



KOC Group

Shenzhen KOC Communication Co., Ltd.
Fiber optic components global supplier.

Passive Optical Components

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About KOC Group

Located in Shenzhen, China, KOC Group is specialized in fiber optic communication products and accessories. She offers precise customized solutions for various customers involved in telecommunication, broadcast, CATV and network industry worldwide.

Our quality is guaranteed by the scientific management with the assistances of professional personnel, advanced testing equipments and efficient ERP system under the strict guidance of ISO9001:2008, from supplier evaluation to inbound material examination, from processing monitoring to permanent inspection, from packing to shipping, we do care for every detail!

KOC never forgets her mission statements:

To be dedicated to be a popular manufacturer with her quality products, satisfactory services and attention to details through the full commitment of each personnel to work as one team in an effort to exceed our customer expectations.

To operate the business in a transparent and honest manner, that our customers, our associates and our business partners are proud to play their parts in our success.

Please visit us website for more informations : <http://www.koc.com.cn>



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CWDM (Coarse Wavelength Division Multiplexers)



DESCRIPTION

- CWDM (Coarse Wavelength Division Multiplexer) is based on thin-film filter technology and patented athermal platform systems for optical devices. The CWDM is used to combine or separate different optical wavelength signals. This device offers a very flat and wide passband, low insertion loss, and high isolation, which make it ideal for CWDM Network applications and Optical Amplification Systems. KOC CWDM devices are Bellcore GR-1221 qualification tested and are in compliance with industry green initiatives such as RoHS and WEEE. All KOC CWDM products are epoxy-free in the optical path.

FEATURES

- Widely Operating Wavelength Range
- Low Insertion Loss
- High Channel Isolation
- High Stability and Reliability
- Insensitive to shock and vibration
- Ultra Flat Wide Pass band
- Epoxy Free Optical Path

APPLICATIONS

- System Monitoring
- WDM System
- Transmitters and Fiber lasers
- Fiber Optical Amplifier
- Fiber optic instruments

Specifications

| Parameter | | Specification | Unit |
|-----------------------------|-----|------------------------|------|
| Channel Center Wavelength | | 1270~1610 or 1271~1611 | nm |
| Channel Spacing | | 20 | nm |
| Channel Clear Passband | | ITU+7 | nm |
| Transmission Insertion Loss | Max | 0.8 (Typ 0.6) | dB |
| Reflection Insertion Loss | Max | 0.6 (Typ 0.4) | dB |
| Passband Ripple | Max | 0.3 | dB |
| Transmission Isolation | Min | 30 | dB |
| Reflection Isolation | Min | 12 | dB |
| Return Loss | Min | 45 | dB |
| Directivity | Min | 45 | dB |
| Polarization Dependent Loss | Max | 0.1 | dB |
| Operating Temperature Range | | 0~ +70 | °C |
| Storage Temperature Range | | -40~+85 | °C |
| Maximum Power Handling | | 300 | mW |
| Package Dimension (L" ɸ) | | 38*5.5 | mm |

Order Information

| CWDM-3P | Center wavelength | Fiber Type | Connector Type |
|---------|------------------------|-----------------------------|---------------------------------|
| | 1271~1611; 1270~1610 | 1: 250μm bare fiber | 0: Without connector |
| | Example: 1271 = 1271nm | 2: 900μm tight buffer fiber | 1: FC/PC 2: FC/UPC 3: FC/APC |
| | other | | 4: SC/PC 5: SC/UPC 6: SC/APC |
| | | | 7: ST 8: LC 9: MU X: Customized |

DWDM (Dense Wavelength Division Multiplexers)



DESCRIPTION

- DWDM (Dense Wavelength Division Multiplexer) is based on a patented athermal platform for optical devices. This multiplexer features ultra low insertion loss, superb thermal stability, and unparalleled reliability. The technology is a lead-free packaging platform and contains no epoxies in the optical path. KOC DWDM is Telcordia GR-1221 and GR-1209 tested, qualified for uncontrolled environment applications, and is in compliance with industry green initiatives such as RoHS and WEEE. KOC can provide customized designs to meet specialized feature applications. KOC also offers modular assemblies that integrate other components to form a full function module or subsystem.

FEATURES

- Widely Operating Wavelength Range
- Low Insertion Loss
- High Channel Isolation
- High Stability and Reliability
- Insensitive to shock and vibration
- Ultra Flat Wide Pass band
- Epoxy Free Optical Path

APPLICATIONS

- System Monitoring
- WDM System
- Transmitters and Fiber lasers
- Fiber Optical Amplifier
- Fiber optic instruments

Specifications

| Parameter | | Specification | | | | | | | Unit | |
|--------------------------------------|----------------------|--------------------------------|------------------------------------|-----|-----------------|------|----|-----|--------|----|
| Channel Wavelength | | ITU 100GHz Grid | | | ITU 200GHz Grid | | | | nm | |
| Channel Spacing | | 100 | | | 200 | | | | GHz | |
| Channel Count | | Single | 2 | 4 | 8 | 16 | 20 | 40 | CH | |
| Channel Passband (@-0.5dB bandwidth) | | Min | 0.125 | | | 0.25 | | | | nm |
| Insertion Loss | | Max | <1.1 (add or drop) <0.8 (other) | 1.3 | 2.2 | 3 | 4 | 4.2 | 4.5 | dB |
| Isolation | Adjacent channel | Min. | >30 (add or drop) | 30 | | | | | dB | |
| | Non-adjacent channel | Min. | >12 (other) | 40 | | | | | dB | |
| Passband Ripple | | Max. | 0.5 | | | | | | dB | |
| Polarization Dependent Loss | | Max. | 0.1 | | | | | | dB | |
| Polarization Mode dispersion | | Max. | 0.1 | | | | | | ps | |
| Directivity | | Min. | 50 | | | | | | dB | |
| Return Loss | | Min | 45 | | | | | | dB | |
| Insertion Loss Temperature Stability | | Max. | 0.005 | | | | | | dB/° C | |
| Temperature Wavelength Drift | | Max. | 0.003 | | | | | | nm/° C | |
| Power Handling | | Max. | 300 | | | | | | mW | |
| Tensile Load | | Max. | 5 | | | | | | N | |
| Pigtail Type | | white 0.9mm loose tube | | | | | | | | |
| Fiber Type | | SMF-28e | | | | | | | | |
| Fiber length | | ≥1.0 or customer requirements. | | | | | | | m | |
| Operating Temperature | | -10 ~ 70 | | | | | | | °C | |
| Storage Temperature | | -40 ~ 85 | | | | | | | °C | |
| Package Dimension | | 100X80×10 & 141X115X18&5.5*36 | | | | | | | mm | |

Order Information

| DWDM-3P | Center wavelength | Fiber Type | Connector Type |
|---------|-------------------|----------------------------|-------------------------------|
| | C17~C61 (C-Band) | 1: 250µm bare fiber | 0: Without connector |
| | L62~L09 (L-Band) | 2:900µm tight buffer fiber | 1: FC/ PC 2: FC/UPC 3: FC/APC |
| | other | | 4: SC/PC 5: SC/UPC 6: SC/APC |
| | | | 7: ST 8: LC 9: MU X: Cusmized |

CWDM Module



DESCRIPTION

- CWDM Module is based on Thin-Film-Filter and Micro-Optics, this product features wide pass band, low insertion loss and high channel isolation, high stability and reliability.

