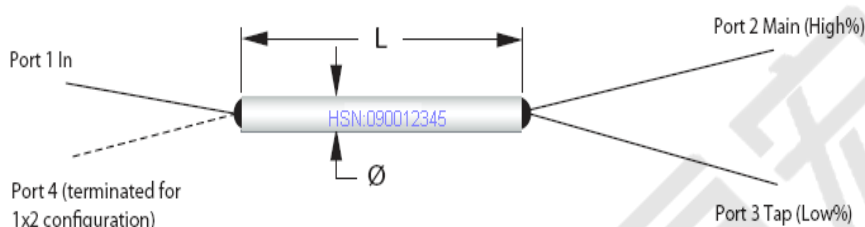


## THREE WINDOW SINGLE MODE WIDEBAND FIBER COUPLER (1310NM AND 1490NM AND 1510NM BAND)

### Product Description

The HiPhotonics fused dual window wideband fiber 1X2(2x2) 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 **1W** and are tested according to industry standard procedures. Reliability is guaranteed through stringent tests to fully meet

Telcordia GR-1221 requirements



### Performance Specification

| STWFC Series                | Specifications                        | Unit |
|-----------------------------|---------------------------------------|------|
| Wavelength Range            | 1310±40 and 1490±30 and 1550±40       | nm   |
| Fiber Type                  | Corning SMF-28 Ultra                  |      |
| Insertion Loss              | See Insertion Loss Table              | dB   |
| Directivity (Min)           | 55                                    | dB   |
| Return Loss (Min)           | 55                                    | dB   |
| TDL (Max)                   | Signal Path:<0.10dB, Tap path:<0.15dB | dB   |
| Maximum Power Handling      | 1                                     | W    |
| Operating Temperature Range | -40 ~ +75                             | °C   |
| Storage Temperature Range   | -40 ~+ 85                             | °C   |
| Package Dimensions          | P1:250um bare fiber    Ø 3.0X 45      | mm   |
|                             | P2:900nm loose tube    Ø 3.0X 50      |      |
|                             | P3:3mm cable            L90xW20xH10   |      |
| Qualifications              | Telcordia GR-1221                     |      |

### Features:

- Wavelength Independent
- Low Insertion Loss and PDL
- High Power Handling
- Guaranteed Reliability

### Applications:

- Signal monitoring in EDFA
- Network Monitoring
- CATV
- Local Area Networks
- Testing Instruments
- Laboratory R&D

Note:

- (1) Values are referenced without connector loss.
- (2) Temperature Sensitivity Coefficient~ 0.002°C at the range of -5to75°C
- (3) Operating temperature range changes to -5 to 75°C in P2,P3 package and all package with connectors
- (4) The mechanical tolerance should be ±0.2mm on all package dimensions unless otherwise custom specified

| Coupling Ratio | P Grade   |          |          |       |            | A Grade   |          |          |       |            |
|----------------|-----------|----------|----------|-------|------------|-----------|----------|----------|-------|------------|
|                | IL (dB)   |          | PDL (dB) |       | Uniformity | IL (dB)   |          | PDL (dB) |       | Uniformity |
|                | Signal    | Tap      | Signal   | Tap   |            | Signal    | Tap      | Signal   | Tap   |            |
| 99/1           | ≤0.25     | 18~22.5  | ≤0.05    | ≤0.20 |            | ≤0.25     | 16~23.5  | ≤0.05    | ≤0.20 |            |
| 98/2           | ≤0.30     | 16~19    | ≤0.05    | ≤0.20 |            | ≤0.30     | 14.5~19  | ≤0.05    | ≤0.20 |            |
| 97/3           | ≤0.35     | 13.5~17  | ≤0.05    | ≤0.20 |            | ≤0.35     | 13~18.2  | ≤0.05    | ≤0.20 |            |
| 95/5           | ≤0.45     | 11.8~15  | ≤0.10    | ≤0.20 |            | ≤0.45     | 12~16.5  | ≤0.10    | ≤0.20 |            |
| 90/10          | ≤0.65     | 9.6~11.3 | ≤0.10    | ≤0.15 |            | ≤0.65     | 9.2~12.2 | ≤0.10    | ≤0.15 |            |
| 85/15          | ≤0.98     | 7.8~9.4  | ≤0.10    | ≤0.15 |            | ≤0.98     | 7.8~9.8  | ≤0.10    | ≤0.15 |            |
| 80/20          | ≤1.25     | 6.5~7.85 | ≤0.15    | ≤0.15 |            | ≤1.25     | 6.4~8.0  | ≤0.15    | ≤0.15 |            |
| 75/25          | ≤1.60     | 5.5~6.8  | ≤0.15    | ≤0.15 |            | ≤1.80     | 5.3~7.0  | ≤0.15    | ≤0.15 |            |
| 70/30          | ≤2.00     | 4.7~6.0  | ≤0.15    | ≤0.15 |            | ≤1.95     | 4.7~6.0  | ≤0.15    | ≤0.15 |            |
| 65/35          | ≤2.10     | 4.3~5.2  | ≤0.15    | ≤0.15 |            | ≤2.30     | 4.3~5.5  | ≤0.15    | ≤0.15 |            |
| 60/40          | ≤2.70     | 3.5~4.7  | ≤0.15    | ≤0.15 |            | ≤2.80     | 3.2~5.0  | ≤0.15    | ≤0.15 |            |
| 55/45          | ≤3.00     | 3.0~4.2  | ≤0.15    | ≤0.15 |            | ≤3.20     | 2.8~4.5  | ≤0.15    | ≤0.15 |            |
| 50/50          | 2.70~3.60 |          | ≤0.15    |       | ≤0.70      | 2.40~3.90 |          | ≤0.20    |       | ≤1.2       |

1. Insertion loss over operating wavelength range at ~23°C (excluding PDL and TDL).
2. Insertion loss change over the all input polarization states.

#### Order Information STWFC-①①-②-③-④-⑤-⑥-⑦

|                        |        |                 |           |                       |
|------------------------|--------|-----------------|-----------|-----------------------|
| ①①Operating Wavelength | ②Port  | ③Coupling Ratio | ④Grade    | ⑤Packaging Dimension  |
| 345=1310/1490/1550nm   | 12=1X2 | 01=01/99        | P=P Grade | A=P1+250um bare fiber |
| S=Special              | 22=2X2 | 05=05/99        | A=A Grade | B=P2+900um loose tube |
|                        |        | 10=10/90        |           | C=P3+3mm cable        |
|                        |        | 20=20/80        |           |                       |
|                        |        | 30=30/70        |           |                       |
|                        |        | 40=40/60        |           |                       |
|                        |        | 50=50/50        |           |                       |
|                        |        | S=Special       |           |                       |

#### ⑥Fiber Length

A=0.5 Meter  
B=1 Meter  
C=1.5 Meter  
D=2.0 Meter

S=Special

#### ⑦Connector Type

0=None  
1=FC/UPC  
2=FC/APC  
3=SC/UPC  
4=SC/APC  
5=LC  
S=Special