

## ISOLATOR HYBRID: WDM + ISOLATOR

(1480/1550, 1480/1590nm)

### Specifications

Contact Ascentta with your custom specification needs.

| Parameter              |                                   |                       | Unit | Single Stage        | Dual Stage |     |
|------------------------|-----------------------------------|-----------------------|------|---------------------|------------|-----|
| Signal Channel         | Wavelength                        |                       | Nm   | 1550±20, or 1590±20 |            |     |
|                        | Isolation (All SOP)               | ( $\lambda_c$ , 23°C) | Typ. | dB                  | 40         | 50  |
|                        |                                   | (23°C)                | Min  | dB                  | 30         | 44  |
|                        | Channel Isolation (23°C, All SOP) |                       | Min  | dB                  | 30         |     |
|                        | Insertion Loss All (SOP)          | (23°C)                | Typ  | dB                  | 0.7        | 0.8 |
| (-5 to 70°C)           |                                   | Max                   | dB   | 0.9                 | 1.0        |     |
| Pump Channel           | Wavelength                        |                       | nm   | 1480±20             |            |     |
|                        | Channel Isolation (23°C, All SOP) |                       | Min  | dB                  | 14         |     |
|                        | Insertion Loss (All SOP)          | (23°C)                | Typ  | dB                  | 0.4        |     |
| (-5 to 70°C)           |                                   | Max                   | dB   | 0.6                 |            |     |
| PDL                    |                                   | Max                   | dB   | 0.1                 |            |     |
| PMD                    |                                   | Max                   | ps   | 0.1                 | 0.05       |     |
| Return Loss            |                                   | Min                   | dB   | 55                  |            |     |
| Directivity            |                                   | Min                   | dB   | 60                  |            |     |
| Optical Power Handling |                                   |                       | mW   | 300                 |            |     |
| Package Dimension      |                                   |                       | mm   | Φ5.5 x L35          |            |     |
| Operation Temperature  |                                   |                       | °C   | -5 to 70            |            |     |
| Storage Temperature    |                                   |                       | °C   | -40 to 85           |            |     |

\* The above specifications are for parts without connectors. Adding connectors can affect the IL, RL, & PDL.  
 \* SOP=State of Polarization

### Ordering Information

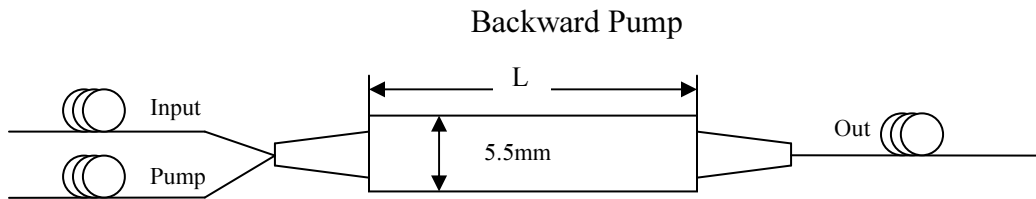
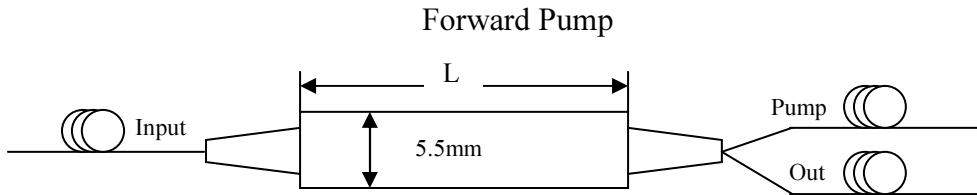
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| IWDM | Wavelengths  | Stages                         | Pump Type                         | Fiber Type  | Fiber Length   | Connector  |
|------|--|--------------------------------|-----------------------------------|---|--|--|
| IWDM | 95=980/1550nm<br>99=980/1590nm<br>45=1480/1550nm<br>49=1480/1590nm | S=Single Stage<br>D=Dual Stage | F=Forward Pump<br>B=Backward Pump | B=SMF-28, 250um<br>L= SMF-28, 900um<br><br>X=Others | 10=1.0m<br>15=1.5m<br>20=2.0m<br>30=3.0m<br><br>X=Others | NE=None<br>FA=FC/APC<br>FC=FC/PC<br>SA=SC/APC<br>SC=SC/PC<br>ST=ST/PC<br>LA=LC/APC<br>LC=LC/PC<br><br>X=Others |
|      | X=Others   |                                |                                   |   |  |  |