FEATURES

- Ultra-low Insertion Loss
- High Channel Isolation
- Super Thermal
- RoHS Compliance
- Optical Path Epoxy Free

APPLICATIONS

- Metro CWDM system
- Access CWDM system
- Enterprise Network
- RoHS Compliance
- CATV Network

Specifications

| Parameters | | Mux & Demux | | | |
|---------------------------------|----------------------|--|-----|-----|------|
| Channel Space (nm) | | 20 | | | |
| Channel Number | | 2CH | 4CH | 8CH | 16CH |
| Center Wavelength (nm) | | 1270~1610 | | | |
| Channel Passband (@-0.5dB) (nm) | | +/-7.5 | | | |
| Fiber Type | | ITU-T G652D with0.9mm loose tube or customized | | | |
| IL (dB) | | 0.9 | 1.5 | 2.4 | 3.5 |
| Passband Ripple (dB) | | 0.5 | | | |
| Isolation (dB) | Adjacent Channel | 30 | | | |
| | Non-Adjacent Channel | 40 | | | |
| | Upgrade Port | 13 | | | |
| PDL (dB) | | 0.2 | | | |
| PMD (ps) | | 0.1 | | | |
| RL (dB) | | 45 | | | |
| Directivity (dB) | | 50 | | | |
| Maximum Optical Power (mw) | | 500 | | | |
| Operating Temperature (°C) | | -5~65 | | | |
| Storage Temperature (°C) | | -40~85 | | | |
| Fiber Length (m) | | 0.6 | | | |
| Connector type | | SC/PC,LC/PC or cstomed | | | |
| BOX Package (mm) | | Rack mount 1u 19" or customized | | | |

Order Information

| PD-CWDM | Channels | JUMPER TYPE | CONNECTOR | FIBER LENGTH |
|---------|----------|-------------|-----------|---------------------|
| | 2CH | B: 250um | 0: None | 10: 1.0m 15: 1.5m |
| | 4CH | 9: 900um | 1: SC/UPC | 18: Other 3: FC/UPC |
| | 8CH | 8: Other | 2: SC/APC | 4: FC/APC 5: LC/UPC |
| | 16CH | | | 6: LC/SPC 7: MU/UPC |
| | Customed | | | 16: Other |

LAN WDM Module



DESCRIPTION

- KOC's LAN (Local Area Network) WDM is designed to meet industrial stringent size and loss requirement. Based on Thin-Film-Filter (TFF) and Micro-optics, this low loss LWDM features small form factor, ultra low insertion loss, high channel isolation, and unparallel reliability. The technology is a lead-free packaging platform and no epoxy in the optical path. The LAN-WDM is Telcordia GR-1221 and GR-1209 qualified, and RoHS compliant.

FEATURES

- Ultra low insertion loss
- High isolation
- Mux & DeMux
- Compact size
- High Reliability
- Epoxy-Free Optical Path
- Telcordia GR 1221 and GR-1209 compliant

APPLICATIONS

- WDM System for Local Area Network
- Optimized package for CFP transceiver modules
- Following 100Gbps IEEE 802.3 ba standard

Specifications

| Parameter | Specification | Unit |
|--------------------------------|---|------|
| Optical Performance | | |
| Channel Wavelength | 1271, 1291, 1311, 1331 | nm |
| | 1295.56nm, 1300.06nm, (or other CWDM wavelength) | |
| | 1304.59nm, 1309.14nm | |
| 0.5dB Passband | CW±6.5nm CW±1.1nm | nm |
| Insertion Loss | (max) 1.6dB, typical <1.0 dB | dB |
| Polarization Dependent Loss | ≤0.30 ≤0.25 | dB |
| Adjacent Channel Isolation | ≥30 ≥25 | dB |
| Non-adjacent Channel Isolation | ≥40 ≥35 | dB |
| Return Loss | ≥45 | dB |
| Directivity | ≥50 | dB |
| Mechanical Performance | | |
| Dimension | 20x12.4x6.4 | mm |
| Fiber | 250 um Corning ClearCurve bare fiber, or 900um loose tube for protection (other protection tube is available) | |
| | | |
| Environment Performance | | |
| Operating Temperature Range | -5 to 70 (-40 to 85C) | °C |
| Storage Temperature Range | -40 to 85 | °C |

Packing Dimension



Order Information

| L-WDM | Channels | Wavelength | Type | Grade | Pigtail | Length | Connector |
|-------|----------|--------------------|----------|-------------|----------|---------|---|
| | 4: 4CH | 6: 1271~1331 | M: Mux | P: Premium | 1: 250um | 1: 0.5m | 1: None, 2: SCU 3: SCA, 4: LCU 5: LCA, 6: FCU 7: FCA |
| | | 1: 1259.56~1309.14 | D: DeMux | S: Standard | 2: 900um | 2: 1m | |
| | | | | | | 3: 1.5m | |
| | | | | | | 4: 2m | |
| | | | | | | 5: 2.5m | |

3-Port EDGE Filter WDM



FEATURES

- low insertion loss & high isolation
- Excellent thermal stability
- Optical path epoxy free
- Telcordia compliant
- RoHS compliant

APPLICATIONS

- WDM system
- EDFA

Specifications

| Parameter | | Specification | | | | Unit |
|-------------------------------|-----|---------------|-----------|-----------|-----------|------|
| | | 1310/1550 | 1550/1310 | 1550/1480 | 1550/980 | |
| Operating Wavelength | | 1310/1550 | 1550/1310 | 1550/1480 | 1550/980 | |
| Transmission Wavelength Range | | 1270~1350 | 1500~1600 | 1530~1570 | 1530~1570 | nm |
| Reflection Wavelength Range | | 1500~1600 | 1270~1350 | 1460~1500 | 960~1000 | nm |
| Transmission Insertion Loss | Max | 0.8 | 0.8 | 0.8 | 0.8 | dB |
| Reflection Insertion Loss | Max | 0.6 | 0.6 | 0.6 | 0.6 | dB |
| Passband Ripple | Max | 0.3 | 0.3 | 0.3 | 0.3 | dB |
| Transmission Isolation | Min | 30 | 30 | 30 | 30 | dB |
| Reflection Isolation | Min | 15 | 15 | 15 | 18 | dB |
| Return Loss | Min | 45 | 45 | 45 | 45 | dB |
| Directivity | Min | 45 | 45 | 45 | 45 | dB |
| Polarization Dependent Loss | Max | 0.1 | 0.1 | 0.1 | 0.1 | dB |
| Operating Temperature Range | | 0~+70 | | | | °C |
| Storage Temperature Range | | -40~+85 | | | | °C |
| Maximum Power Handling | | 300 | | | | mW |
| Package Dimension (L * Ø) | | 38*5.5 | | | | mm |

Order Information

| F-WDM | Channels | JUMPER TYPE | CONNECTOR | FIBER LENGTH |
|-------|----------------|-------------|-----------|------------------------|
| | 1: T 1260-1360 | B: 250um | 0: None | 10: 1.0m 15: 1.5m |
| | 2: T1480-1500 | 9: 900um | 1: SC/UPC | 18: Other 3: FC/UPC |
| | 3: T1540-1560 | 8: Other | 2: SC/APC | 4: FC/APC 5: LC/UPC |
| | 4: 1550/980 | | | 6: LC/SPC 7: MU/UPC |
| | Customed | | | 16: Other |

Module



DESCRIPTION

- Module is in accordance with a certain structure, the components will be connected, to achieve specific functional products. (the number of components can be one, or more than one device)

FEATURES

- Compact design
- Low insertion loss and low PDL
- High reliability
- High channel counts
- Wide operating temperature range
- Wide wavelength range
- Customized packaging & configuration

APPLICATIONS

- FTTX Systems
- LAN, WAN and Metro Networks
- Analog/Digital Passive Optical Networks
- CATV Networks
- Other applications in fiber optic systems

Product Category



Rack Module



ABS Box Module



Plug Box Module

Just show some products, for reference only

Mini CWDM Module



DESCRIPTION

- CWDM Module is based on Thin-Film-Filter and Micro-Optics, this product features wide pass band, low insertion loss and high channel isolation, high stability and reliability.

