

Fused Coupler, Single Window, 980 nm FFCR Series



Key Features

- Ultra low-pump loss
- Minimum wastage of pump power
- High EDFA output power
- Wide range of regular parts readily available
- Proven reliability

Applications

- EDFA pump redundancy and sharing
- EDFA pump monitoring
- Fiber lasers

Compliance

- Telcordia GR-1221

The 980 nm fused coupler enables the accurate splitting and monitoring of pump power in erbium-doped fiber amplifiers. In addition, JDSU manufacturing technology provides uniquely low excess loss, along with low polarization and temperature dependence for all ports.

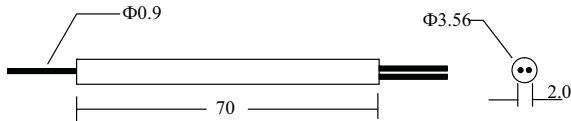
These high-performance standard parts are available with a variety of tap ratios and housing and connector options, and can therefore be specified for a wide range of applications, enabling rapid design cycles and new project builds. Standard variants for 960 nm and 1060 nm may also be selected.

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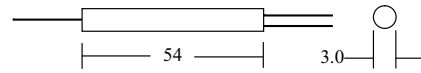
Dimensions Diagrams

Specifications in mm unless otherwise noted

1x2 Models, L-Package



1x2 Models, S-Package



Insertion Loss

| Coupling Ratio | Grade | Signal Path | | Tap Path | |
|----------------|-------|--|---------------|--|---------------|
| | | Insertion Loss ^{1,2} (Min./Max.) (dB) | TDL Max. (dB) | Insertion Loss ^{1,2} (Min./Max.) (dB) | TDL Max. (dB) |
| 1% | P | NA/0.15 | 0.02 | 18.4/21.5 | 0.20 |
| 1% | A | NA/0.20 | 0.02 | 15.0/22.0 | 0.20 |
| 5% | P | NA/0.40 | 0.08 | 11.3/14.8 | 0.15 |
| 5% | A | NA/0.50 | 0.08 | 11.0/15.2 | 0.15 |
| 10% | P | NA/0.65 | 0.08 | 9.00/11.5 | 0.13 |
| 10% | A | NA/0.75 | 0.08 | 8.50/11.8 | 0.13 |
| 20% | P | NA/1.40 | 0.10 | 5.60/8.40 | 0.10 |
| 20% | A | NA/1.50 | 0.10 | 5.40/8.60 | 0.10 |
| 30% | P | NA/2.00 | 0.10 | 4.10/6.40 | 0.10 |
| 30% | A | NA/2.20 | 0.10 | 4.00/6.50 | 0.10 |
| 40% | P | NA/2.60 | 0.10 | 3.20/4.70 | 0.10 |
| 40% | A | NA/2.80 | 0.10 | 3.10/4.80 | 0.10 |
| 50% | P | 2.60/3.40 | 0.10 | 2.60/3.40 | 0.10 |
| 50% | A | 2.50/3.60 | 0.10 | 2.50/3.60 | 0.10 |

1. Insertion loss over operating wavelength range (not including PDL or connector losses).

2. In 2x2 couplers with a coupling ratio of 20 percent or lower, insertion loss is not specified for launch through second input port (P4).

Specifications

| Parameter | 960 nm | 980 nm | 1060 nm |
|---|---------------|--------------------|-----------------|
| Operating wavelength range ¹ | 955 to 965 nm | 975 to 985 nm | 1055 to 1065 nm |
| Return loss/directivity | Minimum | 55 dB | |
| Pigtail tensile load | Maximum | 5 N | |
| Optical Power handling | Maximum | 4 W | |
| Operating temperature range | | -5 to 75°C | |
| Storage temperature range | | -40 to 85°C | |
| Environmental qualification | | Telcordia GR-1221 | |
| Package dimensions | | | |
| S package (D x L) | | 3.0 x 54 mm | |
| L package (D x L) | | 3.6 x 70 mm | |
| H package (L x W x H) | | 85 x 17.8 x 7.5 mm | |

1. For wavelength within ± 5 nm of the operating wavelength range, the worst-case changes in insertion loss and WDL are shown as follows:
 Tap ratio = 1%, maximum insertion loss and WDL increase = 0.65 dB.
 Tap ratio = 5%, maximum insertion loss and WDL increase = 0.50 dB.
 Tap ratio = 10%, maximum insertion loss and WDL increase = 0.40 dB.
 Tap ratio = 50%, maximum insertion loss and WDL increase = 0.20 dB.

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide, or via e-mail at customer.service@jdsu.com.

Sample: FFCR51H1PN510

| FFCR | | | | | | N | | | | | |
|-------------|----------------------------|-------------|-----------------------|-------------|----------------------|-------------|----------------------|-------------|-----------------------|-------------|-------------------|
| Code | Passband Wavelength | Code | Coupling Ratio | Code | Configuration | Code | Fiber Type | Code | Pigtail Length | Code | Connectors |
| 5 | 980 nm | 1 | 1% | 0 | 1x1 (attenuator) | 2 | Lucent BFO5635-02 | 0 | 0.5 m | 0 | None |
| 8 | 1060 nm | 5 | 5% | 1 | 1x2 | 5 | Corning Hi 1060 Flex | 1 | 1 m | 1 | FC/PC |
| F | 960 nm | A | 10% | 2 | 2x2 | | | 2 | 2 m | 2 | FC/SPC |
| | | C | 20% | | | | | | | 3 | FC/APC |
| | | E | 30% | Code | Grade | | | | | 4 | SC/SPC |
| | | H | 40% | A | Grade A | | | | | 5 | SC/APC |
| | | K | 50% | P | Grade P | | | | | 6 | BICONIC |
| | | | | | | | | | | 7 | D4 |
| | | Code | Housing | | | | | | | 8 | ST |
| | | H | Ø 3.0 mm cable | | | | | | | 9 | FC/UPC |
| | | L | Ø 900 µm fiber | | | | | | | A | SC/UPC |
| | | S | Ø 250 µm fiber | | | | | | | B | LC |
| | | | | | | | | | | C | MU |