



# WDM LGX MODULE

**DWDM LGX MODULE  
100GHZ 40CH**



WDM  
DEVICE



8CH DWDM  
MUX MODULE



8CH CWDM  
DEMUX MODULE



8CH DWDM  
DEMUX MODULE



DWDM OSP MODULE  
100GHZ 20CH



DWDM OSP MODULE  
100GHZ 40CH



DWDM LGX MODULE  
100GHZ 16CH



DWDM 1RU MODULE  
100GHZ 40CH





Applications & Regulatory and compliance standards

## 3-PORT WDM DEVICE

### Applications

- WDM System
- LAN Networks System
- CATV Networks
- 5G Networks

## 3-PORT WDM DEVICE



## LGX DWDM MODULE

### Applications

- Storage Area Network (SAN)
- Long haul optical network
- Service providers & Internet companies

### Regulatory and compliance standards

- Telcodia GR-1221-CORE and GR-1209-CORE
- All materials comply with RoHS

## LGX DWDM MODULE





## Applications & Regulatory and compliance standards

### 40CH OSP DWDM MODULE



### 40CH OSP DWDM MODULE

#### ■ Applications

- Storage Area Network (SAN)
- Long haul optical network
- Service providers & Internet companies

#### ■ Regulatory and compliance standards

- Telcodia GR-1221-CORE and GR-1209-CORE
- All materials comply with RoHS

### 2X40CH 1RU DWDM MODULE



### 2X40CH 1RU DWDM MODULE

#### ■ Applications

- Storage Area Network (SAN)
- Long haul optical network
- Service providers & Internet companies

#### ■ Regulatory and compliance standards

- Telcodia GR-1221-CORE and GR-1209-CORE
- All materials comply with RoHS



## LAN-WDM MUX OSP MODULE



## LAN-WDM MUX/ DEMUX OSP MODULE

## LAN-WDM DEMUX OSP MODULE



### Applications

- Storage Area Network (SAN)
- Long haul optical network
- Service providers & Internet companies

### Regulatory and compliance standards

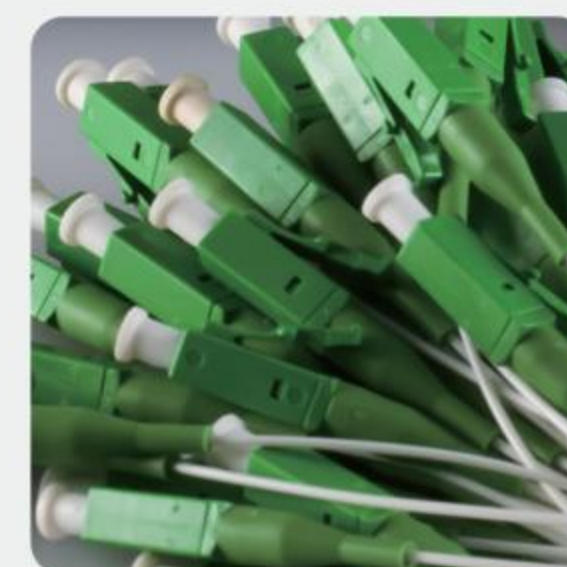
- Telcodia GR-1221-CORE and GR-1209-CORE
- All materials comply with RoHS



# WDM

## WDM

- 3-Port WDM Device ..... 6-7
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- 40CH OSP DWDM MODULE ..... 15-21
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### 3-PORT DWDM DEVICE

## Features

- Low Insertion Loss
- High Return Loss
- Low PDL
- High Channel Isolation
- Excellent environmental reliability
- Wide operating temperature

## Specifications

Parameters		CWDM Device	DWDM Device	LWDM Device
Operating Wavelength (nm)		1260-1635	1450-1635	1260-1360
Center Wavelength (nm)		ITU Grid	ITU Grid	ITU Grid
Pass Band Bandwidth @ 0.5dB(nm)		±7.0	±0.125	±1.0
Insertion Loss(dB)	Pass Channel	≤ 0.70	≤ 0.80	≤ 0.70
	Reflect Channel	≤ 0.40	≤ 0.35	≤ 0.40
Ripple Within Passband (dB)		≤ 0.50	≤ 0.50	≤ 0.50
Adjacent Channel Isolation (dB)		≥ 30	≥ 30	≥ 25
Non- Adjacent Channel Isolation (dB)		≥ 45	≥ 45	≥ 35
Reflect Channel Isolation (dB)		≥ 15	≥ 13	≥ 15
PDL (dB)		≤ 0.15	≤ 0.15	≤ 0.15
PMD (ps)		≤ 0.15	≤ 0.25	≤ 0.15
Directivity (dB)		≥ 50	≥ 50	≥ 50
Return Loss (dB)		≥ 48	≥ 48	≥ 48
Packaging Dimensions (mm)	250um Bare Fiber	Φ3.6 x L28	Φ3.6 x L28	Φ3.6 x L28
	Φ5.5 x L35	Φ5.5 x L35	Φ5.5 x L35	Φ5.5 x L35
	900um Loose Tube	Φ5.5 x L38	Φ5.5 x L38	Φ5.5 x L38
Maximun Optical Power Handing (mW)		300		
Operating Temperature (°C)		-40 ~ +85		
Storage Temperature (°C)		-40 ~ +85		
Fiber Type		SMF-28e fiber Or Others		

**Note:**

- 1、All optical parameters should be guaranteed across the operating temperature range.
- 2、Products should meet Telcordia GR-1209 and GR-1221.
- 3、All materials must be RoHS compliant.
- 4、All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.
- 5、Other package size available by request



