

FIBER OPTIC COUPLERS & SPLITTERS

CP-HD CP-HDS 1x2 Multimode High Directivity Fiber Optic Couplers

SEDI-ATI's Multimode High Directivity Fiber Optic Couplers are manufactured using a proprietary process based on a wavefront division technology. This unique manufacturing method intrinsically ensures our couplers are highly mode insensitive and achromatic.

Our couplers show a very high stability in coupling ratio over a very broad wavelength range and over modal fluctuation.

The CP-HD couplers are ideal for optical metrology and sensing applications where the dynamic range of the sensor is a key parameter. They can be made with any Graded Index fiber types such as GI50/125 μm with **directivity as high as > 55 dB** or GI62.5/125 μm .

For **high-power UV applications**, we have developed the HDS series which can handle as much as **2 W @ 420 nm**.

Bespoke coupling ratios and fiber lengths are available upon request.

Please contact us to discuss your specific requirements.



As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.
DTSCPHD October 2020

KEY FEATURES

- GI50/125 or GI62.5/125 fibers
- UV to IR wavelength range
- High directivity
- Mode insensitivity
- Achromaticity
- Stable coupling ratio
- High reliability
- Low insertion loss
- Custom configurations available

APPLICATIONS

- Optical metrology
- Optical sensing
- UV applications down to 400 nm

QUALITY

- ISO 9001:2015

CP-HD CP-HDS

1x2 Multimode High Directivity Fiber Optic Couplers

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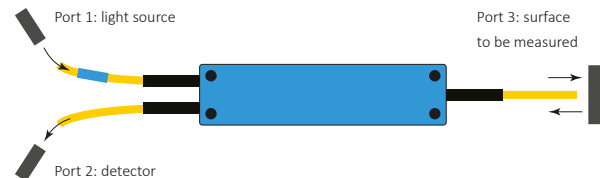
STANDARD PRODUCT SPECIFICATIONS

| Parameters | CP-HD | CP-HDS |
|-----------------------------|---|---------------------------|
| Port configuration | 1x2 | 1x2 |
| Fiber length | 0.5 m on each port | 0.5 m on each port |
| Coupling ratio | 50/50 | 50/50 |
| Fiber type | GI 50/125 μm | GI 62.5/125 μm |
| Directivity | > 55 dB | > 45 dB |
| Uniformity | 0,7 dB | 1,0 dB |
| Insertion loss* | $\leq 3,7$ dB | $\leq 4,2$ dB |
| Handling power | 100 mW @ 850 nm | 2 W @ 420 nm |
| Operating wavelength range | 532-1625 nm | 400-1625 nm |
| Operating temperature range | -20°C to +70°C | -20°C to +70°C |
| Storage temperature range | -40°C to +85°C | -40°C to +85°C |
| Connector type | see our list of connectors DOCLC | see DOCLC |
| Housing | see our list of packages and cables DOCLP | see DOCLP |

The specifications are given for non-connectorized products, measured with a 850 nm steady state LED. Please note that the values can vary substantially according to the customer's measurement bench set up (light source, detector...).

ROUND TRIP CONFIGURATION

*In a round trip configuration, the insertion loss from Port 1 to Port 2 is < 6.5 dB with a total reflection at Port 3. It can be lower than 6 dB if not used at fully filled stage. The input port is identified by a marking.



ORDERING INFORMATION

| | | |
|----------------------------|--|---|
| Order code | <i>fiber type</i> GI50 : GI 50/125/250 GI62 : GI 62.5/125/250 | <i>connector type</i> connector code according to our connector's list DOCLC |
| CP - - - 50 - 12 - - - 0 - | | |
| <i>series</i> HD HDS | <i>package style</i> package code according to our package's list DOCLP | |

Example : CP-HD-GI50-50-12-44C-0-FCA
(High Directivity fiber optic coupler with 50 cm long GI 50/125 fibers on each port, a 50% coupling ratio, in the 90x16x8 mm housing with 2.3 mm inox jacket and FC/APC connectors)

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