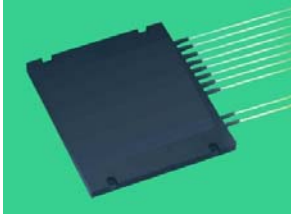
CWDM

LFO CWDM Module Series



CWDM Module

The Coarse Wave Division Multiplexing (CWDM) modules combine or split up to 16 wavelengths into a single fiber. Our CWDM module features wide channel bandwidth (13nm) in ITU channel allocation. Their isolation is greater than 30dB for adjacent channels, and greater than 40dB for non-adjacent channels. They have also high thermal stability.



CWDM Add/Drop Module

The CWDM Add/Drop Module is designed to add and drop an individual channel flexibly at an optical node of a CWDM network system. Our CWDM Add/Drop Module Features Wide channel bandwidth (13nm) in ITU channel allocation. They have low insertion Loss (IL), low IL Uniformity and high Isolation. The central wavelength of each channel can be specified to one of the ITU-T grid wavelengths



CWDM Add/Drop Unit

The CWDM Add/Drop Unit is designed to add or drop one single CWDM wavelength at any node location of the network. The central wavelength and channel spacing of this component are at ITU grid. This component is the basic building block of multiple-channel CWDM mux/demux modules. Customers can specify the central wavelength of the add/drop channel of this component.

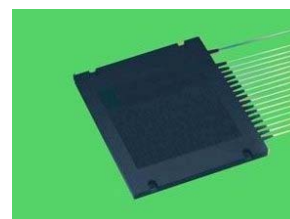
CWDM Module

Features

- Environmentally stable
- Easy installation
- Custom-defined specifications
- Low return Loss
- Low Loss, Low cross Talk
- ITU standard

Applications

- Telecommunication
- Local area network
- CWDM & FTTH



Specifications

ITEM	VALUES	
	Mux	Demux
Type		
Channel	4/8/16 or Customer Specify	
Central Wavelength, nm	1311/1331/1351/1371/1391/1141/1431/1451 1471/1491/1511/1531/1551/1571/1591/1611 or customer specify	
Channel Space, nm	20	
Pass band@ 0.5dB, nm	ITU±6.5nm	
Insert Loss, dB for 4 channel	≤ 1.6	
Insert Loss, dB for 8 channel	≤ 2.8	
Insert Loss, dB for 16 channel	≤ 4.0	
Adjacent Channel isolation, dB	N/A	≥ 30
Non-adjacent Channel isolation, dB	N/A	≥ 40
Uniformity, dB	≤ 1.5 (Mux-Demux pair only)	
Directivity, dB	≥ 50	
Optical Input Return Loss, dB	≤ 45	
Polarization Dependent Loss, dB	≤ 0.1	
Polarization Mode Dispersion (PMD), ps	≤ 0.1	
Thermal Stability, dB /°C	≤ 0.005	
Thermal Stability Drift, pm /°C	≤ 5	
Max. Optical Power, mW	300	
Max. Tensile Load, N	5	
Storage Temperature, °C	-40~85	
Operating Temperature, °C	0~70	
Package size, mm ³	M4(1×4, 1×8 standard);M5(1×16 standard, Mux+Demux 1×8 standard), A2,A3	

CWDM Module Ordering information

WD-CM XX/XX XX XX X XX XXX(cm)

Connector(in/out)

11-ST
 21-FC/PC
 22-FC/APC
 31-SC/PC
 32-SC/APC
 41-LC/PC
 51-MU/PC
 00-None
 XX-Others

Pigtail length

050- 50cm
 100- 100cm
 150- 150cm
 200- 200cm
 000- Modulized
 XXX-Others

No.of channels

04- 4 channel
 08- 8 channel
 16- 16 channel
 XX- Others

Central wavelength

01-1511/1531/1551/1571 for 4 channels
 02-1501/1521/1541/1561 for 4 channels
 03-1471/1479/1511/1531/1551/1571/1591/1611 for 8 channels
 04-1311/1331/1351/1371/1391/1411/1431/1451/
 1471/1479/1511/1531/1551/1571/1591/1611 for 16 channels
 XX- Others

Type

M-Mux
 D-Demux
 U-Mux/Demux
 X-Others

Package option(for both ends)

C1-Coated fiber(250um)
 L1-Loose tube cable (900um)
 XX-Others

LEAD Fiber Optics Co.,Ltd.