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**ISOLATOR HYBRID: WDM + ISOLATOR**  
(1480/1550, 1480/1590nm)

**Package Dimensions**



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## ISOLATOR HYBRID: WDM + ISOLATOR (980/1550, 980/1590nm)

### Specifications

Contact Ascentta with your custom specification needs.

| Parameter              |                                   | Unit                  | Single Stage                    | Dual Stage |     |
|------------------------|-----------------------------------|-----------------------|---------------------------------|------------|-----|
| Signal Channel         | Wavelength ( $\lambda_c$ )        | nm                    | 1550 $\pm$ 20, or 1590 $\pm$ 20 |            |     |
|                        | Isolation (All SOP)               | ( $\lambda_c$ , 23°C) | Typ. dB                         | 40         | 50  |
|                        |                                   | (23°C)                | Min dB                          | 30         | 44  |
|                        | Channel Isolation (23°C, All SOP) | Min dB                | 30                              |            |     |
|                        | Insertion Loss (All SOP)          | (23°C)                | Typ dB                          | 0.8        | 1.0 |
| (-5 to 70°C)           |                                   | Max dB                | 1.1                             | 1.3        |     |
| Pump Channel           | Wavelength                        | nm                    | 980 $\pm$ 15                    |            |     |
|                        | Channel Isolation (23°C, All SOP) | Min dB                | 14                              |            |     |
|                        | Insertion Loss (All SOP)          | (23°C)                | Typ dB                          | 0.4        |     |
|                        |                                   | (-5 to 70°C)          | Max dB                          | 0.6        |     |
| PDL                    | Max dB                            | 0.1                   |                                 |            |     |
| PMD                    | Max ps                            | 0.1                   | 0.05                            |            |     |
| Return Loss            | Min dB                            | 55                    |                                 |            |     |
| Directivity            | Min dB                            | 55                    |                                 |            |     |
| Optical Power Handling | mW                                | 300                   |                                 |            |     |
| Package Dimension      | mm                                | Φ5.5 x L35            |                                 |            |     |
| Operation Temperature  | °C                                | -5 to 70              |                                 |            |     |
| Storage Temperature    | °C                                | -40 to 85             |                                 |            |     |

\* The above specifications are for parts without connectors. Adding connectors can affect the IL, RL, & PDL.

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### Ordering Information

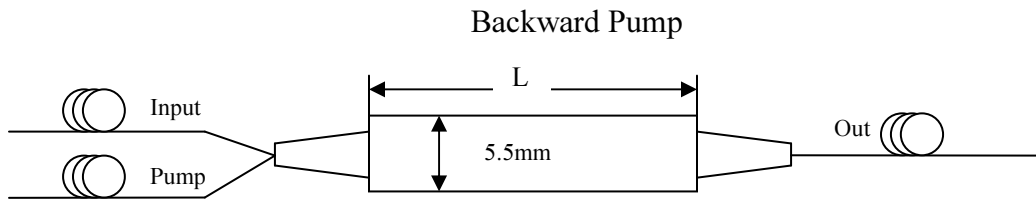
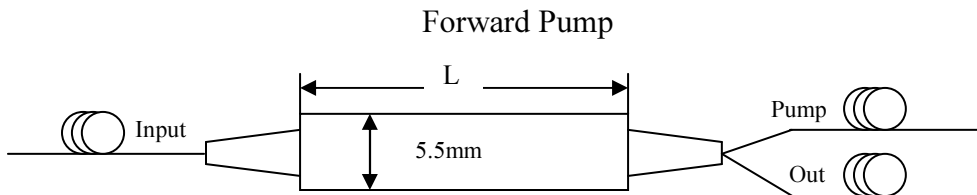
Contact Ascentta with your custom configuration needs.

| IWDM | Wavelengths  | Stages                         | Pump Type                         | Fiber Type                                      | Fiber Length   | Connector  |
|------|--|--------------------------------|-----------------------------------|---|--|--|
| IWDM | 95=980/1550nm<br>99=980/1590nm<br>45=1480/1550nm<br>49=1480/1590nm | S=Single Stage<br>D=Dual Stage | F=Forward Pump<br>B=Backward Pump | B=SMF-28, 250um<br>L= SMF-28, 900um<br>X=Others | 10=1.0m<br>15=1.5m<br>20=2.0m<br>30=3.0m<br>X=Others | NE=None<br>FA=FC/APC<br>FC=FC/PC<br>SA=SC/APC<br>SC=SC/PC<br>ST=ST/PC<br>LA=LC/APC<br>LC=LC/PC<br>X=Others |
|      | X=Others   |                                |                                   |   |  |  |