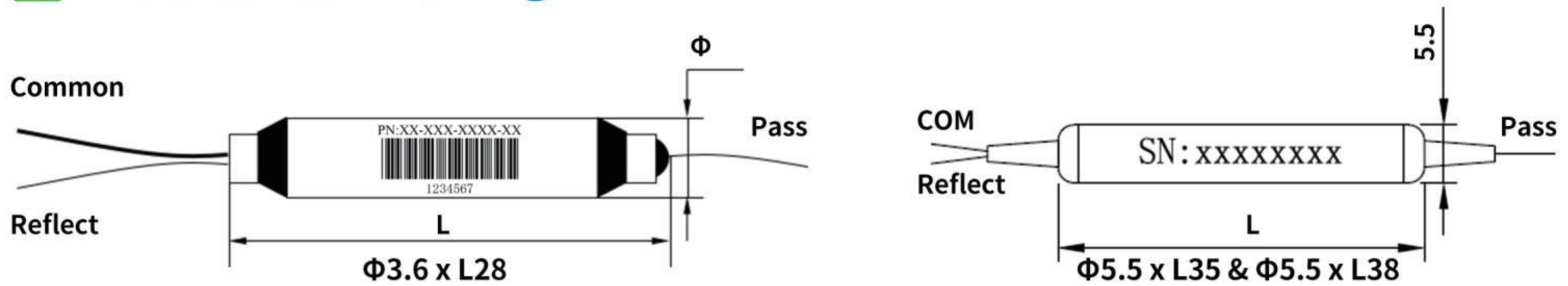
## Specifications

Parameters		G-PON Device	XG-PON Device	NG-PON Device
Operating Wavelength (nm)		1260 -1675		
Passband Width (nm)		1290 -1500	1260 -1280 &1575 -1581	1524 -1544 &1596 -1615
Reflect band Width (nm)		1260 -1280 &1524 -1675	1290 -1560 &1596 -1675	1260 -1500 &1550 -1581 &1640 -1675
Insertion Loss (dB)	Pass Channel	≤ 0.70	≤ 0.70	≤ 0.70
	Reflect Channel	≤ 0.45	≤ 0.45	≤ 0.45
Ripple Within Passband (dB)		≤ 0.50	≤ 0.50	≤ 0.50
Isolation (dB)	Pass Port	≥ 30	≥ 30	≥ 30
	Reflect Port	≥ 15	≥ 15	≥ 15
PDL (dB)		≤ 0.10	≤ 0.10	≤ 0.10
PMD (ps)		≤ 0.15	≤ 0.15	≤ 0.15
Directivity (dB)		≥ 50	≥ 50	≥ 50
Return Loss (dB)		≥ 48	≥ 48	≥ 48
Packaging Dimensions (mm)	250um Bare Fiber	Φ3.6 x L28	Φ3.6 x L28	Φ3.6 x L28
		Φ5.5 x L35	Φ5.5 x L35	Φ5.5 x L35
	900um Loose Tube	Φ5.5 x L38	Φ5.5 x L38	Φ5.5 x L38
Maximun Optical Power Handing (mW)		300		
Operating Temperature (°C)		-40 ~ +85		
Storage Temperature (°C)		-40 ~ +85		
Fiber Type		SMF-28e fiber Or Others		

**Note:**

1. All optical parameters guaranteed under Operating temperature and Humidity range
2. Telcordia GR-1209 and GR-1221 compliant
3. All materials are RoHS compliant
4. All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.
5. Other package size available by request

## Mechanical Drawing







# LGX DWDM MODULES

## Overview

Dense Wavelength Division Multiplexing (DWDM) allows for network flexibility and bandwidth expansion by incorporating multiple communication signals into a single optical fiber by using different wavelengths for each signal. It is the technology of choice for carriers to add services without expanding their fiber infrastructure. DWDM systems are capable to transmit up to 40 channels for long haul transmission. The OSP module DWDM can be easily installed in a variety of indoor and outdoor locations.

## Features

- Simple plug-and-play deployment
- Increased capacity in short-haul
- Low power dissipation
- Interchangeable modules
- High port density
- High flexibility




**Specifications**
**DWDM MUX/DEMUX MODULE C-BAND**

Optical Performance <sup>*1</sup>	Unit	Specifications					
Channel Spacing	GHz	100					
ITU Channels	--	C14~C62					
Operating Wavelength Range		1520~1620					
Passband width <sup>*2</sup>	nm	ITU ± 0.125					
Channel Count <sup>*3</sup>	CH	2	4	8	16	20	40
Channel MAX Insertion Loss	dB	≤ 1.2	≤ 1.4	≤ 2.1	≤ 3.5	≤ 3.8	≤ 4.0
MUX DEMUX Link Insertion Loss	dB	≤ 2	≤ 2.3	≤ 3	≤ 5	≤ 5.5	≤ 6.0
Ripple within Passband	dB	≤ 0.5					
Adjacent Channel Isolation	dB	≥ 30					
Non-Adjacent Channel Isolation	dB	≥ 45					
Directivity	dB	≥ 50					
Return Loss	dB	≥ 45					
Polarization Dependent Loss	dB	≤ 0.25					
Polarization Mode Dispersion	ps	≤ 0.25					
Maximum Input Power	mW	≤ 300					
Operating Temperature	°C	-20 ~ 65					
Operation Humidity	%RH	5 ~ 95					
Storage Temperature	°C	-40 ~ 85					
Package Type and Dimension <sup>*4</sup>	mm	L158xW130xH29			L158xW130xH58		
Connector & Adapter <sup>*5</sup>	--	LC/APC					

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 48CH is optional.

\*4 Package Dimension don't include adapter or connector, other size can be customized.

\*5 The type of Connector and Adapter can be customized.

\*6 Module with tap monitoring port , express port and upgrade port are optional.





## Specifications

### DWDM MUX/DEMUX MODULE C-BAND

Optical Performance <sup>*1</sup>	Unit	Specifications					
Channel Spacing	GHz	100					
ITU Channels	--	C14~C62					
Operating Wavelength Range		1520~1620					
Passband width <sup>*2</sup>	nm	ITU ± 0.125					
Channel Count <sup>*3</sup>	CH	2	4	8	16	20	40
Channel MAX Insertion Loss	dB	≤ 1.0	≤ 1.3	≤ 1.8	≤ 3.0	≤ 3.2	≤ 3.5
Module Link Insertion Loss	dB	≤ 2.0	≤ 2.6	≤ 3.6	≤ 6.0	≤ 6.0	≤ 6.0
Uniformity	dB	≤ 0.5		≤ 0.8	≤ 1.5	≤ 1.8	
Ripple within Passband	dB	≤ 0.5					
Adjacent Channel Isolation	dB	≥ 30					
Non-Adjacent Channel Isolation	dB	≥ 45					
Directivity	dB	≥ 50					
Return Loss	dB	≥ 45					
Polarization Dependent Loss	dB	≤ 0.25					
Polarization Mode Dispersion	ps	≤ 0.25					
Maximum Input Power	mW	≤ 300					
Operating Temperature	° C	-20 ~ 65					
Operation Humidity	%RH	5 ~ 95					
Storage Temperature	° C	-40 ~ 85					
Package Type and Dimension <sup>*4</sup>	mm	L158xW130xH29			L158xW130xH58		
Connector & Adapter <sup>*5</sup>	--	LC/APC					

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 48CH is optional.

\*4 Package Dimension don't include adapter, other size can be customized.

\*5 The type of Connector and Adapter can be customized.

\*6 Module with tap monitoring port , express port and upgrade port are optional.




**Specifications**
**DWDM MUX/DEMUX MODULE L-BAND**

Optical Performance <sup>*1</sup>	Unit	Specifications			
Channel Spacing	GHz	100			
ITU Channels	--	L68~L100			
Operating Wavelength Range	nm	1565~1625			
Passband width <sup>*2</sup>	nm	ITU $\pm$ 0.125			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	$\leq$ 1.2	$\leq$ 1.4	$\leq$ 2.1	$\leq$ 3.5
MUX DEMUX Link Insertion Loss	dB	$\leq$ 2	$\leq$ 2.3	$\leq$ 3.0	$\leq$ 5.0
Ripple within Passband	dB	$\leq$ 0.5			
Adjacent Channel Isolation	dB	$\geq$ 30			
Non-Adjacent Channel Isolation	dB	$\geq$ 45			
Directivity	dB	$\geq$ 50			
Return Loss	dB	$\geq$ 45			
Polarization Dependent Loss	dB	$\leq$ 0.25			
Polarization Mode Dispersion	ps	$\leq$ 0.25			
Maximum Input Power	mW	$\leq$ 300			
Operating Temperature	$^{\circ}$ C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	$^{\circ}$ C	-40 ~ 85			
Package Type and Dimension <sup>*3</sup>	mm	L158xW130xH29			
Connector & Adapter <sup>*4</sup>	--	LC/APC			

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.





