## Dual Windaw Single Made Wideband FIber CaUPLER (1310NM AND 1510 NM BAND)

## Product Description

The Oplink fused dual window wideband fiber $1 \times 2(2 \times 2)$ couplers provide accurate optical signal coupling and splitting over wide bandwidth with high performance and high reliability. These couplers have excellent uniformity, low excess loss and very low polarization sensitivity and are available with various tap ratios, fiber types, and connector options. All devices are shown to be able to handle high optical power up to 4 W and are tested according to industry standard procedures. Reliability is guaranteed through stringent tests to fully meet Telcordia GR-I22I requirements.


Performance Specification

| DWFC Series | Specifications | Unit |
| :---: | :---: | :---: |
| Wavelength Range | $1310 \pm 40$ and $1550 \pm 40$ | nm |
| Fiber Type | Corning SMF-28 |  |
| Insertion Loss ${ }^{[1]}$ | See Insertion Loss Table | dB |
| Return Loss ${ }^{[1]}$ ( Min ) | 55 | dB |
| Directivity (Min) | 55 | dB |
| TDL ${ }^{[2]}$ (Max) | Signal Path: < 0.10 dB , Tap Path: $<0.15 \mathrm{~dB}$ | dB |
| Maximum Power Handling | 4 | W |
| Operating Temperature Range ${ }^{[3]}$ | -40 to +75 | ${ }^{\circ} \mathrm{C}$ |
| Storage Temperature Range | -40 to +85 | ${ }^{\circ} \mathrm{C}$ |
| Package Dimensions ${ }^{[4]}$ | P1: $250 \mu \mathrm{~m}$ bare fiber <br> (Ø) $3.0 \times(\mathrm{L}) 47.0$ <br> P2: $900 \mu \mathrm{~m}$ loose tube <br> (Ø) $3.0 \times$ (L) 60.0 <br> P3: 3 mm cable <br> (L) $96.0 \times(\mathrm{W}) 12.0 \times(\mathrm{H}) 6.4$ | mm |
| Qualifications | Telcordia GR-1221 |  |

## Note:

[1] Values are referenced without connector loss.
[2] Temperature Sensitivity Coefficient $\sim 0.002 \mathrm{~dB} /{ }^{\circ} \mathrm{C}$ at the range of -5 to $75^{\circ} \mathrm{C}$.
[3] Operating temperature range changes to -5 to $75^{\circ} \mathrm{C}$ in P2, P3 package and all package with connectors
[4] The mechanical tolerance should be +/- 0.2 mm on all package dimensions unless otherwise custom specified.

## Features

$\diamond$ Wavelength Independent
$\diamond$ Low Insertion Loss and PDL
$\diamond$ High Power Handling
$\diamond$ Guranteed Reliability

## Applications

$\diamond$ Signal monitoring in EDFA
$\diamond$ Network Monitoring
$\diamond$ CATV
$\diamond$ Local Area Networks
$\Leftrightarrow$ Testing Instruments
$\diamond$ Laboratory R\&D