FEATURES

- low insertion loss & high isolation
- Compact size
- Optical path epoxy free
- Telcordia compliant

APPLICATIONS

- CWDM system
- Metro/Access networks
- CATV network

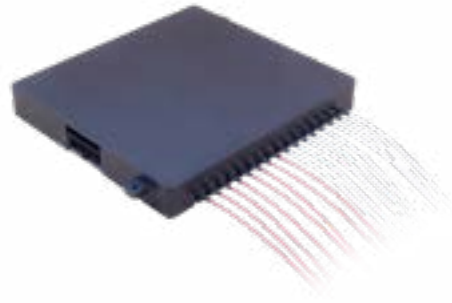
Specifications

| Parameter | | Specification | | Unit |
|--------------------------------|-----|---------------|-----------|------|
| | | | | |
| Channel Center wavelength | | 1460-1610 | 1461-1611 | nm |
| Channel Spacing | | 20 | | nm |
| Channel ClearPassband | | ITU±035 | | nm |
| Number of Channels | | 4 | 8 | |
| Insertion Loss | Max | 1 | 1.2 | dB |
| Passband Ripple | Max | 0.5 | 0.5 | dB |
| Adjacent Channel Isolation | Min | 30 | 30 | dB |
| Non-adjacent Channel Isolation | Min | 15 | 15 | dB |
| Return Loss | Min | 45 | 45 | dB |
| Directivity | Min | 45 | 45 | dB |
| Polarization Dependent Loss | Max | 0.2 | 0.2 | dB |
| Operating Temperature Range | | 0~+70 | | °C |
| Storage Temperature Range | | -40~+85 | | °C |
| Maximum Power Handling | | 300 | | mW |
| Package Dimension (L * Ø) | | 46.5*30*8 | | mm |

Order Information

| Mini- CWDM | Number of Channels | Starting Channel | Fiber Type | Connector Type |
|------------|--------------------|------------------|--------------------|---------------------------------|
| | 04: 4 channels | 1471: ch-1471 | 1: 900µm fiber | 0: Without connector |
| | 08: 8 channels | 1470: ch-1470 | 2: 250m bare fiber | 1: FC/PC 2: FC/UPC 3: FC/APC |
| | | more | | 4: SC/PC 5:SC/UPC 6:SC/APC |
| | | | | 7: ST 8: LC 9: MU X: Customized |

8-Channel MEMS VOA Array



DESCRIPTION

- 8-Channel MEMS VOA Array is a VOA Module based on MEMS technology, featuring compacting design, simple construction, and excellent optical performance. The VOA Array is applied to the dynamic fiber optical modules, subsystems and networks.

FEATURES

- Low insertion loss
- Low polarization dependent loss
- Fast response
- Low power consumption
- Compact packaged size
- Customized design available on request

APPLICATIONS

- Dynamic gain equalization in DWDM systems
- Optical network power management
- MUX/DeMUX module
- OADM node
- Power equalization in VMUX
- Instrumentation

Specifications

| Parameter | Unit | Specification | | | |
|--------------------------------------|--------------------|-------------------------|--------------------|-----|-----|
| | | Bright | Dark | | |
| Configuration | | Bright | Dark | | |
| Wavelength Range | nm | C band 1525 - 1570 | L band 1570 - 1610 | | |
| Attenuation Range | dB | 25/30/40 | 25/30/40 | | |
| Return Loss . | dB | 45 | 45 | | |
| Insertion Loss | dB/ V | 0.8 | 0.8 | | |
| Polarization Dependent Loss | 0dB | 0.1 | 0.1 | | |
| | 0dB ~ 10dB | 0.4 | 0.4 | | |
| | 10dB ~ 20dB | 0.8 | 0.8 | | |
| Flat-ness | Broad Application | band | 0dB | 0.2 | 0.2 |
| | | | 0-10dB | 0.6 | 0.6 |
| | | | 10-20dB | 1.5 | 1.5 |
| | Narrow Application | band | 0dB | 0.2 | 0.2 |
| | | | 0-10dB | 0.2 | 0.2 |
| | | | 10-20dB | 0.4 | 0.4 |
| Response Time | ms | 5 | 5 | | |
| Optical Power Handling (per ch/wme1) | mW/ch | 500 | 500 | | |
| Dimension | mm | 60x50x11 (LxWxH).. | | | |
| Fiber Type | | Corning SMF-28(9/125µm) | | | |
| Fiber Marking | | Input port: Red | | | |
| | | Output port: Clear | | | |
| Operating Temperature | °C | -5~70 | | | |
| Storage Temperature | °C | -40~85 | | | |
| Power Consumption | mW | 10 | | | |

Order Information

| Number of Channels | Attenuation Type | Drive Voltage | Wavelength Range | Attenuation Range | Fiber Protection | Connector Type |
|--------------------|------------------|---------------|------------------|-------------------|------------------|---------------------|
| 04 4 Channels | 1 Bright | 1 6.5V | 1 1525-1570nm | 25 25dB min | 1 No Jacket | 1 FC/UPC |
| 08 8 Channels | 2 Dark | 2 15V | 2 1570-1610nm | 30 30dB min | 2 0.9mm OD | 2 FC/APC |
| 16 16 Channels | | X Customized | 3 1310nm | 40 40dB min | Jacket | 3 SC/APC |
| XX Customized | | | 4 1550nm | 60 60dB min | | 4 SC/UPC |
| | | | 5 1550&1310nm | X Customized | | 5 None X Customized |

Variable Optical Attenuator



DESCRIPTION

- This product using the MEMS chip with a movable mirror on the silicon. The mirror attenuates the laser light power by coupling the input beam onto the output fiber. The applied voltage to the device controls the mirror tilt angle, thus the desired attenuation amount.

FEATURES

- Low insertion loss
- Low polarization dependent loss
- Miniature design
- Low power consumption
- High shock & vibration immunity
- Telcordia 1209 & 1221 compliant

APPLICATIONS

- Channel on/off switch
- Channel equalization
- Receiver protection
- Power equalization in OADM/ROADM
- Power equalization in VMUX
- EDFA GAIN-TILT control

Specifications

| Parameter | Unit | Specification | | | |
|-----------------------------|--------------------|-------------------------|--------------------|------|------|
| | | Bright | Dark | | |
| Configuration | | Bright | Dark | | |
| Wavelength Range | nm | C band 1525 - 1570 | L band 1570 - 1610 | | |
| Attenuation Range | dB | 25/40 | 25/40 | | |
| Repeatability | dB | 0.1 | 0.1 | | |
| Attenuation Slop | dB/ V | 20 | 20 | | |
| Insertion Loss | dB | 1 | 1 | | |
| Return Loss | dB | 45 | 45 | | |
| Polarization Dependent Loss | 0dB | 0.2 | 0.2 | | |
| | 0dB ~ 10dB | 0.4 | 0.4 | | |
| | 10dB ~ 20dB | 0.8 | 0.8 | | |
| Flat-ness | Broad Application | band | 0dB | 0.2 | 0.2 |
| | | | 0-10dB | 1.0 | 1.0 |
| | | | 10-20dB | 2.0 | 2.0 |
| | Narrow Application | band | 0dB | 0.25 | 0.25 |
| | | | 0-10dB | 0.5 | 0.5 |
| | | | 10-20dB | 0.5 | 0.5 |
| Wear-out | Cycle | 10 | 10 | | |
| Response Time | ms | 5 | 5 | | |
| Total Optical Power | mW | 500 | 500 | | |
| Dimension | mm | 16xΦ5.4 (LxD) | | | |
| Fiber Type | | Corning SMF-28(9/125µm) | | | |
| Fiber Marking | | Input port: Red | | | |
| | | Output port: Clear | | | |
| Operating Temperature | °C | -5~70 | | | |
| Storage Temperature | °C | -40~85 | | | |
| Power Consumption | mW | 10 | | | |

Order Information

| Attenuation Type | Wavelength Range | Attenuation Range | Drive Voltage | Ripple | Connector Type |
|------------------|------------------|-------------------|---------------|---------------|---------------------|
| B Bright | C 1525-1570nm | 25 25dB min | L 6.5V | N Narrow band | 1 FC/UPC |
| D Dark | L 1570-1610nm | 30 30dB min | H 15V | B Broad band | 2 FC/APC |
| | S 850nm | 40 40dB min | X Customized | X Customized | 3 SC/APC |
| | H 1060 | X Customized | | | 4 LC/UPC |
| | D 1310&1550nm | | | | 5 None X Customized |

Desktop Variable Optical Attenuator



DESCRIPTION

- Based on MEMS technology, the Desktop Variable Optical Attenuator is featured with smart structure, low consumption and stable performance. Due to the significant applications in engineering, laboratory and production lines, the Desktop Variable Optical Attenuator is widely appreciated by our customers over the years.