## Specifications

### DWDM UNIVERSAL MODULE L-BAND

Optical Performance <sup>*1</sup>	Unit	Specifications			
Channel Spacing	GHz	100			
ITU Channels	--	L68~L100			
Operating Wavelength Range		1565~1625			
Passband width <sup>*2</sup>	nm	ITU $\pm$ 0.125			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	$\leq$ 1.0	$\leq$ 1.3	$\leq$ 1.8	$\leq$ 3.0
MUX DEMUX Link Insertion Loss	dB	$\leq$ 2.0	$\leq$ 2.6	$\leq$ 3.6	$\leq$ 6.0
Uniformity	dB	$\leq$ 0.5		$\leq$ 0.8	$\leq$ 1.5
Ripple within Passband	dB	$\leq$ 0.5			
Adjacent Channel Isolation	dB	$\geq$ 30			
Non-Adjacent Channel Isolation	dB	$\geq$ 45			
Directivity	dB	$\geq$ 50			
Return Loss	dB	$\geq$ 45			
Polarization Dependent Loss	dB	$\leq$ 0.25			
Polarization Mode Dispersion	ps	$\leq$ 0.25			
Maximum Input Power	mW	$\leq$ 300			
Operating Temperature	$^{\circ}$ C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	$^{\circ}$ C	-40 ~ 85			
Package Type and Dimension <sup>*3</sup>	mm	L158xW130xH29			
Connector & Adapter <sup>*4</sup>	--	LC/APC			

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.




**Specifications**
**DWDM MUX/DEMUX MODULE O-BAND**

Optical Performance <sup>*1</sup>	Unit	Specifications			
Channel Spacing	GHz	100			
Operating Wavelength Range		1260~1360			
Passband width <sup>*2</sup>	nm	ITU $\pm$ 0.10			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	$\leq$ 1.2	$\leq$ 1.4	$\leq$ 2.1	$\leq$ 3.5
MUX DEMUX Link Insertion Loss	dB	$\leq$ 2	$\leq$ 2.3	$\leq$ 3.0	$\leq$ 5.0
Ripple within Passband	dB	$\leq$ 0.5			
Adjacent Channel Isolation	dB	$\geq$ 30			
Non-Adjacent Channel Isolation	dB	$\geq$ 45			
Directivity	dB	$\geq$ 50			
Return Loss	dB	$\geq$ 45			
Polarization Dependent Loss	dB	$\leq$ 0.25			
Polarization Mode Dispersion	ps	$\leq$ 0.25			
Maximum Input Power	mW	$\leq$ 300			
Operating Temperature	$^{\circ}$ C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	$^{\circ}$ C	-40 ~ 85			
Package Type and Dimension <sup>*3</sup>	mm	L158xW130xH29			
Connector & Adapter <sup>*4</sup>	--	LC/APC			

\*1 All specifications are provided without connector; Insertion loss of one mated pair is  $<$  0.3dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.



DWDM UNIVERSAL MODULE O-BAND

Optical Performance <sup>*1</sup>	Unit	Specifications			
Channel Spacing	GHz	100			
Operating Wavelength Range		1260~1360			
Passband width <sup>*2</sup>	nm	ITU ± 0.10			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	≤ 1.0	≤ 1.3	≤ 1.8	≤ 3.0
MUX DEMUX Link Insertion Loss	dB	≤ 2.0	≤ 2.6	≤ 3.6	≤ 6.0
Uniformity	dB	≤ 0.5		≤ 0.8	≤ 1.5
Ripple within Passband	dB	≤ 0.5			
Adjacent Channel Isolation	dB	≥ 30			
Non-Adjacent Channel Isolation	dB	≥ 45			
Directivity	dB	≥ 50			
Return Loss	dB	≥ 45			
Polarization Dependent Loss	dB	≤ 0.25			
Polarization Mode Dispersion	ps	≤ 0.25			
Maximum Input Power	mW	≤ 300			
Operating Temperature	° C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	° C	-40 ~ 85			
Package Type and Dimension <sup>*3</sup>	mm	L158xW130xH29			
Connector & Adapter <sup>*4</sup>	--	LC/APC			

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

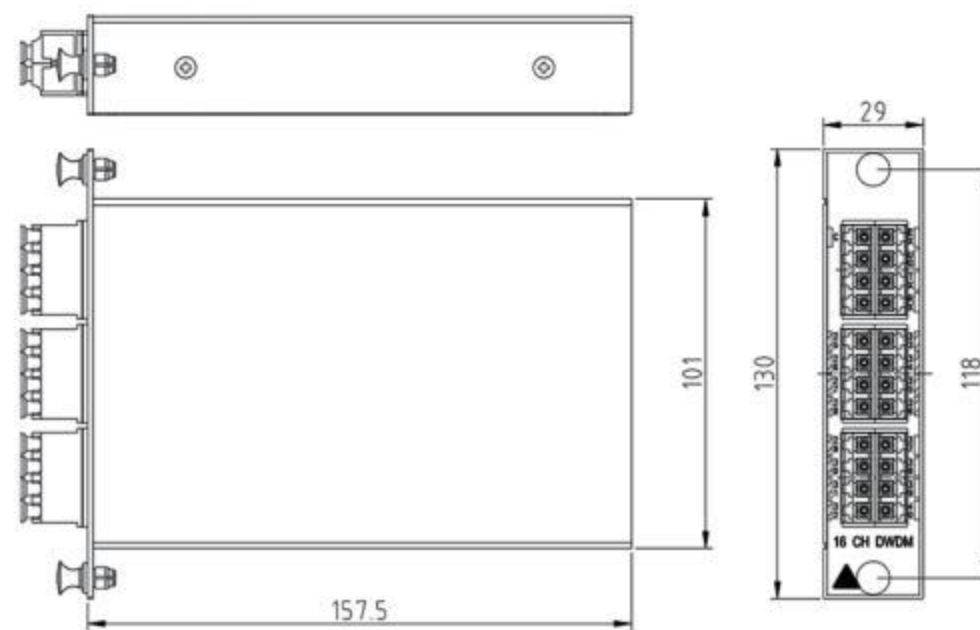
\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