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**ISOLATOR HYBRID: WDM + ISOLATOR**  
(980/1550, 980/1590nm)

**Package Dimensions**



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## ISOLATOR HYBRID: TAP COUPLER + ISOLATOR (1310, 1550)

### Specifications

Contact Ascentta with your custom specification needs.

| Parameter                |                          |                       | Unit | Single Stage        | Dual Stage          |            |
|--------------------------|--------------------------|-----------------------|------|---------------------|---------------------|------------|
| Signal Channel           | Wavelength               |                       | nm   | 1310±15, or 1550±15 | 1310±30, or 1550±30 |            |
|                          | Isolation (All SOP)      | ( $\lambda_c$ , 23°C) | Typ. | dB                  | 40                  | 50         |
|                          |                          | (23°C)                | Min  | dB                  | 31                  | 45         |
| Insertion Loss (All SOP) | (23°C)                   | Typ.                  | dB   | 0.6                 | 0.8                 |            |
|                          | (-5 to 70°C)             | Max                   | dB   | 0.8                 | 1.0                 |            |
| Tap Port                 | Insertion Loss (All SOP) | 2%                    | dB   | 16.2 ~ 18.0         |                     |            |
|                          |                          | 5%                    | dB   | 12.1 ~ 14.0         |                     |            |
| Ripple                   |                          |                       | Max  | dB                  |                     | 0.5        |
| PDL                      |                          |                       | Max  | dB                  |                     | 0.15       |
| PMD                      |                          |                       | Max  | ps                  |                     | 0.1        |
| Return Loss              |                          |                       | Min  | dB                  |                     | 55         |
| Optical Power Handling   |                          |                       | mW   |                     |                     | 300        |
| Package Dimension        |                          |                       | mm   |                     |                     | Φ5.5 x L35 |
| Operation Temperature    |                          |                       | °C   |                     |                     | -5 to 70   |
| Storage Temperature      |                          |                       | °C   |                     |                     | -40 to 85  |

\* The above specifications are for parts without connectors. Adding connectors can affect the IL, RL, & PDL.

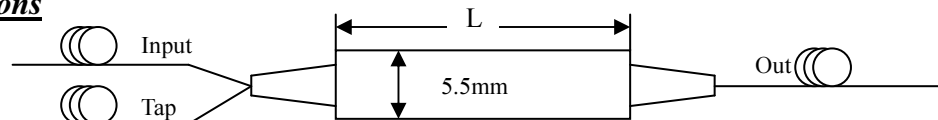
\* SOP=State Of Polarization

### Ordering Information

Contact Ascentta with your custom configuration needs.

| TISO | Wavelength | Stages         | Tap Ratio | Fiber Type       | Fiber Length | Connector  |         |
|------|------------|----------------|-----------|------------------|--------------|--|---------|
| TISO | 13=1310nm  | S=Single Stage | 01=1%     | B=SMF-28, 250um  | 10=1.0m      | NE=None<br>FA=FC/APC<br>FC=FC/PC<br>SA=SC/APC<br>SC=SC/PC<br>ST=ST/PC<br>LA=LC/APC<br>LC=LC/PC<br><br>X=Others |         |
|      | 15=1550nm  | D=Dual Stage   | 02=2%     | L= SMF-28, 900um | 15=1.5m      |  |         |
|      | X=Others   |                |           | 03=3%            | X=Others     |  | 20=2.0m |
|      |            |                |           | 05=5%            |              |  | 30=3.0m |
|      |            |                | X=Others  |                  | X=Others     |  |         |

### Package Dimensions



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## HYBRID ISOLATOR: TAP + WDM + ISOLATOR (1480/1550, 1480/1590nm)