FEATURES

- Low insertion loss * Low PDL
- Wide attenuation range
- Fast response
- High resolution
- Remarkable reliability

APPLICATIONS

- Sideband analysis
- System loss simulation
- Optical power calibration and verification
- Scientific laboratory equipment

Specifications

| Parameter | | Specification | Unit |
|--|-----|-------------------------------|------|
| Operating Wavelength Range (Calibration) | | 1310&1550 | nm |
| Attenuation Range | Max | 60 | dB |
| Accuracy | | ±0.3@.0-30dB | dB |
| | | ±0.6@.30-60dB | dB |
| Attenuation Resolution | Max | 0.1 | dB |
| Attenuation Repeatability | Max | 0.2 | dB |
| Stability | Max | 0.2 | dB |
| Insertion Loss | Max | 2 | dB |
| Return Loss | Min | 45 | dB |
| Input Power | Max | 500 | m/W |
| Fiber Type | | Coming SMF-28 | |
| Connector Type | | FCIUPC or FUIAPC (Customized) | |
| Power Consumption | Max | 200 | m/W |
| Supply Power | | AC:100-240V 50/60Hz | |
| Communication Interface | | RS232 | |
| Operating Temperature | | -5~50 | °C |
| Storage Temperature | | -25-70 | °C |
| Dimension | | 210x200x100 (Lx\WxH) | mm |

Order Information

| D-VOA | Wavelength Range | Attenuation Range | Connector Type |
|-------|------------------|-------------------|----------------|
| | 1 1310&1550nm | 60 60dB | 1 FC/UPC |
| | X Customized | X Customized | 2 FC/APC |
| | | | X Customized |

Simple Variable Optical Attenuator



DESCRIPTION

- The Simple Variable Optical Attenuator is based on our MEMS VOA technology. It has high response speed, good linearity, high resolution and low IL. It is an ideal instrument for optical network system and optical engineering test.

FEATURES

- Low insertion loss * Low PDL
- Wide attenuation range
- Fast response
- High resolution
- Remarkable reliability

APPLICATIONS

- System sideband analysis
- System loss simulation
- Optical power calibration and verification
- Scientific laboratory equipment

Specifications

| Parameter | JYVOA-30 | JYVOA-60 | Remarks |
|----------------------------|---------------------|------------|------------|
| Attenuation Range(dB) | 0dB ~ 30dB | 0dB ~ 60dB | |
| Stability(dB) | ≤0.1 | ≤0.2 | |
| Insertion Loss(dB) | ≤1.2 | ≤3.0 | |
| Repeatability(dB) | ≤0.1 | | |
| Calibration(nm) | 1310/1550 | | |
| Return Loss(dB) | ≥45 | | |
| Input Power(mW) | ≤500 | | |
| Fiber Type | SMF-28 | | |
| Connector type | FC/UPC or FC/APC | | Customized |
| Supply Power | DC:9V | | |
| Power Consumption(mW) | <100 | | |
| Operating Temperature (°C) | -5 ~ 50 | | |
| Storage Temperature (°C) | -25 ~ 70 | | |
| Dimension(LxWxH) | 120 * 190 * 60 (mm) | | |

Order Information

| JYVOA | Attenuation Range | Connector Type |
|-------|-------------------|----------------|
| | 30 30dB | 1 FC/UPC |
| | 60 60dB | 2 FC/APC |

Hand-held Optical Attenuator



DESCRIPTION

- High-precision digital decay series is developed in accordance with optical communication equipment engineering requirements. The Hand-held Optical Attenuator is based on MEMS technology, simple construction, and stable optical performance. The portable design is easy to carry in engineering and maintenance

FEATURES

- Large screen LCD digital display
- 0.1dB Display resolution
- 0~60dB variable attenuation
- Low power consumption
- Return loss more than 50dB

APPLICATIONS

- Communication engineering and maintenance
- CATV engineering and maintenance
- Optical device production and research

Specifications

| Parameter | | Specification | Unit |
|----------------------------|-----|--|------|
| Operating Wavelength Range | | 1310&1550 | nm |
| Attenuation Range | Max | 50 60 | dB |
| Accuracy | | ±0.3@0~40dB ±0.3@0~40dB | dB |
| | | ±0.5@40~50dB ±0.5@40~60dB | dB |
| Attenuation Resolution | Max | 0.1 | dB |
| Attenuation Repeatability | Max | 0.05 | dB |
| Insertion Loss | Max | 2 | dB |
| Return Loss | Min | 50(APC) or 40(UPC) | dB |
| Fiber Type | | Coming SMF-28 | |
| Power Consumption | Max | 100 | m/W |
| Operating Temperature | | -5~50 | °C |
| Storage Temperature | | -25-70 | °C |
| Dimension | | 158x88x36 (LxWxH) | mm |
| weight | | 150 | g |

Order Information

| H-VOA | Wavelength Range | Attenuation Range | Connector Type |
|-------|------------------|-------------------|----------------|
| | 1 1310&1550nm | 50 50dB | 1 FC/UPC |
| | X Customized | 60 60dB | 2 FC/APC |
| | | X Customized | X Customized |

1x3/1x4 FBT Coupler



DESCRIPTION

- We use fused biconical taper technique to build a series of couplers. According to the different operating bandwidths, we have wide band couplers, dual window couplers, three-window couplers, and so on.

FEATURES

- Low insertion loss and low PDL
- High reliability & High stability
- RoHS compliant

APPLICATIONS

- EDFA
- CATV Passive network WAN
- FTTH

Specifications

| Parameter | Unit | Value | | |
|-----------------------------|------|------------------------------|--------------------------------|------------------------------|
| | | 1x3 Dual-Window Coupler(DWC) | 3x3 Single Window Coupler(WBC) | 1x4 Dual-Window Coupler(DWC) |
| Type | | 1x3 Dual-Window Coupler(DWC) | 3x3 Single Window Coupler(WBC) | 1x4 Dual-Window Coupler(DWC) |
| Operating Wavelength | nm | 1310/1550 | 1310 or 1550 | 1310/1550 |
| Operating Bandwidth | nm | 1310/1550±40 | ±20 | 1310/1550±40 |
| Insertion Loss | dB | ≤5.8 | ≤6.0 | ≤7.3 |
| Polarization Dependent Loss | dB | ≤0.25 | ≤0.3 | ≤0.25 |
| Uniformity | dB | ≤1.0 | ≤1.2 | ≤1.5 |
| Temperature Dependent Loss | dB | ≤0.25 | ≤0.25 | ≤0.25 |
| Return Loss | dB | ≥55 | ≥55 | ≥55 |
| Operating Temperature | °C | -40~+85 | -40~+85 | -40~+85 |
| Storage Temperature | °C | -40~+85 | -40~+85 | -40~+85 |
| Fiber Type | | SMF-28e | SMF-28e/BI 1015-A/RC-80 | SMF-28e |

Order Information

| SP- FBT | Type | Package Dimension | Fiber Type | Connector Type |
|---------|----------------------|-------------------|----------------------------|---------------------------------|
| | 1: 1x3 Dual-Window | 1:3*60mm | 1: 250m bare fiber | 0: without connector |
| | 2: 3x3 Single Window | 2:3*54mm | 2: 900m tight buffer fiber | 1: FC/ PC 2: FC/UPC 3: FC/APC |
| | 3: 1x4 Dual-Window | 3:3*40mm | X: Customized | 4: SC/PC 5:SC/UPC 6: SC/APC |
| | | | | 7: ST 8: LC 9: MU X: Customized |

FBT Fiber Coupler



DESCRIPTION

- FBT Fiber Coupler is a kind of passive component that couple optical and realize the distribution of light power It can divide a light signal from an optical fiber into several ones, realizing the separation or combination of light signal, or be used to extend the fiber link. It belongs to optical passive components, can be applied to the telecom network , CATV network, subscriber loop system, regional network.

FEATURES

- Low excess loss
- High Isolation
- Compact size

APPLICATIONS

- Long-haul telecommunications
- CATV systems & Fiber sensors
- Local area network

Specifications

| Parameter | Premium | A Grade |
|-----------------------------|-------------------|---------|
| Port Configuration | 1x2 | |
| Operating Wavelength (nm) | 1310/1550±15 | |
| Maximum Insertion loss (dB) | ≤ 0.3 | ≤ 0.5 |
| Isolation (dB) (Typical) | >17 | >16 |
| Return Loss (dB) | >55 | |
| Directivity (dB) | >55 | |
| PDL(dB) | <0.1 | |
| Storage Temperature | -40°C - 85°C | |
| Fiber Type | Corning SMF-28 | |
| Package Dimension | Package A, B, C,S | |

Order Information

| FBT | Grade | Package Dimension | Fiber Type | Connector Type |
|-----|------------|-------------------|----------------------------|---------------------------------|
| | P: P-grade | 1:3*60mm | 1: 250m bare fiber | 0: without connector |
| | A: A-grade | 2:3*54mm | 2: 900m tight buffer fiber | 1: FC/ PC 2: FC/UPC 3: FC/APC |
| | | 3:3*40mm | X: Customized | 4: SC/PC S:SC/UPC 6: SC/APC |
| | | | | 7: ST 8: LC 9: MU X: Customized |

1x2 980/1550 WDM



FEATURES

- Wavelength on customer request
- Coupling ratio on customer request
- Low excess loss
- High stability and reliability

APPLICATIONS

- Fiber sensors
- Optical communication systems
- Testing instruments

Specifications

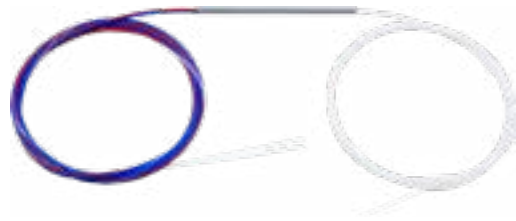
| Parameters | | | Unit | Specifications | |
|---------------------------------------|--------------------|----------|--|----------------|--------|
| Signal Working Wavelength Range (λ s) | | | nm | 1527 ~ 1566 | |
| Pump working wavelength range(λ p) | | | nm | 960~990 | |
| Insertion loss | signal~common@ λ s | Max | dB | 0.20 | |
| | pump~common@ λ p | Max | dB | 0.15 | |
| Isolation | signal~common@ λ p | Min | dB | 20 | |
| | pumpcommon@ λ s | Min | dB | 18 | |
| Wavelength dependent loss1 @ signal | | | Max | dB | 0.10 |
| Temperature dependent loss2 | | | Max | dB | 0.1 |
| Polarization Dependent Loss | | | Max | dB | 0.05 |
| Directivity | | | Min | dB | 55 |
| Operating Temperature | °C | -5 ~ 75 | Max. Optical Power | w | 1 |
| Storage Temperature | °C | -40 ~ 85 | Operating Humidity | % | 5 ~ 95 |
| Reliability Requirement | | | Compliant with GR-1209-CORE and GR-1221-CORE | | |

Order Information

| 980/15 WDM | Package Dimension | Fiber Type | Connector Type |
|------------|-------------------|----------------------------|---------------------------------|
| | 1:3*60mm | 1: 250m bare fiber | 0: without connector |
| | 2:3*54mm | 2: 900m tight buffer fiber | 1: FC/ PC 2: FC/UPC 3: FC/APC |
| | 3:3*40mm | X: Customized | 4: SC/PC S:SC/UPC 6: SC/APC |
| | | | 7: ST 8: LC 9: MU X: Customized |



Special WDM



DESCRIPTION

- Special wavelength WDM such as 980/1064nm, 1064/1550nm, 1550/1625nm WDM. Raman Pump Combiner is designed for combining the multiple pumps with different wavelengths for Raman amplifiers.

FEATURES

- Wavelength on customer request
- Coupling ratio on customer request
- Low excess loss
- High stability and reliability

APPLICATIONS

- Fiber sensors
- Optical communication systems
- Testing instruments

Specifications

| Parameter | Special WDM | | |
|----------------------------|-------------|-------------|-------------|
| Operating wavelength (nm) | 980 / 1064 | 1064 / 1550 | 1550 / 1625 |
| Operating bandwidth (nm) | ±5 | ±15 | ±5 |
| Insertion loss (dB) | P | ≤0.3 | |
| | A | ≤0.4 | |
| Isolation (dB) | P | ≥14 | ≥18 |
| | A | ≥13 | ≥13 |
| PDL (dB) | P | ≤0.10 | |
| | A | ≤0.15 | |
| Directivity (dB) | ≥55 | | |
| Operating temperature (°C) | -40 ~ +85 | | |

| Parameter | Raman Pump Combiner | | | |
|----------------------------|-----------------------|------|-------|------|
| | 15~ 20nm | | >20nm | |
| Operating wavelength (nm) | Upon customer request | | | |
| Grade | P | A | P | A |
| Center insertion loss (dB) | ≤0.5 | ≤0.6 | ≤0.4 | ≤0.5 |
| Center isolation (dB) | ≥14 | | | |
| Directivity (dB) | ≥55 | | | |
| Operating temperature (°C) | -40 ~ +85 | | | |

Order Information

| SP- WDM | Wavelength | Grade | Package Dimension | Fiber Type | Connector Type |
|---------|-------------|------------|-------------------|----------------------------|---------------------------------|
| | 980 / 1064 | P: P-grade | 1:3*60mm | 1: 250m bare fiber | 0: without connector |
| | 1064 / 1550 | A: A-grade | 2:3*54mm | 2: 900m tight buffer fiber | 1: FC/ PC 2: FC/UPC 3: FC/APC |
| | 1550 / 1625 | | 3:3*40mm | | 4: SC/PC S:SC/UPC 6: SC/APC |
| | | | | | 7: ST 8: LC 9: MU X: Customized |



1X2 Mechanical Optical Switch



DESCRIPTION

- 1x2 Mechanical Optical Switch support all wavelength at 1260nm~1650nm, it offers ultra- high reliability, low insertion loss, fast switching speed as well as bi-directional performance. The optical switches are widely used for Optical Network, Protection, Transmitter and Receiver Protection, Network Test System and Instrumentations.

