

## Wavelength Flattened Coupler (WFC)

Single window tap coupler

with various coupling ratios. Wavelength bandwidth +/- 40nm

## Fused Biconical Tapered (FBT) Coupler

FBT couplers are fabricated by placing two standard single-mode fibers side by side, twisting them together to bring them into strong contact and thermally fusing them while elongating the fused region. After the tapering process, the couplers will be potted and mounted in small and rugged packages.



### Features

- Low excess loss
- Low insertion loss
- Excellent uniformity
- Environmentally stable and reliable
- Small size for miniaturized systems
- Can be manufactured according to customer specifications
- Compliant to Telcordia GR-1221

### Applications

- Passive Optical Network (PON)
- Optical fiber amplifier
- Cable TV
- Optical sensing equipment
- Measuring instruments and equipment

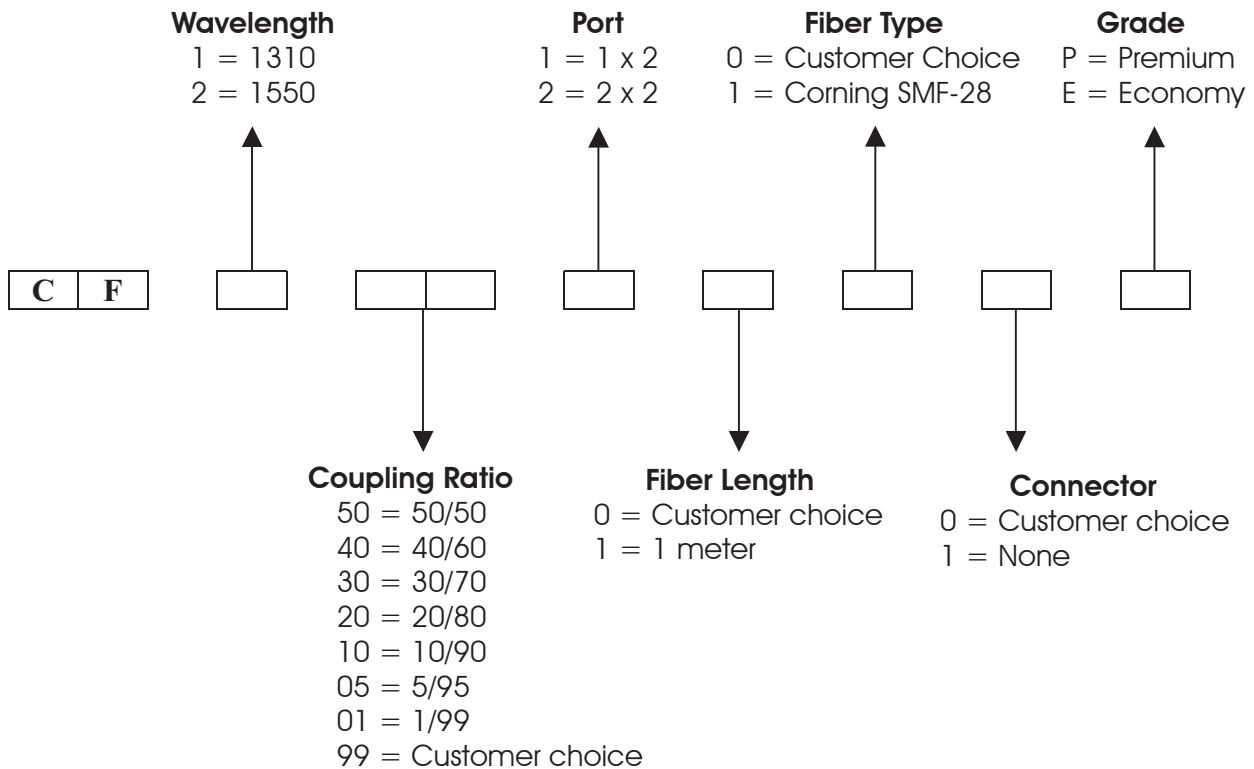
## Specifications

| 50/50 Coupling Ratio          |      | Unit    | Premium         | Economy |
|-------------------------------|------|---------|-----------------|---------|
| Center Wavelength             |      | nm      | 1310 or 1550    |         |
| Wavelength Bandwidth          |      | nm      | ± 40            |         |
| Insertion Loss*               | Max. | dB      | 3.4             | 3.6     |
| Excess Loss*                  | Max. | dB      | 0.07            | 0.1     |
| Uniformity                    | Max. | dB      | 0.6             | 1.0     |
| Polarization Dependent Loss   | Max. | dB      | 0.1             | 0.15    |
| Directivity                   | Min. | dB      | 50              |         |
| Temperature Coefficient       | Max. | dB / °C | 0.002           |         |
| Operating Temperature Range** |      | °C      | -40 to +85      |         |
| Storage Temperature Range**   |      | °C      | -50 to +85      |         |
| Package Dimensions            |      | mm      | 3.0(OD) x 52(L) |         |

\* without Connector

\*\* -20 to -70°C for 2.4 mm cable

## WFC Ordering Information



**Coupling Ratio / Insertion Loss Conversion Table**

| Splitting Ratio | Insertion Loss (dB) |            |
|-----------------|---------------------|------------|
|                 | Premium             | Economy    |
| 40 / 60         | 4.4 / 2.5           | 4.8 / 2.8  |
| 30 / 70         | 5.6 / 1.8           | 6.1 / 2.0  |
| 20 / 80         | 7.4 / 1.1           | 8.0 / 1.3  |
| 10 / 90         | 10.8 / 0.6          | 12.0 / 0.8 |
| 5 / 95          | 14.6 / 0.4          | 18.4 / 0.5 |
| 1 / 99          | 21.5 / 0.2          | 22.0 / 0.3 |

### Note:

1. ☐ Warranty from manufacturing defect for a one year period.
2. ☐ Available for OEM orders.
3. ☐ Photronix Technologies reserves the right to make changes to the product described herein without notice.