### Specifications

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| Parameter                  |                                      |   |      | Unit    | Single Stage        | Dual Stage |     |
|----------------------------|--------------------------------------|---|------|---------|---------------------|------------|-----|
| Signal Channel             | Wavelength                           |   |      | nm      | 1550±20, or 1590±20 |            |     |
|                            | Isolation (All SOP)                  | $(\lambda_c, 23^\circ\text{C})$<br>$(23^\circ\text{C})$     | Typ. | dB      | 40                  | 50         |     |
|                            |                                      |   | Min  | dB      | 30                  | 44         |     |
|                            | Channel Isolation (23°C, All SOP)    |   |      | Min     | dB                  | 55         |     |
|                            | Insertion Loss (All SOP)             | $(23^\circ\text{C})$  | 1%   | Typ.    | dB                  | 0.7        | 0.8 |
|                            |                                      |   | 3%   | Typ.    | dB                  | 0.8        | 0.9 |
|                            |                                      |   | 5%   | Typ.    | dB                  | 0.9        | 1.0 |
|                            |                                      | $(-5 \text{ to } 70^\circ\text{C})$                         | 1%   | Max     | dB                  | 0.9        | 1.0 |
|                            |                                      |   | 3%   | Max     | dB                  | 1.0        | 1.1 |
|                            | 5%                                   | Max   | dB   | 1.1     | 1.2                 |            |     |
| Wavelength                 |                                      |   | nm   | 1480±20 |                     |            |     |
| Pump Channel               | Channel Isolation (23°C, All SOP)    |   |      | Min     | dB                  | 14         |     |
|                            | Insertion Loss (All SOP)             | $(23^\circ\text{C})$<br>$(-5 \text{ to } 70^\circ\text{C})$ | Typ. | dB      | 0.4                 |            |     |
| Max                        |                                      |   | dB   | 0.6     |                     |            |     |
| Tap Port<br>(Forward Pump) | Insertion Loss (-5 to 70°C, All SOP) | 1%  |      | dB      | 19~21               |            |     |
|                            |                                      | 3%  |      | dB      | 14~16               |            |     |
|                            |                                      | 5%  |      | dB      | 12~14               |            |     |
| Ripple                     |                                      |   | Max  | dB      | 0.2                 |            |     |
| PDL                        |                                      |   | Max  | dB      | 0.1                 |            |     |
| PMD                        |                                      |   | Max  | ps      | 0.1/0.25            | 0.1        |     |
| Return Loss                |                                      |   | Min  | dB      | 55                  |            |     |
| Directivity                |                                      |   | Min  | dB      | 60                  |            |     |
| Optical Power Handling     |                                      |   |      | mW      | 300                 |            |     |
| Package Dimension          |                                      |   |      | mm      | Φ5.5 x L35          |            |     |
| Operation Temperature      |                                      |   |      | °C      | -5 to 70            |            |     |
| Storage Temperature        |                                      |   |      | °C      | -40 to 85           |            |     |

\* The above specifications are for parts without connectors. Adding connectors can affect the IL, RL, & PDL.

\* Max PMD is 0.25 for non-compensated single-stage parts.

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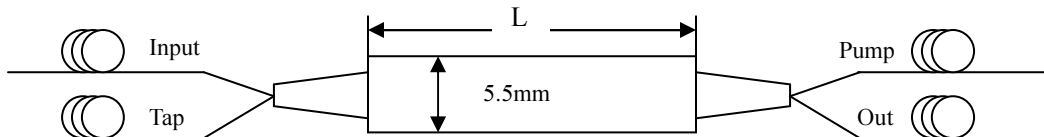
### Ordering Information

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| TIWDM | Wavelengths    | Stages         | Tap Ratio | Pump Type      | Fiber Type                          | Fiber Length | Connector  |
|-------|----------------|----------------|-----------|----------------|-------------------------------------|--------------|--|
| TIWDM | 95=980/1550nm  | S=Single stage | 01=1%     | F=Forward Pump | B=SMF-28, 250um<br>L= SMF-28, 900um | 10=1.0m      | NE=None<br>FA=FC/APC<br>FC=FC/PC<br>SA=SC/APC<br>SC=SC/PC<br>ST=ST/PC<br>LA=LC/APC<br>LC=LC/PC<br>X=Others |
|       | 99=980/1590nm  | D=Dual stage   | 02=2%     |                |                                     | 15=1.5m      |  |
|       | 45=1480/1550nm |                | 03=3%     |                |                                     | 20=2.0m      |  |
|       | 49=1480/1590nm |                | 05=5%     |                |                                     | 30=3.0m      |  |
|       | X=Others       |                | X=Others  |                | X=Others                            | X=Others     |  |

### Package Dimensions

Forward Pump



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## HYBRID ISOLATOR: TAP + WDM + ISOLATOR (980/1550, 980/1590nm)