FEATURES

- Low Insertion Loss
- High Reliability
- Compact Size
- Latching or Non-latching Configurations

APPLICATIONS

- Network Switching
- Configurable optical Add/Drop multiplexing
- Network Protection and Monitoring
- Instrumentation, Testing and Measurement

Specifications

| Parameters | Unit | 1x2 Optical Switch |
|-----------------------------|--------|-----------------------------|
| Wavelength Range | nm | 1260 ~ 1650 |
| Test Wavelength | nm | 1310 and 1550 |
| Insertion Loss 1, 2 | dB | ≤ 0.8 (typical: 0.6) |
| Wavelength Dependent Loss | dB | ≤0.25 |
| Return Loss 1, | dB | ≥ 50 (typical: 55) |
| Crosstalk | dB | ≥ 55 (typical: 60) |
| Polarization Dependent Loss | dB | ≤0.05 (typical: 0.03) |
| Temperature Dependent Loss | dB | ≤0.2 |
| Repeatability | dB | ≤±0.02 |
| Operating Voltage | VDC | 5 |
| Durability | Cycles | ≥ 10 Million |
| Switching Time | ms | ≤8 |
| Optical Power | mW | ≤500 |
| Operating Temperature | °C | -20 ~ +70 |
| Storage Temperature | °C | -40 ~ +85 |
| Relative Humidity | % | ≤85 |
| Dimension | mm | (L)27.0×(W)12.6×(H)8.0 ±0.2 |

Order Information

| TSW12 | Switch Type | Test Wavelength | Tube Type | Fiber Length (Include connector) | Connector |
|-------|-----------------|-----------------|--------------------|----------------------------------|------------|
| | L: Latching | 3: 1310nm | B:250μm bare fiber | 05: 0.5m | 00:None |
| | N: Non-latching | 5: 1550nm | T:900μm loose tube | 10: 1.0m | FP: FC/PC |
| | | D:1310/1550nm | | 15: 1.5m | FA: FC/APC |
| | | | | | SP: SC/PC |
| | | | | | SA: SC/APC |
| | | | | | LP: LC/PC |
| | | | | | LA: LC/APC |
| | | | | | ST: ST |
| | | | | | MU:MU |



UNI-DIRECTIONAL TAP-PO MONITOR



FEATURES

- Low Insertion Loss
- Unidirectional
- Customized tap ratio available
- Integrated devices, compact size

APPLICATIONS

- WDM channel monitoring
- Gain monitoring for amplifiers
- Optical network switch/protection
- Monitoring

Specifications

| Parameter | | Specification | | | Unit |
|-------------------------------|-----|---------------|-------|-------|------|
| Operating Wavelength C/L band | | C/L band | | | |
| Tap Ratio | | 1% | 2% | 5% | |
| Maximum Input Power | | 25 | 22 | 18 | dBm |
| Responsivity | | 7~12 | 14~24 | 40~60 | mA/W |
| Insertion Loss | Max | 0.5 | 0.6 | 0.7 | dB |
| Wavelength Dependent Loss | Max | 0.3 | | | dB |
| Temperature Dependent Loss | Max | 0.3 | | | dB |
| Return Loss | Min | 40 | | | dB |
| Directivity | Min | 25 | | | dB |
| Polarization Dependent Loss | Max | 0.2 | | | dB |
| Dark Current (at 25°C) Max | Max | 1 | | | nA |
| Reverse Voltage | Max | 20 (Typ 5) | | | V |
| Operating Temperature Range | | 0~+70 | | | °C |
| Storage Temperature Range | | -40~+85 | | | °C |
| Package Dimension (L * Ø) | | 27.5*5.6 | | | mm |

Order Information

| UTPD | Standard/Mini Size | Tap Ratio | Fiber Type | Connector Type |
|------|--------------------|-----------|----------------------------|---------------------------------|
| | S: Standard size | 01: 1% | 1: 250m bare fiber | 0: without connector |
| | | 02: 2% | 2: 900m tight buffer fiber | 1: FC/ PC 2: FC/UPC 3: FC/APC |
| | | 05: 5% | | 4: SC/PC 5: SC/UPC 6: SC/APC |
| | | More | | 7: ST 8: LC 9: MU X: Customized |

1310/1550/1590nm In-Line Isolator



FEATURES

- Low Insertion Loss and high isolation
- Low PDL & PMD
- Optical path epoxy free
- Telcordia compliant
- RoHS compliant

APPLICATIONS

- EDFA
- WDM system
- Fiber optic instruments

Specifications

| Parameter | | Specification | | | | Unit |
|--|-----|-----------------|-----------------|---------------|---------------|------|
| Center Wavelength (λ_c) | | 1310/1550/1590 | | | | nm |
| Standard | | Standard Size | | | | |
| | | Mini Size | | | | |
| Single/Dual Stage | | Single(Grade P) | Single(Grade A) | Dual(Grade P) | Dual(Grade P) | |
| Isolation (at $\lambda_c \pm 15\text{nm}$) 1 | Min | 30 | 28 | 45 | 43 | dB |
| Isolation (at $\lambda_c \pm 15\text{nm}$) 2 | Min | 22 | 22 | 42 | 40 | dB |
| Insertion Loss (at λ_c) 1 | Typ | 0.4 | 0.5 | 0.5 | 0.55 | dB |
| Insertion Loss (at $\lambda_c \pm 15\text{nm}$) 2 | Max | 0.5 | 0.6 | 0.6 | 0.7 | dB |
| Return Loss (Input/Output) | Min | 60/55 | 55/55 | 60/55 | 55/55 | dB |
| PDL | Max | 0.05 | 0.08 | 0.08 | 0.1 | dB |
| PMD | Max | 0.05 | 0.05 | 0.05 | 0.05 | ps |
| Operating Temperature Range | | 0~+70 | | | | °C |
| Storage Temperature Range | | -40~+85 | | | | °C |
| Maximum Power Handling | | 500 | | | | mW |
| Package Dimension (L * Φ) | | Standard Size | | 40*5.5 | | mm |
| | | Mini Size | | 26*3.0 | | |

Order Information

| ISO | Single/Dual Stage | Grade | Center Wavelength | Fiber Type | Size | Connector Type |
|-----|-----------------------------|------------|-------------------|---|------------------|------------------------------|
| | S: Single stage without PMD | P: P-grade | 31: 1310nm | 1: 250 μm bare fiber | 1: Standard size | 0: Without connector |
| | D: Dual stage | A: A-grade | 55: 1550nm | 2: 900 μm tight buffer fiber | 2: Mini size | 1: FC/PC 2: FC/UPC 3: FC/APC |
| | P: Single stage with PMD | | 59: 1590nm | | | 4: SC/PC 5: SC/UPC |
| | | | | | | 6: SC/APC 7: ST 8: LC 9: MU |
| | | | | | | X: Customized |

2X2 Mechanical Optical Switch

DESCRIPTION

- 2x2 Mechanical Optical Switch support all wavelength at 1260nm~1650nm, it offers ultra- high reliability, low insertion loss, fast switching speed as well as bi-directional performance. The optical switches are widely used for Optical Network, Protection, Transmitter and Receiver Protection, Network Test System and Instrumentations.