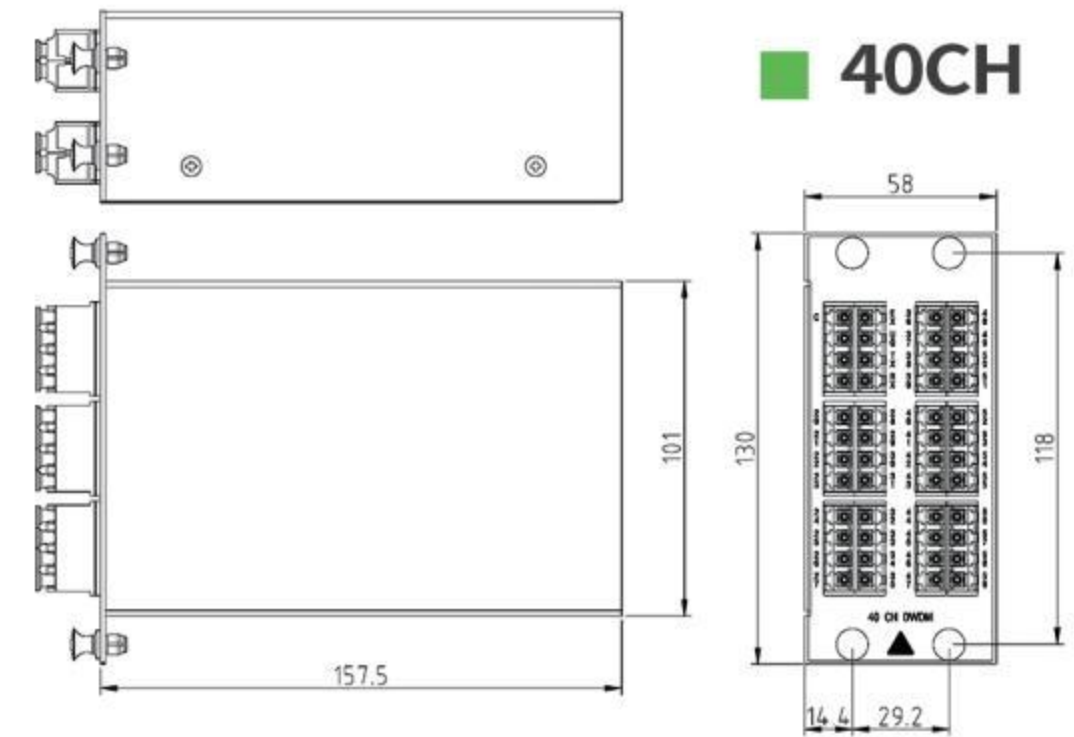
\*5 Module with tap monitoring port , express port and upgrade port are optional.



■ 4CH, 8CH, 16CH, 20CH



■ 40CH







## Overview

Dense Wavelength Division Multiplexing (DWDM) allows for network flexibility and bandwidth expansion by incorporating multiple communication signals into a single optical fiber by using different wavelengths for each signal. It is the technology of choice for carriers to add services without expanding their fiber infrastructure. DWDM systems are capable to transmit up to 40 channels for long haul transmission. The OSP module DWDM can be easily installed in a variety of indoor and outdoor locations.

## Features

- Simple plug-and-play deployment
- Increased capacity in short-haul
- Low power dissipation

- Interchangeable modules
- High port density
- High flexibility





## Specifications

### DWDM MUX/DEMUX MODULE C-BAND

Optical Performance <sup>*1</sup>	Unit	Specifications					
Channel Spacing	GHz	100					
ITU Channels	--	C14~C62					
Operating Wavelength Range		1520~1620					
Passband width <sup>*2</sup>	nm	ITU ± 0.125					
Channel Count <sup>*3</sup>	CH	2	4	8	16	20	40
Channel MAX Insertion Loss	dB	≤ 1.2	≤ 1.4	≤ 2.1	≤ 3.5	≤ 3.8	≤ 4.0
MUX DEMUX Link Insertion Loss	dB	≤ 2	≤ 2.3	≤ 3	≤ 5	≤ 5.5	≤ 6.0
Ripple within Passband	dB	≤ 0.5					
Adjacent Channel Isolation	dB	≥ 30					
Non-Adjacent Channel Isolation	dB	≥ 45					
Directivity	dB	≥ 50					
Return Loss	dB	≥ 45					
Polarization Dependent Loss	dB	≤ 0.25					
Polarization Mode Dispersion	ps	≤ 0.25					
Maximum Input Power	mW	≤ 300					
Operating Temperature	°C	-20 ~ 65					
Operation Humidity	%RH	5 ~ 95					
Storage Temperature	°C	-40 ~ 85					
Package Type and Dimension <sup>*4</sup>	mm	L70xW45xH10	L75xW85xH10	L150xW110xH19			
Connector & Adapter <sup>*5</sup>	--	LC/APC					

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 48CH is optional.

\*4 Package Dimension don't include adapter, other size can be customized.

\*5 The type of Connector and Adapter can be customized.

\*6 Module with tap monitoring port , express port and upgrade port are optional.



Specifications

DWDM UNIVERSAL MODULE C-BAND

Optical Performance <sup>*1</sup>	Unit	Specifications					
Channel Spacing	GHz	100					
ITU Channels	--	C14~C62					
Operating Wavelength Range		1520~1620					
Passband width <sup>*2</sup>	nm	ITU ± 0.125					
Channel Count <sup>*3</sup>	CH	2	4	8	16	20	40
Channel MAX Insertion Loss	dB	≤ 1.0	≤ 1.3	≤ 1.8	≤ 3.0	≤ 3.2	≤ 3.5
Module Link Insertion Loss	dB	≤ 2.0	≤ 2.6	≤ 3.6	≤ 6.0	≤ 6.0	≤ 6.0
Uniformity	dB	≤ 0.5		≤ 0.8	≤ 1.5	≤ 1.8	
Ripple within Passband	dB	≤ 0.5					
Adjacent Channel Isolation	dB	≥ 30					
Non-Adjacent Channel Isolation	dB	≥ 45					
Directivity	dB	≥ 50					
Return Loss	dB	≥ 45					
Polarization Dependent Loss	dB	≤ 0.25					
Polarization Mode Dispersion	ps	≤ 0.25					
Maximum Input Power	mW	≤ 300					
Operating Temperature	° C	-20 ~ 65					
Operation Humidity	%RH	5 ~ 95					
Storage Temperature	° C	-40 ~ 85					
Package Type and Dimension <sup>*4</sup>	mm	L70xW45xH10	L75xW85xH10		L150xW110xH19		
Connector & Adapter <sup>*5</sup>	--	LC/APC					

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 48CH is optional.

\*4 Package Dimension don' t include adapter, other size can be customized.

\*5 The type of Connector and Adapter can be customized.

\*6 Module with tap monitoring port , express port and upgrade port are optional.





