

PREMIUM CONNECTIVITY SOLUTIONS

WDM SOLUTIONS

ENSURE

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WE

MEET ENSURE

With a scalable, customizable production chain and massive commitment to R&D, Ensure crafts premium components (PLC splitters, ceramic ferrules, passive optical components, and WDM products) to meet the exploding growth of fiber optic networks. We manufacture all essential components on-site and control the entire process from start to finish. We can also provide white-label design and packaging for customers who require it.

We've helped customers exceed expectations in quality and reliability since our founding in 2001. Along with our parent company, HH Group plus our affiliated telecommunications corporate siblings, we are an invaluable partner in helping customers like you build bridges from today to an ever-more connected tomorrow. Are you ready for what's to come?

THE CHALLENGE

Explosive growth. Insatiable demand. Speed, reliability, and scalability define the high-performance digital infrastructure of tomorrow. As FTTx and 5G platforms take center stage in content delivery and communications, the thirst for digital programming, reliance on remote workforces and video conferencing, plus an IoT landscape that connects everything from doorbell cams to diaper sensors—show no signs of slowing down.



QUALITY FIRST

We help customers meet the future head-on with an unwavering commitment to quality. We invest heavily in specialized equipment and continuously develop and perfect complex, industry-leading processes in our laboratories. Perhaps most importantly, we control the entire production chain from start to finish, making sure every component that comes off the line is flawless.

Fuse Wavelength Division Multiplexer (WDM)



Features

Low Insertion Loss
High Isolation
Compact Size
Top Quality-Price Ratio

Applications

Long-Haul Telecommunications
Erbium Doped Fiber Amplifiers (EDFA)
Digital, Hybrid & AM-Video Systems
High-Speed Multi-Wavelength Systems

Performance Specifications

1310/1550nm wavelength Division Multiplexer

| Type | | WA | | WB | WC |
|------------------------|----|---|------|------|------|
| Grade | | P | A | P | P |
| Maximum Insertion Loss | dB | 0.3 | 0.4 | 0.7 | 1.2 |
| Min Isolation | dB | 17 | 16 | 34 | 45 |
| PDL | dB | 0.05 | 0.10 | 0.10 | 0.15 |
| Operating Wavelength | nm | 1295~1325/1528~1565 | | | |
| Directivity | dB | ≥60 | | | |
| Return Loss | dB | ≥55 | | | |
| Operating Temperature | °C | -10~+70(-40~+85 available upon request) | | | |
| Storage Temperature | °C | -40 to +85 | | | |
| Fiber Type | | Corning Single mode SMF-28E+(LL) | | | |
| Fiber Length | m | 1 meter or custom on request | | | |
| Port Configuration | | 1x2 or 2x2 | | | |
| Package Dimensions | | A, B, C, D, I | | S, D | D |

Special wavelength Division Multiplexer

| Type | | 850/1310 | 980/1060 | 980/1310 | 980/1550 | 1480/1550 |
|------------------------|----|---|----------|----------|----------|-----------|
| Grade | | P | P | P | P | P |
| Maximum Insertion Loss | dB | 0.25 | 0.40 | 0.35 | 0.25 | 0.30 |
| Min Isolation | dB | 20 | 16 | 18 | 20 | 14 |
| PDL | dB | 0.10 | 0.15 | 0.10 | 0.05 | 0.10 |
| Bandwidth | nm | ±10 | ±5 | ±5 | ±10 | ±5 |
| Directivity | dB | ≥60 | | | | |
| Return Loss | dB | ≥55 | | | | |
| Operating Temperature | °C | -10~+70(-40~+85 available upon request) | | | | |
| Storage Temperature | °C | -40 to +85 | | | | |
| Fiber Type | | Corning HI 1060, CS 980, SMF-28E+(LL) | | | | |
| Fiber Length | m | 1 meter or custom on request | | | | |
| Port Configuration | | 1x2 or 2x2 | | | | |
| Package Dimensions | | A, B, C | | | | |

Fuse Wavelength Division Multiplexer (WDM)