TEL: 886-2-2949-8116

www.fiberoptic.com.tw

10F.-6, No.347, Jingsin St., Jhonghe City, Taipei County 235, Taiwan (R.O.C)

FAX: 886-2-2949-8117

sales@fiberoptic.com.tw

Lfo

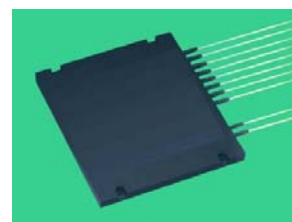
CWDM Add/Drop Module

Features

- Environmentally stable
- Easy installation
- Custom-defined specifications
- Low return Loss
- Low Loss, Low cross Talk
- ITU standard

Applications

- Telecommunication
- Local area network
- CWDM & FTTH



Specifications

ITEM	VALUES			
Channel No.	1/2/4/8/ or Customer Specify			
Starting Wavelength (nm)	1311/1331/1351/1371/1391/1411/1431/1451; 1471/1491/1511/1531/1551/1571/1591/1611 or customer specify			
Channel Space, nm	20			
Pass band@ 0.5dB,nm	ITU±6.5nm			
Typical Insertion Loss,	1 set of λ	2 set of λ	4 set of λ	8 set of λ
Input/Drop Channel	≤ 0.8	≤ 1.2	≤ 2.0	≤ 3.6
Add/Output Channel	≤ 0.8	≤ 1.2	≤ 2.0	≤ 3.6
Input/Output Channel	≤ 0.8	≤ 1.9	≤ 2.8	≤ 5.2
Adjacent Channel isolation, dB	≥ 30			
Non-adjacent Channel isolation, dB	≥ 40			
Uniformity, dB	≥ 1.5			
Directivity, dB	≥ 50			
Optical Input Return Loss, dB	≤ 45			
Polarization Dependent Loss, dB	≤ 0.1			
Polarization Mode Dispersion (PMD), ps	≤ 0.1			
Thermal Stability, dB / $^{\circ}$ C	≤ 0.005			
Thermal Stability Drift, pm / $^{\circ}$ C	≤ 5			
Max. Optical Power, mW	300			
Max. Tensile Load, N	5			
Storage Temperature, $^{\circ}$ C	-40~85			
Operating Temperature, $^{\circ}$ C	0~70			
Package size,mm ³	M4(1/2/4,channel standard);M5(8 channel standard), A2,A3			

CWDM Add/Drop Module Ordering information

WD-AM XX/XX/XX XX XX XX XX XXX(cm)

- Connector (in/common/out)**
- 11-ST
 - 21-FC/PC
 - 22-FC/APC
 - 31-SC/PC
 - 32-SC/APC
 - 41-LC/PC
 - 51-MU/PC
 - 00-None
 - XX-Others

- Pigtail length**
- 050- 50cm
 - 100- 100cm
 - 150- 150cm
 - 200- 200cm
 - 000- Modulized
 - XXX-Others

- Sets of wavelengths**
- 01- 1 set of wavelengths
 - 02- 2 set of wavelengths
 - 04- 4 set of wavelengths
 - XX-Others

- Starting wavelength**
- | | |
|---------------------|------------|
| 31-1310 nm | 47-1470 nm |
| 33-1330 nm | 49-1490 nm |
| 35-1350 nm | 51-1510 nm |
| 37-1370 nm | 53-1530 nm |
| 39-1390 nm | 55-1550 nm |
| 41-1410 nm | 57-1570 nm |
| 43-1430 nm | 59-1590 nm |
| 45-1450 nm | 61-1610 nm |
| XX-Customer Specify | |

- Channel spacing**
- S2- 20 nm, single directional
 - D2- 20 nm, dual directional
 - XX- Others

- Cable type(for both ends)**
- S1-Singlemode fiber
 - L1-Loose tube cable (900um)
 - XX-Others

CWDM Add/Drop Unit

Features

- Environmentally stable
- Easy installation
- Custom-defined specifications
- Low return Loss
- Low Loss, Low cross Talk
- ITU standard

Applications

- Telecommunication
- Local area network
- CWDM & FTTH



Specifications

ITEM	VALUES
Central Wavelength, nm	1311/1331/1351/1371/1391/1411/1431/1451 1471/1491/1511/1531/1551/1571/1591/1611 or customer specify
Pass band@ 0.5dB, nm	ITU±6.5nm or customer specify
Channel Space, nm	20
Add/Drop Channel Insertion Loss(C-P1), dB	≤ 0.8
Express Channel Insertion Loss(C-P2), dB	≤ 0.4
Add/Drop Channel Ripple, dB	≤ 0.3
Isolation(C-P1), dB	≤ 30
Isolation(C-P2), dB	≥ 12
Directivity, dB	≥ 50
Optical Input Return Loss, dB	≥ 45
Polarization Dependent Loss, dB	≤ 0.1
Polarization Mode Dispersion (PMD), ps	≤ 0.1
Thermal Stability, dB /°C	≤ 0.005
Thermal Stability Drift, pm /°C	≤ 5
Max. Optical Power, mW	300
Max. Tensile Load, N	5
Storage Temperature, °C	-40°C ~ 85°C
Operating Temperature, °C	0°C ~ 70°C
Package size, mm	φ 5.5×34mm for coated fiber(250 μ m) φ 5.5×39mm for Loose tube cable(900 μ m)