## Specifications

### DWDM MUX/DEMUX MODULE L-BAND

Optical Performance <sup>*1</sup>	Unit	Specifications			
Channel Spacing	GHz	100			
ITU Channels	--	L68~L100			
Operating Wavelength Range	nm	1565~1625			
Passband width <sup>*2</sup>	nm	ITU ± 0.125			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	≤ 1.2	≤ 1.4	≤ 2.1	≤ 3.5
MUX DEMUX Link Insertion Loss	dB	≤ 2	≤ 2.3	≤ 3.0	≤ 5.0
Ripple within Passband	dB	≤ 0.5			
Adjacent Channel Isolation	dB	≥ 30			
Non-Adjacent Channel Isolation	dB	≥ 45			
Directivity	dB	≥ 50			
Return Loss	dB	≥ 45			
Polarization Dependent Loss	dB	≤ 0.25			
Polarization Mode Dispersion	ps	≤ 0.25			
Maximum Input Power	mW	≤ 300			
Operating Temperature	°C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	°C	-40 ~ 85			
Package Type and Dimension <sup>*3</sup>	mm	L70xW45xH10		L75xW85xH10	
Connector & Adapter <sup>*4</sup>	--	LC/APC			

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.




**Specifications**
**DWDM UNIVERSAL MODULE L-BAND**

Optical Performance <sup>*1</sup>	Unit	Specifications			
Channel Spacing	GHz	100			
ITU Channels	--	L68~L100			
Operating Wavelength Range		1565~1625			
Passband width <sup>*2</sup>	nm	ITU $\pm$ 0.125			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	$\leq$ 1.0	$\leq$ 1.3	$\leq$ 1.8	$\leq$ 3.0
MUX DEMUX Link Insertion Loss	dB	$\leq$ 2.0	$\leq$ 2.6	$\leq$ 3.6	$\leq$ 6.0
Uniformity	dB	$\leq$ 0.5		$\leq$ 0.8	$\leq$ 1.5
Ripple within Passband	dB	$\leq$ 0.5			
Adjacent Channel Isolation	dB	$\geq$ 30			
Non-Adjacent Channel Isolation	dB	$\geq$ 45			
Directivity	dB	$\geq$ 50			
Return Loss	dB	$\geq$ 45			
Polarization Dependent Loss	dB	$\leq$ 0.25			
Polarization Mode Dispersion	ps	$\leq$ 0.25			
Maximum Input Power	mW	$\leq$ 300			
Operating Temperature	$^{\circ}$ C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	$^{\circ}$ C	-40 ~ 85			
Package Type and Dimension <sup>*3</sup>	mm	L70xW45xH10		L75xW85xH10	
Connector & Adapter <sup>*4</sup>	--	LC/APC			

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.





## Specifications

### DWDM MUX/DEMUX MODULE O-BAND

Optical Performance <sup>*1</sup>	Unit	Specifications			
Channel Spacing	GHz	100			
Operating Wavelength Range		1260~1360			
Passband width <sup>*2</sup>	nm	ITU $\pm$ 0.10			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	$\leq$ 1.2	$\leq$ 1.4	$\leq$ 2.1	$\leq$ 3.5
MUX DEMUX Link Insertion Loss	dB	$\leq$ 2	$\leq$ 2.3	$\leq$ 3.0	$\leq$ 5.0
Ripple within Passband	dB	$\leq$ 0.5			
Adjacent Channel Isolation	dB	$\geq$ 30			
Non-Adjacent Channel Isolation	dB	$\geq$ 45			
Directivity	dB	$\geq$ 50			
Return Loss	dB	$\geq$ 45			
Polarization Dependent Loss	dB	$\leq$ 0.25			
Polarization Mode Dispersion	ps	$\leq$ 0.25			
Maximum Input Power	mW	$\leq$ 300			
Operating Temperature	°C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	°C	-40 ~ 85			
Package Type and Dimension <sup>*3</sup>	mm	L70xW45xH10		L75xW85xH10	
Connector & Adapter <sup>*4</sup>	--	LC/APC			

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.





## Specifications

### DWDM UNIVERSAL MODULE O-BAND

Optical Performance <sup>*1</sup>	Unit	Specifications			
Channel Spacing	GHz	100			
Operating Wavelength Range		1260~1360			
Passband width <sup>*2</sup>	nm	ITU $\pm$ 0.10			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	$\leq$ 1.0	$\leq$ 1.3	$\leq$ 1.8	$\leq$ 3.0
MUX DEMUX Link Insertion Loss	dB	$\leq$ 2.0	$\leq$ 2.6	$\leq$ 3.6	$\leq$ 6.0
Uniformity	dB	$\leq$ 0.5		$\leq$ 0.8	$\leq$ 1.5
Ripple within Passband	dB	$\leq$ 0.5			
Adjacent Channel Isolation	dB	$\geq$ 30			
Non-Adjacent Channel Isolation	dB	$\geq$ 45			
Directivity	dB	$\geq$ 50			
Return Loss	dB	$\geq$ 45			
Polarization Dependent Loss	dB	$\leq$ 0.25			
Polarization Mode Dispersion	ps	$\leq$ 0.25			
Maximum Input Power	mW	$\leq$ 300			
Operating Temperature	$^{\circ}$ C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	$^{\circ}$ C	-40 ~ 85			
Package Type and Dimension <sup>*3</sup>	mm	L70xW45xH10		L75xW85xH10	
Connector & Adapter <sup>*4</sup>	--	LC/APC			

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

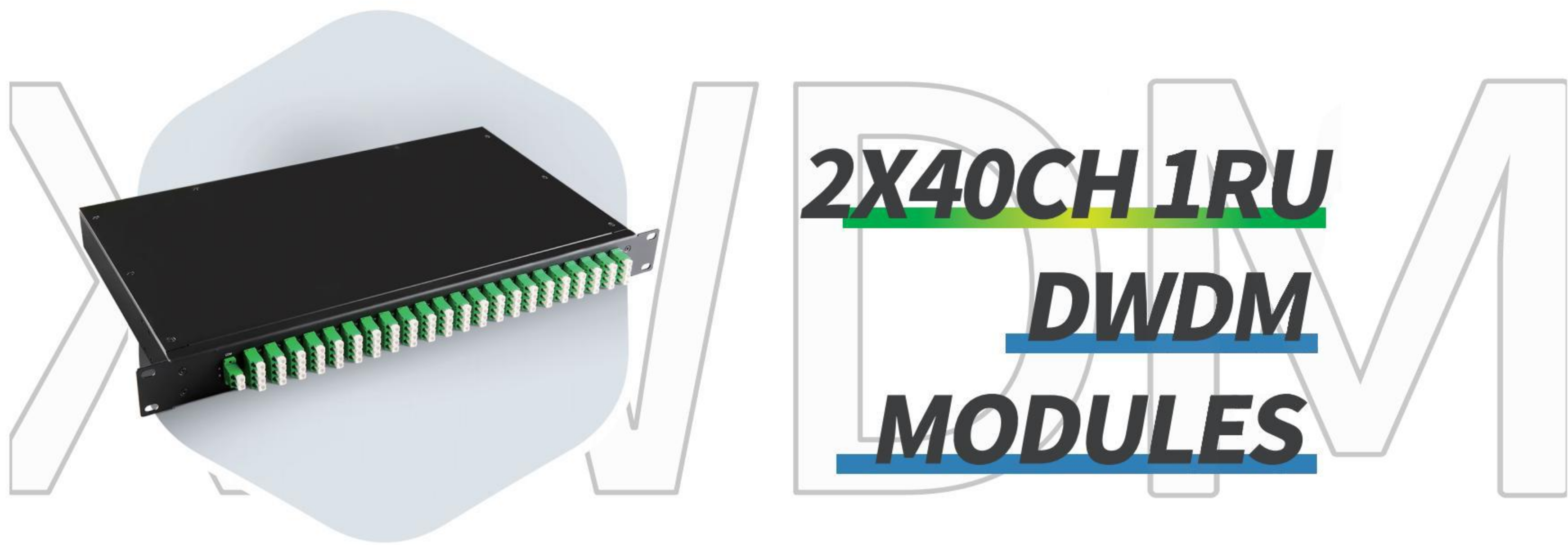
\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.