Ordering Information

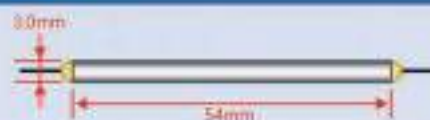
| Type | Grade | Wavelength | Coupling Ratio | Port | Package | Pigtail Style | Fiber Type | In/Out Connector |
|------|-------------------|--|----------------|----------------------|--|----------------------------|--|---|
| D | S=S P=P A=A | 83=850/1310 93=980/1310 96=980/1060 95=980/1550 45=1480/1550 | 00=Standard | 0102=1x2 0202=2x2 | A=PKG A B=PKG B C=PKG C D=PKG D S=PKG S I=PKG I | 1=bare 2=900um 3=3mm | 0=SMF-28E+(LL) 1=HI 1060 2=CS 980 3=HI 1060 Flex 5=Special | 0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC X=Special |

Package Dimensions & Pigtail Style

Package Dimensions:

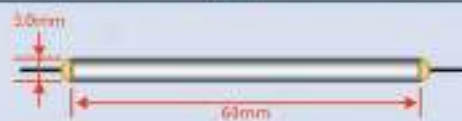
Package A:

3mmx54mm
stainless steel tube



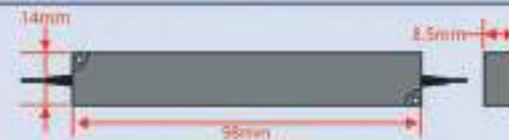
Package B:

3mmx60mm
stainless steel tube



Package C:

8.5mmx14mmx98mm
Plastic Case



Package D:

11.6mm x 80mm x 120mm



Package S:

9.2mm(H) x 50.88mm(W) x 88.9mm(L)

Package I:



Pigtail Style:

Package A:

250um bare fiber

Package B:

250um bare fiber or 900um loose tube

Package C, D, S:

3mm cable or 900um loose tube

Package I

900um loose tube

1x2 CWDM Device



Features

- High Isolation & Return Loss
- Wide Pass Band
- High Channel Isolation
- High Stability and Reliability
- Epoxy free on optical path

Applications

- Line monitoring and WDM Network
- Telecommunication
- Fiber optical Amplifier and Access Network

Performance Specifications

| Parameter | Unit | Specification | |
|--|--------------|--------------------|-----|
| Operating Wavelength | nm | 1270 to 1610 | |
| Center Wavelength Accuracy | nm | ±0.5 | |
| Channel Spacing | nm | 20 | |
| Channel Passband (@-0.5dB bandwidth) | nm | >13 | |
| Pass Channel Insertion Loss | dB | ≤0.6 | |
| Reflection Channel Insertion Loss | dB | ≤0.4 | |
| Channel Ripple | dB | <0.3 | |
| Isolation | Adjacent | dB | >30 |
| | Non-adjacent | dB | >40 |
| Insertion Loss Temperature Sensitivity | dB/°C | 0.005 | |
| Wavelength Temperature Shifting | dB/nm | 0.002 | |
| Polarization Dependent Loss | dB | <0.10 | |
| Polarization Mode Dispersion | ps | <0.1 | |
| Directivity | dB | >50 | |
| Return Loss | dB | >45 | |
| Maximum Power Handling | mW | 300 | |
| Operating Temperature | °C | -5~ +70 | |
| Storage Temperature | °C | -40~ +85 | |
| Package Dimension | mm | Φ4.5x25 or Φ5.5x30 | |

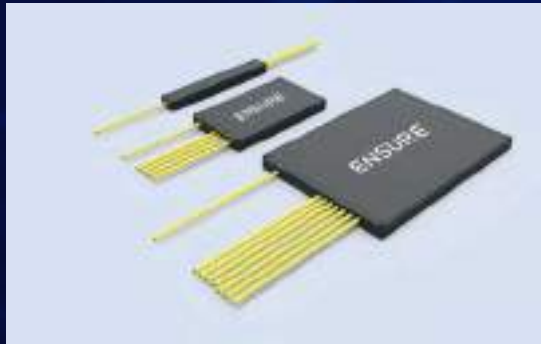
Ordering Information

| CWDM | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|------|--------------------------|--|--------------------------------|--|--|
| | Channel Spacing | Pass Channel | Fiber Style | Fiber Length | In/Out Connector |
| | C=CWDM Grid | 27=1270nm ... 47=1470nm 49=1490nm ... 61=1610nm | 1=Bare Fiber 2=900um Jacket | 1=1.0m 2=1.5m 3=2.0m X=Customized | 0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC |

Package Dimensions



CWDM Module



Features

- Low Insertion Loss
- Wide Pass Band
- High Channel Isolation
- Epoxy free on optical path
- High Stability and Reliability

Applications

- Line monitoring and WDM Network
- Telecommunication
- Fiber optical Amplifier and Access Network

Performance Specifications

| Parameter | Unit | 4 Channel | | 8 Channel | | 16 Channel | | |
|--|--------------|---------------|-------|---------------|-------|---------------|-------|-----|
| | | Mux | Demux | Mux | Demux | Mux | Demux | |
| Operating Wavelength | nm | 1270 to 1610 | | | | | | |
| Center Wavelength Accuracy | nm | ±0.5 | | | | | | |
| Channel Spacing | nm | 20 | | | | | | |
| Channel Passband (@-0.5dB bandwidth) | nm | >13 | | | | | | |
| Pass Channel Insertion Loss | dB | ≤1.6 | | ≤2.5 | | ≤4.5 | | |
| Channel Ripple | dB | <0.3 | | | | | | |
| Isolation | Adjacent | dB | N/A | >30 | N/A | >30 | N/A | >30 |
| | Non-adjacent | dB | N/A | >40 | N/A | >40 | N/A | >40 |
| Insertion Loss Temperature Sensitivity | dB/°C | 0.005 | | | | | | |
| Wavelength Temperature Shifting | dB/nm | 0.002 | | | | | | |
| Polarization Dependent Loss | dB | <0.10 | | <0.10 | | <0.10 | | |
| Polarization Mode Dispersion | ps | <0.1 | | | | | | |
| Directivity | dB | >50 | | | | | | |
| Return Loss | dB | >45 | | | | | | |
| Maximum Power Handling | mW | 300 | | | | | | |
| Operating Temperature | °C | -5~+70 | | | | | | |
| Storage Temperature | °C | -40~+85 | | | | | | |
| Package Dimension | mm | L110xW95xH7.5 | | L110xW95xH7.5 | | L110xW95xH7.5 | | |

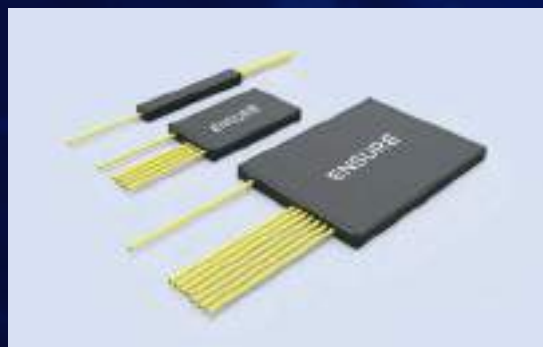
Ordering Information

| CWDM | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|------|--------------------------|--------------------------------|--------------------------|--|--------------------------------|--|--|
| | Channel Spacing | Channels | Configuration | 1 st Channel | Fiber Style | Fiber Length | In/Out Connector |
| | C=CWDM Grid | 04=4 CH 08=8 CH 16=16 CH | M=Mux D=demux | 27=1270nm ... 47=1470nm 49=1490nm ... 61=1610nm | 1=Bare Fiber 2=900um Jacket | 1=1.0m 2=1.5m 3=2.0m X=Customized | 0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC |

Package Dimensions



CWDM OADM Module



Features

- Low Insertion Loss
- High channel Isolation
- High Stability and Reliability
- CWDM channel spacing

Applications

- Channel Add/Drop
- CWDM Network
- Fiber optical amplifier
- CATV fiber optic system
- Metro/Access Network

