Amphenol
FIBER OPTIC PRODUCTS

# 945 SERIES COUPLERS
## Dual Window Wideband Couplers


An optical coupler is a passive device that precisely distributes light signals between two fibers over a broadband operating window. Each device offers a bi-directional performance allowing for either power splitting or signal combining.

Amphenol's couplers are made using a precision manufacturing process capable of producing large volumes and tight unit to unit uniformity. The optical coupler has proven to be a beneficial component of any optical network design.

Amphenol's low loss, cost effective devices provide a means for network design flexibility, system monitoring or increasing capacity. Amphenol couplers are offered in a variety of packaging options and can be terminated with any industry standard connector.

### Performance Specifications:

| ITEM | | Dual Window Wideband Couplers (50:50) |
|---|---|---|
| Operating Wavelength, nm | | 1310 ± 40 and 1550 ± 40 |
| Grade | | Super (S) |
| Typical Excess Loss, dB | | 0.08 |
| Uniformity, dB (50:50) | | 0.8 |
| Thermal Stability, dB (peak-peak) | | ≤0.2 |
| Polarization Stability, dB | | ≤0.15 |
| Port Configuration | | 1 x 2 or 2 x 2 |
| Coupling Ratio | | 1:99 to 50:50, (50:50 standard) |
| Insertion Loss, dB | | Please refer to the coupling ratio vs. insertion loss chart |
| Directivity, dB | | ≥50 (1 x 2), ≥60 (2 x 2) |
| Reflectance, dB | | ≥50 |
| Operating Temperature, °C | | -40 ~ +85 (*) |
| Storage Temperature, °C | | -55 ~ +85 |
| Package Options (for different pigtailing) | 1. coated fiber (250μm) | T5, MA, MB, M3 |
| | 2. loose tube (900μm) | TA, MA, MB, M3 |
| | 3. PVC cable (3.0mm) | A1, MA, MB, M3 |

## Benefits

- Low insertion loss
- High uniformity
- Customized packaging available
- Environmentally stable
- Polarization insensitive
- Ruggedized
- Various Coupling ratios available

## Applications

- Telecommunications
- Local area network
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments
- CATV

## Coupling Ratio VS. Insertion Loss:

| Coupling Ratio (%) | Insertion Loss (dB) |
|---|---|
| | Super Grade (S) |
| 50 / 50 | 3.6 |
| 45 / 55 | 4.15 / 3.15 |
| 40 / 60 | 4.7 / 2.7 |
| 35 / 65 | 5.35 / 2.3 |
| 30 / 70 | 6.0 / 1.9 |
| 25 / 75 | 6.95 / 1.7 |
| 20 / 80 | 7.9 / 1.4 |
| 15 / 85 | 9.6 / 1.0 |
| 10 / 90 | 11.0 / 0.7 |
| 5 / 95 | 14.6 / 0.5 |
| 1 / 99 | 21.6 / 0.3 |

* Without Connector Loss

## Spectral Performance: