



Key Features

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

Applications

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

1030nm High Power Tap & TGG Isolator Hybrid Combination(1µm fiber laser, HPPMTIH, 20W)

DK Photonics' Tap Coupler/Isolator Hybrid Combination is a combination of a 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 Fiber laser & Fiber amplifier application by combining more functions into a very compact package.



Package Dimension

* If Tap port is on the input side (Backward Tap), Tap is both axis working. If Tap port is on the Output side (Forward Tap), it is fast axis blocked, slow axis working. The default tap is on the input side.

*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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For more Info

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Performance Specifications

| Parameter | Unit | Values | | |
|--------------------------------------|------|--|--|--|
| Signal Central Wavelength (λ c) | nm | 1030, 1040 | | |
| Signal Wavelength Range | nm | λ±10 | | |
| Max. Signal Excess Loss, λ c, @ 23°C | nm | 1.0 | | |
| Min. Signal Isolation, λ c, @ 23°C | nm | 26 | | |
| Signal Tap Ratio | % | 1~50 | | |
| Tap Channel Typ. Loss | dB | 1% (19.0~21.8), 2% (16.2 ~ 19.0), 5% (12.2 ~ 15.0) | | |
| Min. Extinction Ratio @ 23°C | dB | Type B: 20, Type F: 22 | | |
| Min. Return Loss | dB | 50 | | |
| Max. Power Handling (CW) | W | 2, 5,10, 20 | | |
| Max. Peak Power for Pulse | kW | 1, 5,10 | | |
| Max. Tensile Load | N | 5 | | |
| Fiber Type | - | PM980-XP, PM1060L, or other | | |
| Operating Temperature | °C | -5 to +70 | | |
| Storage Temperature | °C | -40 to +85 | | |

^{1.} Above specifications are for device without connector.

Order information P/N:HPPMTIH-①-②-③-④-⑤-⑥-⑦

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 250µm bare fiber pigtail.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------------------|---|-------------------------------------|---|---|---|--|
| Wavelength | Optical Power | Tap Ratio | Axis alignment (Main port) | Pigtail Diameter | Fiber Length | Connector |
| 30:1030nm 40:1040nm | L:<0.5W 1:1W 3:3W 5:5W 10:10W | 01:1% Tap 02:2% Tap 05:5% Tap | F:Fast axis blocked, Slow axis working B:Both of axis working | 25:250μm bare fiber 90:900μm Loose Fiber XX: Others | 08:0.8m 10:1.0m 15:1.5m XX: Others | 00:None FP: FC/PC FA: FC/APC XX: Others |

Part Number Example: HPPMTIH-30-20-01-F-25-10-00

Description: High power Polarization Maintaining Tap Coupler/Isolator Hybrid Combination, 20W, 1030nm signal, 1% tap, Fast axis blocked, slow axis working, PM980-XP fiber, bare fiber, 1.0m fiber length, and no connectors at all ports.

Ordering Information for Custom Parts

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

^{2.} 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.

^{3.}Type B: Both axis working, Type F: Fast axis blocked, the default is Type B if without request.

^{4.} If there is pulse application, please be sure to inform us of pulse energy and peak power.