**Overview**

Dense Wavelength Division Multiplexing (DWDM) allows for network flexibility and bandwidth expansion by incorporating multiple communication signals into a single optical fiber by using different wavelengths for each signal. It is the technology of choice for carriers to add services without expanding their fiber infrastructure. DWDM systems are capable to transmit up to 40 channels for long haul transmission. The OSP module DWDM can be easily installed in a variety of indoor and outdoor locations.

**Features**

- Simple plug-and-play deployment
- Increased capacity in short-haul
- Low power dissipation
- Interchangeable modules
- High port density
- High flexibility




**Specifications**
**DWDM MUX/DEMUX MODULE C-BAND**

Optical Performance <sup>*1</sup>	Unit	Specifications					
Channel Spacing	GHz	100					
ITU Channels	--	C14~C62					
Operating Wavelength Range		1520~1620					
Passband width <sup>*2</sup>	nm	ITU $\pm$ 0.125					
Channel Count <sup>*3</sup>	CH	2	4	8	16	20	40
Channel MAX Insertion Loss	dB	$\leq$ 1.2	$\leq$ 1.4	$\leq$ 2.1	$\leq$ 3.5	$\leq$ 3.8	$\leq$ 4.0
MUX DEMUX Link Insertion Loss	dB	$\leq$ 2	$\leq$ 2.3	$\leq$ 3	$\leq$ 5	$\leq$ 5.5	$\leq$ 6.0
Ripple within Passband	dB	$\leq$ 0.5					
Adjacent Channel Isolation	dB	$\geq$ 30					
Non-Adjacent Channel Isolation	dB	$\geq$ 45					
Directivity	dB	$\geq$ 50					
Return Loss	dB	$\geq$ 45					
Polarization Dependent Loss	dB	$\leq$ 0.25					
Polarization Mode Dispersion	ps	$\leq$ 0.25					
Maximum Input Power	mW	$\leq$ 300					
Operating Temperature	$^{\circ}$ C	-20 ~ 65					
Operation Humidity	%RH	5 ~ 95					
Storage Temperature	$^{\circ}$ C	-40 ~ 85					
Package Type and Dimension <sup>*4</sup>	mm	L483xW254xH44					
Connector&Adapter <sup>*5</sup>	--	LC/APC					

\*1 All specifications are provided without connector; Insertion loss of one mated pair is  $<$  0.3dB.

\*2 Other passband width can be customized.

\*3 48CH is optional.

\*4 Package Dimension don' t include adapter or connector, other size can be customized.

\*5 The type of Connector and Adapter can be customized.

\*6 Module with tap monitoring port , express port and upgrade port are optional.





## Specifications

### DWDM UNIVERSAL MODULE C-BAND

Optical Performance <sup>*1</sup>	Unit	Specifications					
Channel Spacing	GHz	100					
ITU Channels	--	C14~C62					
Operating Wavelength Range		1520~1620					
Passband width <sup>*2</sup>	nm	ITU $\pm$ 0.125					
Channel Count <sup>*3</sup>	CH	2	4	8	16	20	40
Channel MAX Insertion Loss	dB	$\leq$ 1.0	$\leq$ 1.3	$\leq$ 1.8	$\leq$ 3.0	$\leq$ 3.2	$\leq$ 3.5
Module Link Insertion Loss	dB	$\leq$ 2.0	$\leq$ 2.6	$\leq$ 3.6	$\leq$ 6.0	$\leq$ 6.0	$\leq$ 6.0
Uniformity	dB	$\leq$ 0.5		$\leq$ 0.8	$\leq$ 1.5	$\leq$ 1.8	
Ripple within Passband	dB	$\leq$ 0.5					
Adjacent Channel Isolation	dB	$\geq$ 30					
Non-Adjacent Channel Isolation	dB	$\geq$ 45					
Directivity	dB	$\geq$ 50					
Return Loss	dB	$\geq$ 45					
Polarization Dependent Loss	dB	$\leq$ 0.25					
Polarization Mode Dispersion	ps	$\leq$ 0.25					
Maximum Input Power	mW	$\leq$ 300					
Operating Temperature	$^{\circ}$ C	-20 ~ 65					
Operation Humidity	%RH	5 ~ 95					
Storage Temperature	$^{\circ}$ C	-40 ~ 85					
Package Type and Dimension <sup>*4</sup>	mm	L483xW254xH44					
Connector&Adapte <sup>r*5</sup>	--	LC/APC					

\*1 All specifications are provided without connector; Insertion loss of one mated pair is  $< 0.3$ dB.

\*2 Other passband width can be customized.

\*3 48CH is optional.

\*4 Package Dimension don't include adapter, other size can be customized.

\*5 The type of Connector and Adapter can be customized.

\*6 Module with tap monitoring port , express port and upgrade port are optional.




**Specifications**
**DWDM UNIVERSAL MODULE L-BAND**

Optical Performance <sup>*1</sup>	Unit	Specifications			
Channel Spacing	GHz	100			
ITU Channels	--	L68~L100			
Operating Wavelength Range	nm	1565~1625			
Passband width <sup>*2</sup>	nm	ITU ± 0.125			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	≤ 1.2	≤ 1.4	≤ 2.1	≤ 3.5
MUX DEMUX Link Insertion Loss	dB	≤ 2	≤ 2.3	≤ 3.0	≤ 5.0
Ripple within Passband	dB	≤ 0.5			
Adjacent Channel Isolation	dB	≥ 30			
Non-Adjacent Channel Isolation	dB	≥ 45			
Directivity	dB	≥ 50			
Return Loss	dB	≥ 45			
Polarization Dependent Loss	dB	≤ 0.25			
Polarization Mode Dispersion	ps	≤ 0.25			
Maximum Input Power	mW	≤ 300			
Operating Temperature	°C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	°C	-40 ~ 85			
Package Type and Dimension <sup>*3</sup>	mm	L483xW254xH44			
Connector&Adapter <sup>*4</sup>	--	LC/APC			

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don' t include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.