Performance Specifications

| Parameter | Unit | 1 Channel | | 2 Channel | | 4 Channel | |
|--|----------------|---------------|------|-----------|------|-----------|------|
| | | Add | Drop | Add | Drop | Add | Drop |
| Operating Wavelength | nm | 1270 to 1610 | | | | | |
| Center Wavelength Accuracy | nm | ±0.5 | | | | | |
| Channel Spacing | nm | 20 | | | | | |
| Channel Passband (@-0.5dB bandwidth) | nm | >13 | | | | | |
| Pass Channel Insertion Loss | In-drop @ drop | 0.6 | | 0.9 | | 1.5 | |
| | Add-out @ add | 0.6 | | 0.9 | | 1.5 | |
| | In-out @ other | 0.6 | | 1.2 | | 1.4 | |
| Channel Ripple | dB | <0.3 | | | | | |
| Isolation | Adjacent | N/A | >30 | N/A | >30 | N/A | >30 |
| | Non-adjacent | N/A | >40 | N/A | >40 | N/A | >40 |
| Insertion Loss Temperature Sensitivity | dB/°C | 0.005 | | | | | |
| Wavelength Temperature Shifting | dB/nm | 0.002 | | | | | |
| Polarization Dependent Loss | dB | <0.10 | | | | | |
| Polarization Mode Dispersion | ps | <0.1 | | | | | |
| Directivity | dB | >50 | | | | | |
| Return Loss | dB | >45 | | | | | |
| Maximum Power Handling | mW | 300 | | | | | |
| Operating Temperature | °C | -5~+70 | | | | | |
| Storage Temperature | °C | -40~+85 | | | | | |
| Package Dimension | mm | L110xW95xH7.5 | | | | | |

Ordering Information

| CWDM | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|------|--------------------------|----------------------------|----------------------------|--|--|--|--|
| | Channel Spacing | Channels | Configuration | 1 st Channel | Fiber Style | Fiber Length | In/Out Connector |
| | C=CWDM Grid | 01=1CH 02=2CH 04=4CH | 11=1x1 22=2x2 44=4x4 | 27=1270nm ... 47=1470nm 49=1490nm ... 61=1610nm | 1=Bare Fiber 2=900um Jacket 3=2mm Cable 4=3mm Cable | 1=1.0m 2=1.5m 3=2.0m X=Customized | 0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC |

Package Dimensions



100/200GHz DWDM Optical CWDM OADM Module Add-Drop Multiplexer



Features

- Low Insertion Loss
- High Channel Isolation
- Epoxy free on optical path
- High Stability and Reliability

Applications

- Channel Add/Drop
- DWDM Network
- Wavelength Routing
- Fiber Optical Amplifier
- CATV Fiber Optic System

Performance Specifications

| Parameter | Unit | Mux/Demux | |
|--|--------------|------------------------------------|------|
| Operating Wavelength | nm | ITU Grid | |
| Center Wavelength Accuracy | nm | ±0.05 | ±0.1 |
| Channel Spacing | GHz | 100 | 200 |
| Channel Passband (@-0.5dB bandwidth) | nm | >0.22 | >0.5 |
| Pass Channel Insertion Loss | dB | ≤1.0 | ≤1.0 |
| Reflection Channel Insertion Loss | dB | ≤0.4 | ≤0.4 |
| Channel Ripple | dB | <0.3 | |
| Isolation | Adjacent | dB | >30 |
| | Non-adjacent | dB | >40 |
| Express Channel Isolation | dB | >13 | |
| Insertion Loss Temperature Sensitivity | dB/°C | 0.005 | |
| Wavelength Temperature Shifting | dB/nm | 0.002 | |
| Polarization Dependent Loss | dB | <0.1 | |
| Polarization Mode Dispersion | ps | <0.1 | |
| Directivity | dB | >50 | |
| Return Loss | dB | >45 | |
| Maximum Power Handling | mW | 300 | |
| Operating Temperature | °C | -5 ~ +70 | |
| Storage Temperature | °C | -40 ~ +85 | |
| Package Dimension | mm | 5.5xL34 (L38 for 900um loose tube) | |