### Specifications

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| Parameter                  |                                      |   |      | Unit   | Single Stage        | Dual Stage |     |
|----------------------------|--------------------------------------|---|------|--------|---------------------|------------|-----|
| Signal Channel             | Wavelength                           |   |      | nm     | 1550±20, or 1590±20 |            |     |
|                            | Isolation (All SOP)                  | $(\lambda_c, 23^\circ\text{C})$<br>$(23^\circ\text{C})$     | Typ. | dB     | 40                  | 50         |     |
|                            |                                      |   | Min  | dB     | 30                  | 44         |     |
|                            | Channel Isolation (23°C, All SOP)    |   |      | Min    | dB                  | 55         |     |
|                            | Insertion Loss (All SOP)             | (23°C)  | 1%   | Typ.   | dB                  | 0.8        | 0.9 |
|                            |                                      |   | 3%   | Typ.   | dB                  | 0.9        | 1.0 |
|                            |                                      |   | 5%   | Typ.   | dB                  | 1.0        | 1.1 |
|                            |                                      | (-5 to 70°C)  | 1%   | Max    | dB                  | 1.1        | 1.2 |
|                            |                                      |   | 3%   | Max    | dB                  | 1.2        | 1.3 |
|                            |                                      |   | 5%   | Max    | dB                  | 1.3        | 1.4 |
| Wavelength                 |                                      |   | nm   | 980±15 |                     |            |     |
| Pump Channel               | Channel Isolation (23°C, All SOP)    |   |      | Min    | dB                  | 14         |     |
|                            | Insertion Loss (All SOP)             | $(23^\circ\text{C})$<br>$(-5 \text{ to } 70^\circ\text{C})$ | Typ. | dB     | 0.4                 |            |     |
|                            |                                      |   | Max  | dB     | 0.6                 |            |     |
| Tap port<br>(Forward Pump) | Insertion Loss (-5 to 70°C, All SOP) |   |      | 1%     | dB                  | 19~21      |     |
|                            |                                      |   |      | 3%     | dB                  | 14~16      |     |
|                            |                                      |   |      | 5%     | dB                  | 12~14      |     |
| Ripple                     |                                      |   | Max  | dB     | 0.2                 |            |     |
| PDL                        |                                      |   | Max  | dB     | 0.1                 |            |     |
| PMD                        |                                      |   | Max  | ps     | 0.1                 | 0.05       |     |
| Return Loss                |                                      |   | Min  | dB     | 55                  |            |     |
| Directivity                |                                      |   | Min  | dB     | 60                  |            |     |
| Optical Power Handling     |                                      |   |      | mw     | 300                 |            |     |
| Package Dimension          |                                      |   |      | mm     | Φ5.5 x L35          |            |     |
| Operation Temperature      |                                      |   |      | °C     | -5 to 70            |            |     |
| Storage Temperature        |                                      |   |      | °C     | -40 to 85           |            |     |

\* The above specifications are for parts without connectors. Adding connectors can affect the IL, RL, & PDL.

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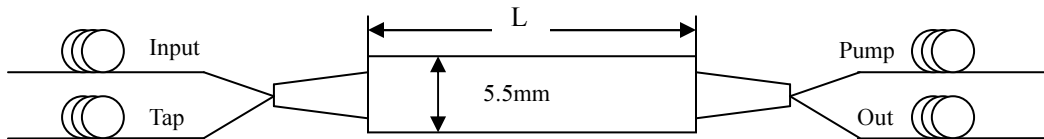
### Ordering Information

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| TIWDM | Wavelengths                    | Stage                          | Tap Ratio                        | Pump Type         | Fiber Type                                | Fiber Length                             | Connector  |
|-------|--------------------------------|--------------------------------|----------------------------------|-------------------|---|--|--|
| TIWDM | 95=980/1550nm<br>99=980/1590nm | S=Single stage<br>D=Dual stage | 01=1%<br>02=2%<br>03=3%<br>05=5% | F=Forward<br>Pump | B=SMF-28,<br>250um<br>L= SMF-28,<br>900um | 10=1.0m<br>15=1.5m<br>20=2.0m<br>30=3.0m | NE=None<br>FA=FC/APC<br>FC=FC/PC<br>SA=SC/APC<br>SC=SC/PC<br>ST=ST/PC<br>LA=LC/APC<br>LC=LC/PC |
|       | X=Others                       | X=Others                       | X=Others                         |                   | X=Others                                  | X=Others                                 |  |

### Package Dimensions

Forward Pump



Contact Ascentta for all your custom design needs.