FEATURES

- Low Insertion Loss
- High Reliability
- Compact Size
- Latching or Non-latching Configurations

APPLICATIONS

- Network Switching
- Configurable optical Add/Drop multiplexing
- Network Protection and Monitoring
- Instrumentation, Testing and Measurement



Specifications

| Parameters | Unit | 1x2 Optical Switch |
|-----------------------------|--------|-----------------------------|
| Wavelength Range | nm | 1260 ~ 1650 |
| Test Wavelength | nm | 1310 and 1550 |
| Insertion Loss 1, 2 | dB | ≤ 1.0 (typical: 0.8) |
| Wavelength Dependent Loss | dB | ≤0.25 |
| Return Loss 1, | dB | ≥ 50 (typical: 55) |
| Crosstalk | dB | ≥ 55(typical: 60) |
| Polarization Dependent Loss | dB | ≤0.05(typical: 0.03) |
| Temperature Dependent Loss | dB | ≤0.2 |
| Repeatability | dB | ≤±0.02 |
| Operating Voltage | VDC | 5 |
| Durability | Cycles | ≥ 10 Million |
| Switching Time | ms | ≤8 |
| Optical Power | mW | ≤500 |
| Operating Temperature | °C | -20 ~ +70 |
| Storage Temperature | °C | -40 ~ +85 |
| Relative Humidity | % | ≤85 |
| Dimension | mm | (L)27.0×(W)12.6×(H)8.0 ±0.2 |

Order Information

| TSW12 | Switch Type | Test Wavelength | Tube Type | Fiber Length (Include connector) | Connector |
|-------|-----------------|-----------------|--------------------|----------------------------------|------------|
| | L: Latching | 3: 1310nm | B:250μm bare fiber | 05: 0.5m | 00:None |
| | N: Non-latching | 5: 1550nm | T:900μm loose tube | 10: 1.0m | FP: FC/PC |
| | | D:1310/1550nm | | 15: 1.5m | FA: FC/APC |
| | | | | | SP: SC/PC |
| | | | | | SA: SC/APC |
| | | | | | LP: LC/PC |
| | | | | | LA: LC/APC |
| | | | | | ST: ST |
| | | | | | MU:MU |

Circulator

DESCRIPTION

- 1550nm 3port Circulator,0.9mm loose tube, with FC/APC connector, Fiber length ≥ 0.5m, Package Dimension : Φ 5.5×L50mm.

FEATURES

- Ultra Low PDL and PMD
- High Isolation, Low Insertion Loss
- Epoxy-Free in Optical Path
- Telcordia GR-1221 and 1209 Qualified

APPLICATIONS

- Add-Drop Multiplexing
- Fiber Sensors
- Bidirectional Pumping
- Bidirectional Signal Transmission Systems
- Coupling In-Line Chromatic Dispersion Compensation Devices



Specifications

| Parameters | Unit | Specifications | |
|------------------------------|---------|---------------------------|--|
| Configuration | | Port 1 to Port2 to Port 3 | |
| Operating Wavelength | nm | 1550±30 | |
| Insertion Loss | Typical | dB | 1.00 |
| | Maximum | dB | 1.20 |
| Channel Peak Isolation | Min | dB | 50 |
| Channel Minimum Isolation | Min | dB | 40 |
| Channel Cross Talk | Min | dB | 50 |
| Return Loss | Min | dB | 50 |
| Polarization Dependent Loss | Max | dB | 0.15 |
| Polarization Mode Dispersion | Max | ps | 0.10 |
| Power Handling | Max | mW | 300 |
| Pigtail and connector Type | | | 0.9mm loose tube with FC/UPC connector |
| Fiber Type | | | SMF-28e |
| Fiber length | cm | | ≥50 |
| Operating Temperature | °C | | 0~ 70 |
| Storage Temperature | °C | | -40 ~ 85 |
| Package Dimension | mm | | Φ 5.5×L50 |

Order Information

| KOCC | Wavelength | Port | Fiber Type | Size | Connector Type |
|------|---------------------|-----------|-----------------------------|---------------------|------------------------------|
| | 13A:1310nm(A Grade) | 3: 3 port | 1: 250μm bare fiber | 1: 5.5×L50(3 port) | 0: Without connector |
| | 13P:1310nm(P Grade) | 4: 4 port | 2: 900μm tight buffer fiber | 2: 5.5×L70(4 port) | 1: FC/PC 2: FC/UPC 3: FC/APC |
| | 15A:1550nm(A Grade) | | X: Customized | | 4: SC/PC 5: SC/UPC |
| | 15P:1550nm(P Grade) | | | | 6: SC/APC 7: ST 8: LC 9: MU |
| | | | | | X: Customized |



1064nm In-Line Isolator



FEATURES

- Low Insertion Loss and high isolation
- Low PDL & PMD
- Optical path epoxy free
- Telcordia compliant
- RoHS compliant

APPLICATIONS

- EDFA
- WDM system
- Fiber optic instruments

Specifications

| Parameter | | Specification | | Unit |
|---|-----|---------------|------------|------|
| Center Wavelength (λ_c) | | 1064 | | nm |
| Standard | | Standard Size | | |
| Single/Dual Stage | | Single Stage | Dual Stage | |
| Isolation (at $\lambda_c \pm 15\text{nm}$) ¹ | Min | 25 | 45 | dB |
| Insertion Loss (at λ_c) ¹ | Typ | 1.8 | 3.5 | dB |
| Insertion Loss (at $\lambda_c \pm 15\text{nm}$) ² | Max | 2.5 | 4.5 | dB |
| Return Loss (Input/Output) | Min | 55/55 | 55/55 | dB |
| PDL | Max | 0.1 | 0.1 | dB |
| Operating Temperature Range | | 0~+70 | | °C |
| Storage Temperature Range | | -40~+85 | | °C |
| Maximum Power Handling | | 150 | | mW |
| Package Dimension (L* Φ) | | 40*5.5 | | mm |

Order Information

| ISO | Single/Dual Stage | Grade | Center Wavelength | Fiber Type | Size | Connector Type |
|-----|-----------------------------|------------|-----------------------|---|------------------|------------------------------|
| | S: Single stage without PMD | P: P-grade | 31: 1310nm 55: 1550nm | 1: 250 μm bare fiber | 1: Standard size | 0: Without connector |
| | D: Dual stage | A: A-grade | 59: 1590nm 64: 1064nm | 2: 900 μm tight buffer fiber | 2: Mini size | 1: FC/PC 2: FC/UPC 3: FC/APC |
| | P: Single stage with PMD | | | | | 4: SC/PC 5: SC/UPC |
| | | | | | | 6: SC/APC 7: ST 8: LC 9: MU |
| | | | | | | X: Customized |



PD-WDM



FEATURES

- Low Return Loss
- High Isolation, Low Insertion Loss
- Low Dark Current
- Excellent Stability

APPLICATIONS

- EDFA
- Fiber optic instruments

Specifications

| PARAMETERS | | VALUE | | | UNIT |
|--|-----------------------------|--|-----|--------|------|
| Pass Channel Wavelength Range, λ_P | | 1260~1360 | | | nm |
| Reflection Channel Wavelength | | 1540~1560 and 1480~1500 | | | nm |
| Responsibility | min | Typ | max | 1550nm | |
| | 0.90 | 0.95 | | | |
| Bandwidth | 2.5 | 3.2 | | GHz | |
| IMD2 | 70 | | | dBc | |
| IMD3 | 80 | | | dBc | |
| Operating Voltage | | 5 | 20 | V | |
| Frequency Bandwidth | 5 | 6 | | GHz | |
| Frequency Response | -0.5 | | 0.5 | dB | |
| Dark Current | 1 | | | nA | |
| Capacitance | 0.7 | | | pF | |
| Insertion Loss | Com-Reflection | $\cong 0.5$ | | dB | |
| Isolation | Com-Pass, λ_R | $\cong 25$ | | dB | |
| | Com-Reflection, λ_P | $\cong 15$ | | dB | |
| Return Loss | | $\cong 45$ | | dB | |
| Directivity | | $\cong 50$ | | dB | |
| PDL | | $\cong 0.1$ | | dB | |
| Fiber Type | | SMF-28e, 250 μm bare fiber | | | |
| Fiber Color | | Comport:Black Passport:Nature Ref port:Nature or customized | | | |
| Package Dimension | | 5.5mm(Φ) \times 34(L)for bare fiber 5.5mm(Φ) \times 40(L)for 900 μm Loss tube | | | |
| Operating Temperature | | -10~+70 | | | |
| Storage Temperature | | -40~+85 | | | |

Order Information

| PD-WDM | JUMPER TYPE | CONNECTOR | CONNECTOR |
|--------|----------------------|-----------|-----------|
| | B: 250 μm | 0: None | 10: 1.0m |
| | 9: 900 μm | 1: SC/UPC | 15: 1.5m |
| | 8: Other | 2: SC/APC | 18: Other |
| | | 3: FC/UPC | |
| | | 4: FC/APC | |
| | | 5: LC/UPC | |
| | | 6: LC/SPC | |
| | | 7: MU/UPC | |
| | | 16: Other | |

Isolator WDM Hybrid (IWDM)



FEATURES

- Low Insertion Loss & high isolation
- Low PDL & PMD
- Integrated devices, compact size
- Optical path epoxy free
- Telcordia compliant
- RoHS compliant

APPLICATIONS

- EDFA
- Fiber optic instruments

Specifications

| Parameter | | | Specification | | | | Unit |
|-----------------------------|----------------------------------|-----|---------------|------|-----------|------|------|
| | | | 980/1550 | | 1480/1550 | | |
| Operating Wavelength | | | | | | | |
| Single/Dual Stage | | | Single | Dual | Single | Dual | |
| Signal Port | Wavelength Range (λ_s) | | 1530~1565 | | 1530~1565 | | nm |
| | Insertion Loss@ λ_{s1} | Typ | 0.8 | 0.9 | 0.7 | 0.8 | dB |
| | Insertion Loss@ λ_{s2} | Max | 1.1 | 1.2 | 1 | 1.1 | dB |
| | Isolation@ λ_{s1} | Min | 30 | 44 | 30 | 44 | dB |
| | PDL | Max | 0.1 | 0.1 | 0.1 | 0.1 | dB |
| | PMD | Max | 0.05 | 0.05 | 0.05 | 0.05 | ps |
| Signal Port | Wavelength Range (λ_p) | | 960~990 | | 1460~1490 | | nm |
| | Insertion Loss@ λ_{p1} | Typ | 0.4 | 0.4 | 0.4 | 0.4 | dB |
| | Insertion Loss@ λ_{p2} | Max | 0.6 | 0.6 | 0.6 | 0.6 | dB |
| | Isolation@ λ_{p1} | Min | 15 | 15 | 15 | 15 | dB |
| | PDL | Max | 0.1 | 0.1 | 0.1 | 0.1 | dB |
| Return Loss | | Min | 50 | 50 | 50 | 50 | dB |
| Directivity | | Min | 50 | 50 | 50 | 50 | dB |
| Operating Temperature Range | | | 0~+70 | | | | °C |
| Storage Temperature Range | | | -40~+85 | | | | °C |
| Maximum Power Handling | | | 300 | | | | mW |
| Package Dimension (L*Φ) | | | 35*5.5 | | | | mm |

Order Information

| IWDM | Operating Wavelength | Single/Dual Stage | Forward/Backward Type | Fiber Type | Connector Type |
|------|----------------------|--------------------------|-----------------------|-----------------------------|---------------------------------|
| | 95: 980/1550 | P: Single stage with PMD | 01: Forward Type | 1: 250μm bare fiber | 0: Without connector |
| | 45: 1480/1550 | D: Dual stage | 02: Backward Type | 2: 900μm tight buffer fiber | 1: FC/PC 2: FC/UPC 3: FC/APC |
| | | | | | 4: SC/PC 5: SC/UPC 6: SC/APC |
| | | | | | 7: ST 8: LC 9: MU |
| | | | | | X: Customized |

Collimator



DESCRIPTION

- Collimator is made up by capillary pigtail and G-Lens which aligned accurately. By the self focus of G-Lens, collimator can realize to output a parallel beam or input the parallel beam into the fiber. It is widely used in optical module or optical researching and lab field.

FEATURES

- Low insertion loss
- High return loss
- Epoxy-free in optical path

APPLICATIONS

- WDM device and module
- Isolator
- Circulator
- Optical researching

Specifications

| Parameter | Single fiber | | Dual fiber | |
|-----------------------------|---------------------------------------|---------|------------------|---------|
| | Premium | A Grade | Premium | A Grade |
| Operating Wavelength (nm) | 1310/1550, 1260~1620 or Customized | | 1310±20, 1550±20 | |
| Insertion Loss (dB) | ≤0.18 | ≤0.20 | ≤0.30 | ≤0.35 |
| Return Loss (dB) | 60 | | | |
| Receive angle (degree) | ±0.15 | | | |
| Facula diameter(mm) | <0.5 | | | |
| Optical Power Handling (mw) | ≤500 | | | |
| Operating Temperature (°C) | -10°C+70°C | | | |
| Storage Temperature (°C) | -40°C+85°C | | | |
| Fiber Type | SMF-28, MMF50/125um or MMF62.5/125 | | | |
| Fiber Length (Min.) | 1 Meter Each End 0.25mm or 0.9mm | | | |
| Package Dimension (mm) | φ2.78*10mm or φ3.2*10mm or customized | | | |

Order Information

| CL | Type | Wavelength (nm) | Grade | Pigtail type | Fiber Length | In/Out Connector |
|----|-----------------|-----------------|-----------|----------------------|--------------|------------------|
| | SF=Single fiber | 13=1310 | P=Premium | 1=Bare Fiber | 1=1.0m | 0=None |
| | DF=Dual fiber | 15=1550 | A=Grade A | 2=900um Tight Buffer | 2=1.5m | 1=FC/APC |
| | | 35=1310/1550 | | 3=φ3mm Cable | 3=other | 2=FC/PC |
| | | 1216=1260~1620 | | 4=2.0mm Cable | | 3=SC/APC |
| | | | | | | 4=SC/PC |
| | | | | | | 5=ST |
| | | | | | | 6=LC/PC |
| | | | | | | 7=LC/APC |

Mini TAP-PD Monitor



FEATURES

- Low Insertion Loss & high isolation
- Customized tap ratio available
- Integrated devices, compact size
- Telcordia compliant
- RoHS compliant

APPLICATIONS

- WDM channel monitoring
- Gain monitoring for amplifiers
- Optical network switch/protection monitoring

Specifications

| Parameter | | Specification | | | Unit |
|-----------------------------|-----|---------------|-------|-------|------|
| | | C/L band | | | |
| Operating Wavelength | | C/L band | | | |
| Tap Ratio | | 1% | 2% | 5% | |
| Maximum Input Power | | 25 | 22 | 18 | dBm |
| Responsivity | | 7~15 | 14~26 | 40~60 | mA/W |
| Insertion Loss | Max | 0.5 | 0.6 | 0.7 | dB |
| Wavelength Dependent Loss | Max | 0.3 | 0.3 | 0.3 | dB |
| Temperature Dependent Loss | Max | 0.3 | 0.3 | 0.3 | dB |
| Return Loss | Min | 45 | 45 | 45 | dB |
| Polarization Dependent Loss | Max | 0.1 | 0.1 | 0.1 | dB |
| Dark Current (at 25°C) | Max | 1 | 1 | 1 | nA |
| Reverse Voltage | Max | 20 (Typ 5) | | | V |
| Operating Temperature Range | | 0~+70 | | | °C |
| Storage Temperature Range | | -40~+85 | | | °C |
| Package Dimension (L*) | | 17*3.2 | | | mm |

Order Information

| TPD | Standard/Mini Size | Tap Ratio | Fiber Type | Connector Type |
|-----|--------------------|-----------|-----------------------------|---------------------------------|
| | M: Mini size | 01: 1% | 1: 250µm bare fiber | 0: Without connector |
| | | 02: 2% | 2: 900µm tight buffer fiber | 1: FC/PC 2: FC/UPC 3: FC/APC |
| | | 05: 5% | | 4: SC/PC 5: SC/UPC 6: SC/APC |
| | | | | 7: ST 8: LC 9: MU X: Customized |

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