Ordering Information

| DWDM | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|------|--------------------------|---------------------------|--------------------------------|--|--|
| | ITU | Pass Channel | Fiber Style | Fiber Length | In/Out Connector |
| | 1=100G 2=200G | 21=CH21 22=CH22 ... | 1=Bare Fiber 2=900um Jacket | 1=1.0m 2=1.5m 3=2.0m X=Customized | 0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC |

Package Dimensions



100GHz DWDM Module



Features

- Low Insertion loss
- High Stability and Reliability
- High channel isolation
- Epoxy free on optical path

Applications

- Channel Add/Drop
- DWDM Network
- Fiber optical amplifier
- CATV fiber optic system
- Wavelength routing

Performance Specifications

| Parameter | Unit | 4 Channel | | 8 Channel | | 16 Channel | | 32 Channel | | |
|--|--------------|------------------|-------|---------------|-------|--------------|-------|--------------|-------|-----|
| | | Mux | Demux | Mux | Demux | Mux | Demux | Mux | Demux | |
| Operating Wavelength | nm | ITU 100 GHz Grid | | | | | | | | |
| Center Wavelength Accuracy | nm | ±0.05 | | | | | | | | |
| Channel Spacing | GHz | 100 | | | | | | | | |
| Channel Passband (@-0.5dB bandwidth) | nm | >0.22 | | | | | | | | |
| Pass Channel Insertion Loss | dB | ≤2.0 | | ≤3.5 | | ≤5.0 | | ≤5.5 | | |
| Channel Ripple | dB | <0.3 | | | | | | | | |
| Isolation | Adjacent | dB | N/A | >30 | N/A | >30 | N/A | >30 | N/A | >30 |
| | Non-adjacent | dB | N/A | >40 | N/A | >40 | N/A | >40 | N/A | >40 |
| Insertion Loss Temperature Sensitivity | dB/°C | 0.005 | | | | | | | | |
| Wavelength Temperature Shifting | dB/nm | 0.002 | | | | | | | | |
| Polarization Dependent Loss | dB | <0.10 | | <0.10 | | <0.15 | | <0.15 | | |
| Polarization Mode Dispersion | ps | <0.1 | | | | | | | | |
| Directivity | dB | >50 | | | | | | | | |
| Return Loss | dB | >45 | | | | | | | | |
| Maximum Power Handling | mW | 300 | | | | | | | | |
| Operating Temperature | °C | -5~+70 | | | | | | | | |
| Storage Temperature | °C | -40~+85 | | | | | | | | |
| Package Dimension | mm | L110xW95xH7.5 | | L110xW95xH7.5 | | L110xW95xH15 | | L110xW95xH30 | | |

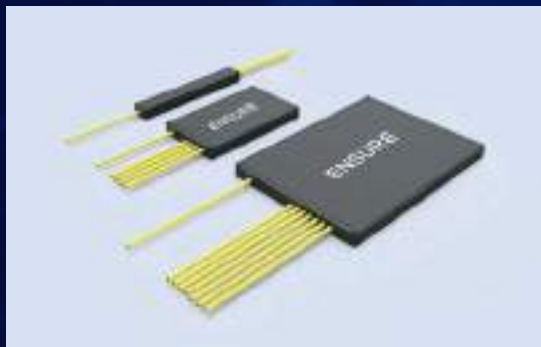
Ordering Information

| CWDM | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|------|--------------------------|--|--------------------------|---|--|--|--|
| | Channel Spacing | Channels | Configuration | 1 st Channel | Fiber Style | Fiber Length | In/Out Connector |
| | 1=100GHz | 04=4CH 08=8CH 16=16CH 32=32CH | M=Mux D=Demux | 21=CH21 ... 34=CH34 ... 50=CH50 | 1=Bare Fiber 2=900um Jacket 3=2mm Cable 4=3mm Cable | 1=1.0m 2=1.5m 3=2.0m X=Customized | 0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC |

Package Dimensions



200GHz DWDM Module



Features

- Low Insertion loss
- High Stability and Reliability
- High channel isolation
- Epoxy free on optical path

Applications

- Channel Add/Drop
- DWDM Network
- Fiber optical amplifier
- CATV fiber optic system
- Wavelength routing

Performance Specifications

| Parameter | Unit | 4 Channel | | 8 Channel | | 16 Channel | | |
|--|--------------|------------------|-------|---------------|-------|--------------|-------|-----|
| | | Mux | Demux | Mux | Demux | Mux | Demux | |
| Operating Wavelength | nm | ITU 200 GHz Grid | | | | | | |
| Center Wavelength Accuracy | nm | ±0.1 | | | | | | |
| Channel Spacing | GHz | 200 | | | | | | |
| Channel Passband (@-0.5dB bandwidth) | nm | > 0.5 | | | | | | |
| Pass Channel Insertion Loss | dB | ≤1.5 | | ≤3.0 | | ≤4.2 | | |
| Channel Ripple | dB | <0.3 | | | | | | |
| Isolation | Adjacent | dB | N/A | >30 | N/A | >30 | N/A | >30 |
| | Non-adjacent | dB | N/A | >40 | N/A | >40 | N/A | >40 |
| Insertion Loss Temperature Sensitivity | dB/°C | 0.005 | | | | | | |
| Wavelength Temperature Shifting | dB/nm | 0.002 | | | | | | |
| Polarization Dependent Loss | dB | <0.10 | | <0.10 | | <0.15 | | |
| Polarization Mode Dispersion | ps | <0.1 | | | | | | |
| Directivity | dB | >50 | | | | | | |
| Return Loss | dB | >45 | | | | | | |
| Maximum Power Handling | mW | 300 | | | | | | |
| Operating Temperature | °C | -5~+70 | | | | | | |
| Storage Temperature | °C | -40~+85 | | | | | | |
| Package Dimension | mm | L110xW95xH7.5 | | L110xW95xH7.5 | | L110xW95xH15 | | |

Ordering Information

| CWDM | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|------|--------------------------|-----------------------------|--------------------------|---|--|--|--|
| | Channel Spacing | Channels | Configuration | 1 st Channel | Fiber Style | Fiber Length | In/Out Connector |
| | 2=100GHz | 04=4CH 08=8CH 16=16CH | M=Mux D=Demux | 21=CH21 ... 34=CH34 ... 50=CH50 | 1=Bare Fiber 2=900um Jacket 3=2mm Cable 4=3mm Cable | 1=1.0m 2=1.5m 3=2.0m X=Customized | 0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC |

Package Dimensions



100GHz DWDM OADM Module



Features

- ITU Channel Spacing
- Low Insertion loss
- High Stability and Reliability
- High channel isolation
- Epoxy free on optical path

Applications

- Channel Add/Drop
- DWDM Network
- Fiber optical amplifier
- CATV fiber optic system
- Wavelength routing

Performance Specifications

| Parameter | Unit | 4 Channel | | 8 Channel | |
|--|----------------|---------------|------|--------------|------|
| | | Add | Drop | Add | Drop |
| Operating Wavelength | nm | ITU Grid | | | |
| Center Wavelength Accuracy | nm | ±0.05 | | | |
| Channel Spacing | GHz | 100 | | | |
| Channel Passband (@-0.5dB bandwidth) | nm | > 0.22 | | | |
| Pass Channel Insertion Loss | In-drop @ drop | 2.0 | | 3.2 | |
| | Add-out @ add | 2.0 | | 3.2 | |
| | In-out @ other | 2.0 | | 5.0 | |
| Channel Ripple | dB | <0.3 | | | |
| Isolation | Adjacent | N/A | >30 | N/A | >30 |
| | Non-adjacent | N/A | >40 | N/A | >40 |
| Insertion Loss Temperature Sensitivity | dB/°C | 0.005 | | | |
| Wavelength Temperature Shifting | dB/nm | 0.002 | | | |
| Polarization Dependent Loss | dB | <0.1 | | | |
| Polarization Mode Dispersion | ps | <0.1 | | | |
| Directivity | dB | >50 | | | |
| Return Loss | dB | >45 | | | |
| Maximum Power Handling | mW | 300 | | | |
| Operating Temperature | °C | -5 ~ +70 | | | |
| Storage Temperature | °C | -40 ~ +85 | | | |
| Package Dimension | mm | L110xW95xH7.5 | | L110xW95xH15 | |