## Specifications

### DWDM MUX/DEMUX MODULE O-BAND

Optical Performance <sup>*1</sup>	Unit	Specifications			
Channel Spacing	GHz	100			
ITU Channels	--	L68~L100			
Operating Wavelength Range		1565~1625			
Passband width <sup>*2</sup>	nm	ITU $\pm$ 0.125			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	$\leq$ 1.0	$\leq$ 1.3	$\leq$ 1.8	$\leq$ 3.0
MUX DEMUX Link Insertion Loss	dB	$\leq$ 2.0	$\leq$ 2.6	$\leq$ 3.6	$\leq$ 6.0
Uniformity	dB	$\leq$ 0.5		$\leq$ 0.8	$\leq$ 1.5
Ripple within Passband	dB	$\leq$ 0.5			
Adjacent Channel Isolation	dB	$\geq$ 30			
Non-Adjacent Channel Isolation	dB	$\geq$ 45			
Directivity	dB	$\geq$ 50			
Return Loss	dB	$\geq$ 45			
Polarization Dependent Loss	dB	$\leq$ 0.25			
Polarization Mode Dispersion	ps	$\leq$ 0.25			
Maximum Input Power	mW	$\leq$ 300			
Operating Temperature	°C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	°C	-40 ~ 85			
Package Type and Dimension <sup>*3</sup>	mm	L483xW254xH44			
Connector&Adapter <sup>*4</sup>	--	LC/APC			

\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.





## Specifications

### DWDM MUX/DEMUX MODULE O-BAND

Optical Performance*1	Unit	Specifications			
Channel Spacing	GHz	100			
Operating Wavelength Range		1260~1360			
Passband width*2	nm	ITU $\pm$ 0.10			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	$\leq 1.2$	$\leq 1.4$	$\leq 2.1$	$\leq 3.5$
MUX DEMUX Link Insertion Loss	dB	$\leq 2$	$\leq 2.3$	$\leq 3.0$	$\leq 5.0$
Ripple within Passband	dB	$\leq 0.5$			
Adjacent Channel Isolation	dB	$\geq 30$			
Non-Adjacent Channel Isolation	dB	$\geq 45$			
Directivity	dB	$\geq 50$			
Return Loss	dB	$\geq 45$			
Polarization Dependent Loss	dB	$\leq 0.25$			
Polarization Mode Dispersion	ps	$\leq 0.25$			
Maximum Input Power	mW	$\leq 300$			
Operating Temperature	$^{\circ}$ C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	$^{\circ}$ C	-40 ~ 85			
Package Type and Dimension*3	mm	L483xW254xH44			
Connector&Adapter*4	--	LC/APC			

\*1 All specifications are provided without connector; Insertion loss of one mated pair is  $< 0.3$ dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.



DWDM MUX/DEMUX MODULE O-BAND

Optical Performance <sup>*1</sup>	Unit	Specifications			
Channel Spacing	GHz	100			
Operating Wavelength Range		1260~1360			
Passband width <sup>*2</sup>	nm	ITU ± 0.10			
Channel Count	CH	2	4	8	16
Channel MAX Insertion Loss	dB	≤ 1.0	≤ 1.3	≤ 1.8	≤ 3.0
MUX DEMUX Link Insertion Loss	dB	≤ 2.0	≤ 2.6	≤ 3.6	≤ 6.0
Uniformity	dB	≤ 0.5		≤ 0.8	≤ 1.5
Ripple within Passband	dB	≤ 0.5			
Adjacent Channel Isolation	dB	≥ 30			
Non-Adjacent Channel Isolation	dB	≥ 45			
Directivity	dB	≥ 50			
Return Loss	dB	≥ 45			
Polarization Dependent Loss	dB	≤ 0.25			
Polarization Mode Dispersion	ps	≤ 0.25			
Maximum Input Power	mW	≤ 300			
Operating Temperature	°C	-20 ~ 65			
Operation Humidity	%RH	5 ~ 95			
Storage Temperature	°C	-40 ~ 85			
Package Type and Dimension <sup>*3</sup>	mm	L483xW254xH44			
Connector&Adapter <sup>*4</sup>	--	LC/APC			

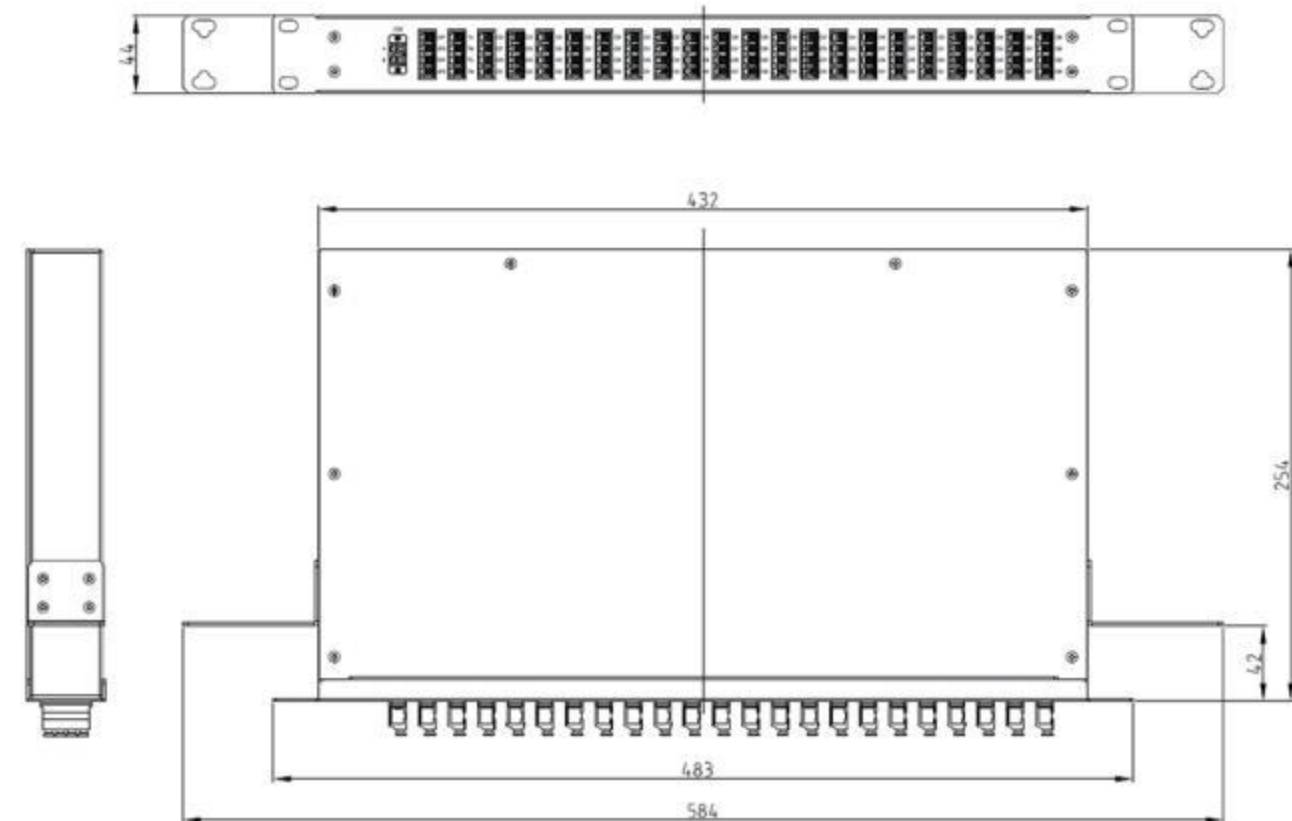
\*1 All specifications are provided without connector; Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.







