

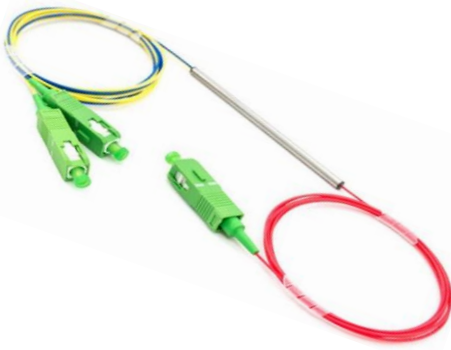
# Double-Clad Fiber Coupler 780nm

(efficient collecting back reflection lights)



DATASHEET

BUY NOW



## Features

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

## Applications

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

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 ( $\leq 0.5$  dB). Light in the multimode inner cladding of the DCF is transferred to the output multimode fiber with  $\geq 60\%$  transmission.

## Specifications

| Parameter                                      | Min | Typical | Max | Unit               |
|--|-----|---------|-----|--------------------|
| Operation Wavelength                           | 680 | 780     | 980 | nm                 |
| Single Mode Core Insertion Loss <sup>[1]</sup> |     | 0.3     | 0.6 | dB                 |
| Multimode Cladding Transfer <sup>[2]</sup>     |     | 60      | 70  | %                  |
| Optical Power Handling                         |     |         | 100 | mW                 |
| Core Diameter (NA=0.12)                        |     | 9       |     | $\mu\text{m}$      |
| Inner Cladding Diameter (NA=0.19)              |     | 125     |     | $\mu\text{m}$      |
| Signal Fiber Diameter                          |     | 245     |     | $\mu\text{m}$      |
| Collection Fiber Diameter (NA=0.22)            |     | 200     |     | $\mu\text{m}$      |
| Operating Temperature                          | -40 |         | 70  | $^{\circ}\text{C}$ |
| Storage Temperature                            | -40 |         | 85  | $^{\circ}\text{C}$ |

### Notes:

- [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

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Rev 12/21/23

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### Ordering Information

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