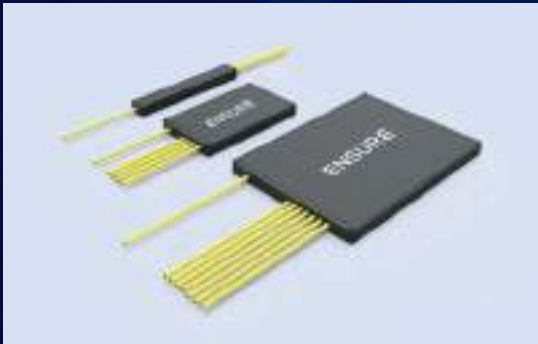
Ordering Information

| CWDM | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|------|--------------------------|--------------------------|--------------------------|---|--|--|--|
| | Channel Spacing | Channels | Configuration | 1 st Channel | Fiber Style | Fiber Length | In/Out Connector |
| | 1=100GHz | 04=4CH 08=8CH | 44=4x4 88=8x8 | 21=CH21 ... 34=CH34 ... 50=CH50 | 1=Bare Fiber 2=900um Jacket 3=2mm Cable 4=3mm Cable | 1=1.0m 2=1.5m 3=2.0m X=Customized | 0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC |

Package Dimensions



200GHz DWDM OADM Module



Features

- Low Insertion loss
- High Stability and Reliability
- High channel isolation
- Epoxy free on optical path

Applications

- Channel Add/Drop
- DWDM Network
- Fiber optical amplifier
- CATV fiber optic system
- Wavelength routing

Performance Specifications

| Parameter | Unit | 4 Channel | | 8 Channel | |
|--|----------------|---------------|------|--------------|------|
| | | Add | Drop | Add | Drop |
| Operating Wavelength | nm | ITU Grid | | | |
| Center Wavelength Accuracy | nm | ±0.1 | | | |
| Channel Spacing | GHz | 200 | | | |
| Channel Passband (@-0.5dB bandwidth) | nm | >0.5 | | | |
| Pass Channel Insertion Loss | In-drop @ drop | 1.8 | | 3.0 | |
| | Add-out @ add | 1.8 | | 3.0 | |
| | In-out @ other | 2.5 | | 5.0 | |
| Channel Ripple | dB | <0.3 | | | |
| Isolation | Adjacent | N/A | >30 | N/A | >30 |
| | Non-adjacent | N/A | >40 | N/A | >40 |
| Insertion Loss Temperature Sensitivity | dB/°C | 0.005 | | | |
| Wavelength Temperature Shifting | dB/nm | 0.002 | | | |
| Polarization Dependent Loss | dB | <0.1 | | | |
| Polarization Mode Dispersion | ps | <0.1 | | | |
| Directivity | dB | >50 | | | |
| Return Loss | dB | >45 | | | |
| Maximum Power Handling | mW | 300 | | | |
| Operating Temperature | °C | -5 ~ +70 | | | |
| Storage Temperature | °C | -40 ~ +85 | | | |
| Package Dimension | mm | L110xW95xH7.5 | | L110xW95xH15 | |

Ordering Information

| CWDM | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|------|--------------------------|--------------------------|--------------------------|---|--|---|--|
| | Channel Spacing | Channels | Configuration | 1 st Channel | Fiber Style | Fiber Length | In/Out Connector |
| | 1=100GHz | 04=4CH 08=8CH | 44=4x4 88=8x8 | 21=CH21 — 34=CH34 — 50=CH50 | 1=Bare Fiber 2=900um Jacket 3=2mm Cable 4=3mm Cable | 1=1.0m 2=1.5m 3=2.0m X= Customized | 0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC |

Package Dimensions



Single Mode Micro-Optical Wavelength Division Multiplexer



Features

- Wide Operating Wavelength Range
- Low Insertion Loss
- Ultra Flat Wide Passband
- High Channel Isolation
- High Stability and Reliability

Applications

- System Monitoring
- WDM System
- Transmitters and Fiber lasers
- Fiber Optical Amplifier and Instruments

Performance Specifications

| Parameter | Unit | Specification |
|--|-----------------|-------------------------------------|
| Pass Channel Wavelength range | nm | 1500–1600 or 1260–1360 |
| Reflect Channel Wavelength range | nm | 1260–1360 or 1500–1600 |
| Insertion Loss | Reflect Channel | ≤0.4 |
| | Pass Channel | ≤0.6 |
| Insertion Loss Variation | dB | <0.3 |
| Isolation | Reflect Channel | > 15 |
| | Pass Channel | > 40 |
| Insertion Loss Temperature Sensitivity | dB/°C | 0.005 |
| Polarization Dependent Loss | dB | <0.1 |
| Polarization Mode Dispersion | ps | <0.1 |
| Directivity | dB | > 50 |
| Return Loss | dB | > 50 |
| Maximum Power Handling | mW | 300 |
| Operating Temperature | °C | -5 – +70 |
| Storage Temperature | °C | -40 – +85 |
| Package Dimension | mm | Φ5.5xL34 (L38 for 900um loose tube) |

Ordering Information

| MWDM | □□ | □ | □ | □□ |
|------|------------------------------|--------------------------------|--|--|
| | Wavelength | Fiber Style | Fiber Length | In/Out Connector |
| | 35=1310 pass 53=1550 pass | 1=Bare Fiber 2=900um Jacket | 1=1.0m 2=1.5m 3=2.0m X=Customized | 0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC |

Package Dimensions



Multi Mode Micro-Optical Wavelength Division Multiplexer



Features

- Wide Operating Wavelength Range
- Low Insertion Loss
- Ultra Flat Wide Passband
- High Channel Isolation
- High Stability and Reliability

Applications

- Testing Instruments
- FTTH Tri-Play System

Performance Specifications

| Parameter | Unit | FWDM4/35 | FWDM5/34 | FWDM34/5 |
|--|-----------------|-------------------------------------|-----------|-------------------------|
| Pass Band Wavelength range | nm | 1480~1500 | 1540~1560 | 1260~1360 &1480~1500 |
| Reflection Band 1 Wavelength Range | nm | 1260~1360 | 1260~1360 | 1540~1560 |
| Reflection Band 1 Wavelength Range | nm | 1540~1560 | 1480~1500 | |
| Insertion Loss | Reflect Channel | dB | | |
| | Pass Channel | dB | | |
| Insertion Loss Variation | dB | <0.3 | | |
| Isolation | Reflect Channel | dB | | |
| | Pass Channel | dB | | |
| Insertion Loss Temperature Sensitivity | dB/°C | 0.005 | | |
| Polarization Dependent Loss | dB | <0.1 | | |
| Polarization Mode Dispersion | ps | <0.1 | | |
| Directivity | dB | >50 | | |
| Return Loss | dB | >50 | | |
| Maximum Power Handling | mW | 300 | | |
| Operating Temperature | °C | -5~+70 | | |
| Storage Temperature | °C | -40~+85 | | |
| Package Dimension | mm | ∅5.5xL34 (L38 for 900um loose tube) | | |

Ordering Information

| MWDM | □□ | □ | □ | □□ |
|------|---|--------------------------------|--|--|
| | Wavelength | Fiber Style | Fiber Length | In/Out Connector |
| | 4/35=1490P/1310&1550R 5/34=1550P/1310&1490R 34/5=1310&1490P/1550R | 1=Bare Fiber 2=900um Jacket | 1=1.0m 2=1.5m 3=2.0m X=Customized | 0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC |

Package Dimensions



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