**8CH LAN WDM  
MUX MODULE**



**8CH LAN WDM  
DEMUX MODULE**

**Overview**

WCFO's LAN WDM module is based on TFF (thin film filter) wavelength division multiplexing technology. WCFO's LAN WDM solution provides lower insertion loss, better consistency, and conforms to industrial standards, and is widely used in data centers, cloud computing, metropolitan area network and other applications.

**Features**

- Simple plug-and-play deployment
- Interchangeable modules
- Low power dissipation

- Lower insertion loss, Higher isolation
- Increased capacity in short-haul
- High flexibility




**Specifications**
**LAN-WDM MUX/DEMUX MODULE**

Optical Performance*1	Unit	Specifications		
Channel Spacing	GHz	100		
Operating Wavelength Range		1260~1360		
Passband width*2	nm	ITU $\pm$ 1.0		
Channel Count	CH	2	4	8
Channel MAX Insertion Loss	dB	$\leq$ 1.2	$\leq$ 1.4	$\leq$ 2.1
MUX DEMUX Link Insertion Loss	dB	$\leq$ 2	$\leq$ 2.3	$\leq$ 3.0
Ripple within Passband	dB	$\leq$ 0.5		
Adjacent Channel Isolation	dB	$\geq$ 30		
Non-Adjacent Channel Isolation	dB	$\geq$ 45		
Directivity	dB	$\geq$ 50		
Return Loss	dB	$\geq$ 45		
Polarization Dependent Loss	dB	$\leq$ 0.25		
Polarization Mode Dispersion	ps	$\leq$ 0.25		
Maximum Input Power	mW	$\leq$ 300		
Operating Temperature	$^{\circ}$ C	-20 ~ 65		
Operation Humidity	%RH	5 ~ 95		
Storage Temperature	$^{\circ}$ C	-40 ~ 85		
Package Type and Dimension*3	mm	L158xW130xH29		
Connector & Adapter*4	--	LC/APC		

\*1 All specifications are provided without connector; Insertion loss of one mated pair is  $<$  0.3dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.



**Specifications**

**LAN-WDM UNIVERSAL MODULE**

Optical Performance <sup>*1</sup>	Unit	Specifications		
Channel Spacing	GHz	100		
Operating Wavelength Range		1260~1360		
Passband width <sup>*2</sup>	nm	ITU ± 1		
Channel Count	CH	2	4	8
Channel MAX Insertion Loss	dB	≤ 1.0	≤ 1.3	≤ 1.8
MUX DEMUX Link Insertion Loss	dB	≤ 2.0	≤ 2.6	≤ 3.6
Uniformity	dB	≤ 0.5		≤ 0.8
Ripple within Passband	dB	≤ 0.5		
Adjacent Channel Isolation	dB	≥ 30		
Non-Adjacent Channel Isolation	dB	≥ 45		
Directivity	dB	≥ 50		
Return Loss	dB	≥ 45		
Polarization Dependent Loss	dB	≤ 0.25		
Polarization Mode Dispersion	ps	≤ 0.25		
Maximum Input Power	mW	≤ 300		
Operating Temperature	° C	-20 ~ 65		
Operation Humidity	%RH	5 ~ 95		
Storage Temperature	° C	-40 ~ 85		
Package Type and Dimension <sup>*3</sup>	mm	L158xW130xH29		
Connector & Adapter <sup>*4</sup>	--	LC/APC		

\*1 All specifications are provided without connector;

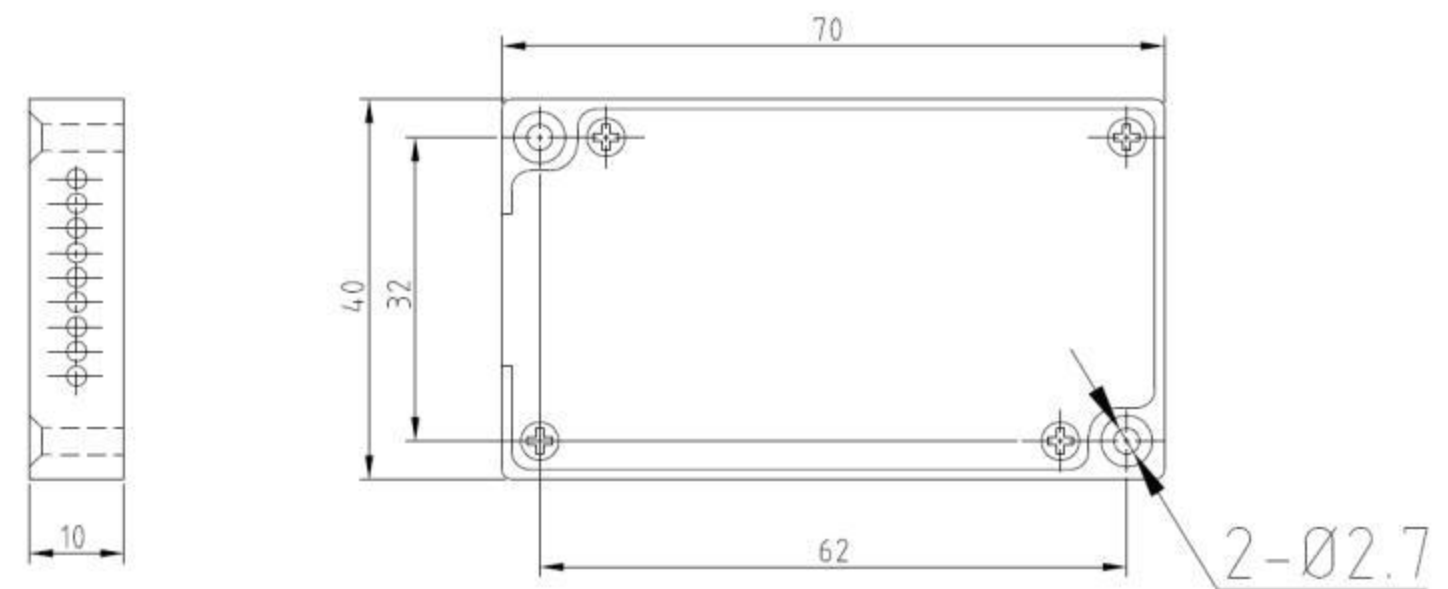
Insertion loss of one mated pair is < 0.3dB.

\*2 Other passband width can be customized.

\*3 Package Dimension don't include adapter or connector, other size can be customized.

\*4 The type of Connector and Adapter can be customized.

\*5 Module with tap monitoring port , express port and upgrade port are optional.







## ■ ABOUT US

WCFO is an industrial provider for optical fiber products and solutions of Telecom/Datacom. We provide the worldwide market with Easy/Green access optical fiber solutions, products and services.

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