

980/1030nm Polarization Maintaining WDM/Tap Coupler/Isolator Hybrid Combination

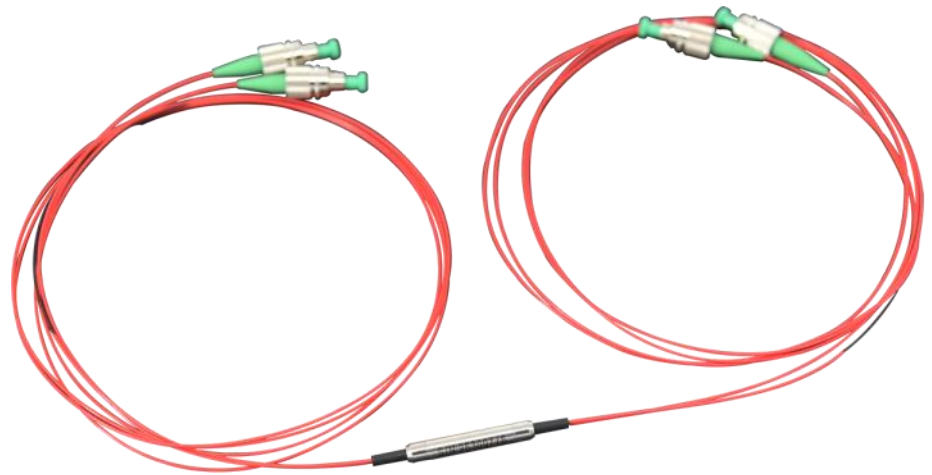
Key Features

- Compact Size
- Low insertion loss
- High channel Isolation
- High Extinction Ratio
- High stability and reliability

DK Photonics' WDM/Tap Coupler/Isolator Hybrid Combination is a combination of a wavelength division multiplexer, tap coupler and an isolator in a compact package. All input and output fibers are polarization maintaining. This product has an extremely low insertion loss, a very stable tap-coupling ratio, high isolation, and high return loss. This product offers integrated solution to amplifier application by combining more functions into a very compact package.

Applications

- Fiber laser
- Fiber amplifier
- Fiber Sensor
- Communications
- Laboratory R&D



For more Info

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Package Dimension



* For forward pump, Tap is both axis working. For backward pump, Tap is fast axis blocked, slow axis working. Both types pump is both axis working.

*Due to ongoing design improvements, the package size is subject to change. Please contact DK Photonics for confirmation if you have special requirements.



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Performance Specifications

| Parameter | Unit | Values | |
|---|----------------|------------------------------|----|
| Stage of Isolator | - | Single Stage | |
| Signal Central Wavelength (λ_c) | nm | 1030, 1040 | |
| Signal Wavelength Range | nm | ± 5 | |
| Max. Signal Excess Loss, λ_c , @ 23°C | nm | 3.8 | |
| Min. Isolation at 23°C (Type B, Isolator) | dB | 22 | |
| Min. Isolation at 23°C (Type F, Isolator) | dB | 28 | |
| Tap Ratio | % | 1~50 | |
| Tap Channel Typ. Loss | dB | 20.0~23.3(1% tap) | |
| Min. Isolation (WDM) | Signal Channel | dB | 25 |
| | Pump Channel | dB | 12 |
| Pump Wavelength Range | nm | 960~990 | |
| Max. Insertion Loss (Pump to Common) | dB | 0.7 | |
| Min. Extinction Ratio @ 23°C | dB | Type B: 20, Type F: 22 | |
| Min. Return Loss | dB | 50 | |
| Max. Power Handling (CW) | mW | 50 | |
| Max. Peak Power for Pulse | kW | 1, 5, 10 | |
| Max. Tensile Load | N | ≤ 5 | |
| Fiber Type | - | PM980 or Specified | |
| Operating Temperature | °C | -5 to +70 | |
| Storage Temperature | °C | -40 to +85 | |
| Package Dimensions | mm | $\varnothing 5.5 \times L38$ | |

- Above specifications are for device without connector.
- For devices with connectors, IL will be 0.3dB higher, RL will be 5dB lower and ER will be 2dB lower. The default connector key is aligned to slow axis. Power transmits through the connector less than 2W.
- Type B: Both axis working, Type F: Fast axis blocked, the default is Type B if without request.
- Pump Power can handle up to 10W if require, but for signal power, with this 1030nm Isolator, Due to high IL, it is recommended to use average power of <50mW for 1030nm. If you need higher handle power, please look for our TGG based High power isolator.
- If there is pulse application, please be sure to inform us of pulse energy and peak power.

Order information P/N: PMWTIH-①-②-③-④-⑤-⑥-⑦-⑧-⑨

When you inquire, please provide the correct P/N number according to our ordering information, and attach the appropriate description would be better. If need any connector, we do not recommend choosing a 250 μ m bare fiber pigtail.

| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ |
|-------------------------|-------------------|-----------------------------|-------------------------------------|-------------------------------------|--|---|---|---|
| Wavelength | Stage of Isolator | Optical Power | Tap Ratio | Pump Configuration | Axis alignment (Only for signal) | Pigtail Diameter | Fiber Length | Connector |
| 39:1030 signal/980 pump | S: Single Stage | L: Refer to the above table | 01:1% Tap 02:2% Tap 05:5% Tap | F: Forward Pump B: Backward Pump | F: Fast axis blocked, Slow axis working B: Both of axis working | 25:250 μ m bare fiber 90:900 μ m Loose Fiber XX: Others | 05:0.5m 10:1.0m 15:1.5m XX: Others | 00: None FP: FC/PC FA: FC/APC XX: Others |

Part Number Example: PMWTIH-39-S-L-01-B-F-90-10-FA

Description: Polarization Maintaining WDM/Tap Coupler/Isolator Hybrid Combination ,1030nm signal/980nm pump, single stage isolator, 1% tap, backward pump, fast axis blocked, slow axis working, with 0.9mm OD loose tube, 1.0m fiber length, and FC/APC connectors at all ports.

Ordering Information for Custom Parts

If you need to customize other specifications, please provide detailed description for your requirement.