| Insertion Loss (IL) : |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Coupling Ratio | P Grade |  |  |  | A Grade |  |  |  |  |
|  | $\mathrm{IL}^{1}(\mathrm{~dB})$ |  | PDL ${ }^{2}$ (dB) | Uniformity | $\mathrm{IL}^{1}(\mathrm{~dB})$ |  | PDL ${ }^{2}$ (dB) |  | Uniformity |
|  | Signal | Tap | Signal Tap |  | Signal | Tap | Signal | Tap |  |
| 99/1 | $\leq 0.25$ | 18.0-22.5 | $\leq 0.05 \leq 0.20$ |  | $\leq 0.25$ | 16.0-23.5 | $\leq 0.05$ | $\leq 0.20$ |  |
| 98/2 | $\leq 0.30$ | 16.0-19.0 | $\leq 0.05 \leq 0.20$ |  | $\leq 0.30$ | 14.5-19.0 | $\leq 0.05$ | $\leq 0.20$ |  |
| 97/3 | $\leq 0.35$ | 13.5-17.0 | $\leq 0.05 \leq 0.20$ |  | $\leq 0.35$ | 13.0-18.2 | $\leq 0.05$ | $\leq 0.20$ |  |
| 95/5 | $\leq 0.45$ | 11.8-15.0 | $\leq 0.10 \leq 0.20$ |  | $\leq 0.45$ | 12.0-16.5 | $\leq 0.10$ | $\leq 0.20$ |  |
| 90/10 | $\leq 0.65$ | 9.60-11.30 | $\leq 0.10 \leq 0.15$ |  | $\leq 0.65$ | 9.20-12.2 | $\leq 0.10$ | $\leq 0.15$ |  |
| 85/15 | $\leq 0.98$ | 7.80-9.40 | $\leq 0.10 \leq 0.15$ |  | $\leq 0.98$ | 7.80-9.80 | $\leq 0.10$ | $\leq 0.15$ |  |
| 80/20 | $\leq 1.25$ | 6.50-7.85 | $\leq 0.15 \leq 0.15$ |  | $\leq 1.25$ | 6.40-8.00 | $\leq 0.15$ | $\leq 0.15$ |  |
| 75/25 | $\leq 1.60$ | 5.50-6.80 | $\leq 0.15 \leq 0.15$ |  | $\leq 1.80$ | 5.30-7.00 | $\leq 0.15$ | $\leq 0.15$ |  |
| 70/30 | $\leq 2.00$ | 4.70-6.00 | $\leq 0.15 \leq 0.15$ |  | $\leq 1.95$ | 4.50-6.50 | $\leq 0.15$ | $\leq 0.15$ |  |
| 65/35 | $\leq 2.10$ | 4.30-5.20 | $\leq 0.15 \leq 0.15$ |  | $\leq 2.30$ | 4.30-5.50 | $\leq 0.15$ | $\leq 0.15$ |  |
| 60/40 | $\leq 2.70$ | 3.50-4.70 | $\leq 0.15 \leq 0.15$ |  | $\leq 2.80$ | 3.20-5.00 | $\leq 0.15$ | $\leq 0.15$ |  |
| 55/45 | $\leq 3.00$ | 3.00-4.20 | $\leq 0.15 \leq 0.15$ |  | $\leq 3.20$ | 2.80-4.50 | $\leq 0.15$ | $\leq 0.15$ |  |
| 50/50 | 2.70-3.60 |  | $\leq 0.15$ | $\leq 0.70$ | 2.40-3.90 |  | $\leq 0.20$ |  | $\leq 1.2$ |

1. Insertion loss over operating wavelength range at $\sim 23^{\circ} \mathrm{C}$ (excluding PDL and TDL).
2. Insertion loss change over the all input polarization states.

## Ordering Information

Oplink can provide a remarkable range of customized optical solutions. For detail, please contact Oplink's OEM design team or account manager for your requirements and ordering information (510) 933-7200.


Wavelength 1310/1550 nm


Type
$1 \times 2=1$ $2 \times 2=2$


Tap Ratio
50/50 = 50
$45 / 55=45$
$40 / 60=40$
$35 / 65=35$
$30 / 70=30$
$25 / 75=25$
$20 / 80=20$
$15 / 85=15$
$10 / 90=10$
$05 / 95=05$
$03 / 97=03$
$02 / 98=02$
$01 / 99=01$


Fiber Length*
Premium Grade $=P$

A Grade $=\mathrm{A}$
0.5 Meter $=\mathrm{H}$
1.0 Meter $=1$
1.5 Meters $=5$
2.0 Meters $=2$

## Package \& Fiber Type

P1 $+250 \mu \mathrm{~m}$ bare fiber $=11$
$\mathrm{P} 2+900 \mu \mathrm{~m}$ loose tube $=22$
P3 +3 mm cable $=33$

Connector Type


None = 1
$\mathrm{FC} / \mathrm{PC}=2$
FC/SPC = 3
$\mathrm{FC} / \mathrm{APC}=4$
SC/PC = 5
SC/SPC = 6
SC/APC $=7$
ST $=8$
LC/UPC = 9
$\mathrm{MU}=\mathrm{A}$
LC/APC $=B$

Notes:

* The tolerance of fiber length is +/-0.1m. 1 meter is standard. The lead time for special fiber length will be longer.


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