

Double-Clad Fiber Coupler

1550nm

(efficient collecting back reflection lights)

Product Description

Agiltron's double-clad 2x2 fiber coupler combines a double-clad fiber (single mode core surrounded by a multimode inner cladding) with a large core multimode fiber. Light in the single mode core of the double-clad fiber (DCF) is guided through the coupler with little loss (≤ 0.5 dB). Light in the multimode inner cladding of the DCF is transferred to the output multimode fiber with $\geq 60\%$ transmission.



Performance Specifications

| Double Cladding Fiber Coupler | Min | Typical | Max | Unit |
|--|-----|-----------------------------|-----|--------------------|
| Operation Wavelength | 680 | 780 | 980 | nm |
| Single Mode Core Insertion Loss ¹ | | 0.3 | 0.6 | dB |
| Multimode Cladding Transfer ² | | 60 | 70 | % |
| Optical Power Handling | | | 100 | mW |
| Core Diameter (NA=0.12) | | 9 | | μm |
| Inner Cladding Diameter (NA=0.19) | | 125 | | μm |
| Signal Fiber Diameter | | 245 | | μm |
| Collection Fiber Diameter (NA=0.22) | | 200 | | μm |
| Operating Temperature | -40 | | 70 | $^{\circ}\text{C}$ |
| Storage Temperature | -40 | | 85 | $^{\circ}\text{C}$ |
| Package Dimension | | $\varnothing 3.2 \times 85$ | | mm |

Note:

1. Exclude connectors and fiber loss, the loss may degrade over time due to shortwave radiation
2. Port 2 to 3. Exclude connectors and the water absorption region around 1383 nm

Features

- Single Mode Core Guide
- Multimode Reflection Guide
- Low Loss Transmission
- High Efficient Collection
- Versatile

Applications

- LiDAR
- OCT
- Fluorescence Imagine
- Confocal Microscopy
- Endoscopy

Ordering Information

| DCFC | <input type="checkbox"/> | 2 | 9 1 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|------------------------------------|---|-----------------------------|--|-------------------------------|---|---|--------------------------|
| Center Wavelength | Collect Fiber | Double Cladding | Pigtail Style | Fiber Length | Connector Input | Connector Output | Connector Signal | |
| 1550 =2 1030=1 1310=3 780=7 530=5 Special=0 | 200 μ m NA=0.22 Special =00 | Core=9 μ m, NA=0.12 Cladding=125 μ m, NA=0.19 Special =00 | 900um Jacket=2 Special=0 | 0.25M=1 0.5M=2 1.0M=3 Special=0 | None=1 FC/PC=2 FC/APC=3 | None=1 FC/PC=2 FC/APC=3 SMA =4 | None=1 FC/PC=2 FC/APC=3 SMA =4 | |