

## 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


## For more Info

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## 2050/1570nm SM WDM/Tap Coupler Hybrid Combination

DK Photonics' WDM/Tap Coupler Hybrid Combination is a combination of a wavelength division multiplexer and tap coupler 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.


## Package Dimension:



PS: For forward pump, signal wavelength is polarization independent. For backward pump, signal wavelength is Polarization dependent.
*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 |
| :---: | :---: | :---: |
| Signal Central Wavelength ( $\lambda$ c) | nm | 1940, 2000,2050 |
| Signal Wavelength Range | nm | $\pm 40$ |
| Max. Signal Excess Loss, $\lambda \mathrm{c}$, @ $23^{\circ} \mathrm{C}$ | nm | 1.8 |
| Tap Ratio | \% | 1~50 |
| Tap Channel Typ. Loss | dB | 1\%(19.5~22), $5 \%$ (13.5 ~ 16.0) |
| Signal Channel | dB | 25 |
| Min. Isolation (WDM) <br> Pump Channel | dB | 12 |
| Pump Wavelength Range | nm | 1520~1590 |
| Max. Insertion Loss (Pump to Common) | dB | 1.0 |
| Max. PDL | dB | 0.15 |
| Min. Return Loss | dB | 50 |
| Max. Power Handling (CW) | W | 0.5, 2, 3, 10 |
| Max. Peak Power for ns Pulse if any | kW | 1, 5,10 |
| Max. Tensile Load | N | 5 |
| Fiber Type Pump port | - | SMF-28e fiber or specified |
| Common Signal and tap port | - | SM1950 fiber or specified |
| Operating Temperature | ${ }^{\circ} \mathrm{C}$ | -5 to +70 |
| Storage Temperature | ${ }^{\circ} \mathrm{C}$ | -40 to +85 |
| Package Dimensions | mm | $\varnothing 5.5 \times \mathrm{L} 35(<5 \mathrm{~W}), 60 \times 12 \times 8$ ( $>5 \mathrm{~W}$ ) |

1. Above specifications are for device without connector.
2. For devices with connectors, IL will be 0.3 dB higher, RL will be 5 dB lower. Power transmits through the connector less than 2 W .
3. If there is pulse application, please be sure to inform us of pulse energy and peak power.

## Order information P/N: WTH-(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 $250 \mu \mathrm{~m}$ bare fiber pigtail.

| (1) (2) | (3) | (4) | (6) | (7) |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Wavelength | Optical Power | Tap Ratio | Pump Configuration | Pigtail Diameter | Fiber Length | Connector |
| $5057: 2050$ sig- | L: $<0.5 \mathrm{~W}$ | $01: 1 \%$ Tap | F: Forward Pump | $25: 250 \mu \mathrm{~m}$ bare fiber | $05: 0.5 \mathrm{~m}$ | 00: None |
| nal/1570 pump | $1: 1 \mathrm{~W}$ | $02: 2 \%$ Tap | B: Backward Pump | $90: 900 \mu \mathrm{~m}$ Loose Fiber | $10: 1.0 \mathrm{~m}$ | FP: FC/PC |
| XX: other | $3: 3 \mathrm{~W}$ | $05: 5 \%$ Tap |  | XX: Others | $15: 1.5 \mathrm{~m}$ | FA: FC/APC |
|  | $5: 5 \mathrm{~W}$ |  |  |  | XX: Others | SA: SC/APC |
|  | $10: 10 \mathrm{~W}$ |  |  |  |  | XX: Others |

Part Number Example: WTH-5057 -L-01-B-90-10-FA
Description: SM WDM/Tap Coupler Hybrid Combination, 2050nm signal/1570nm pump, 1\% tap, forward pump, SMF-28e fiber at 1570 nm port, other with SM1950 fiber, with 0.9 mm OD loose tube, 1.0 m 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.

