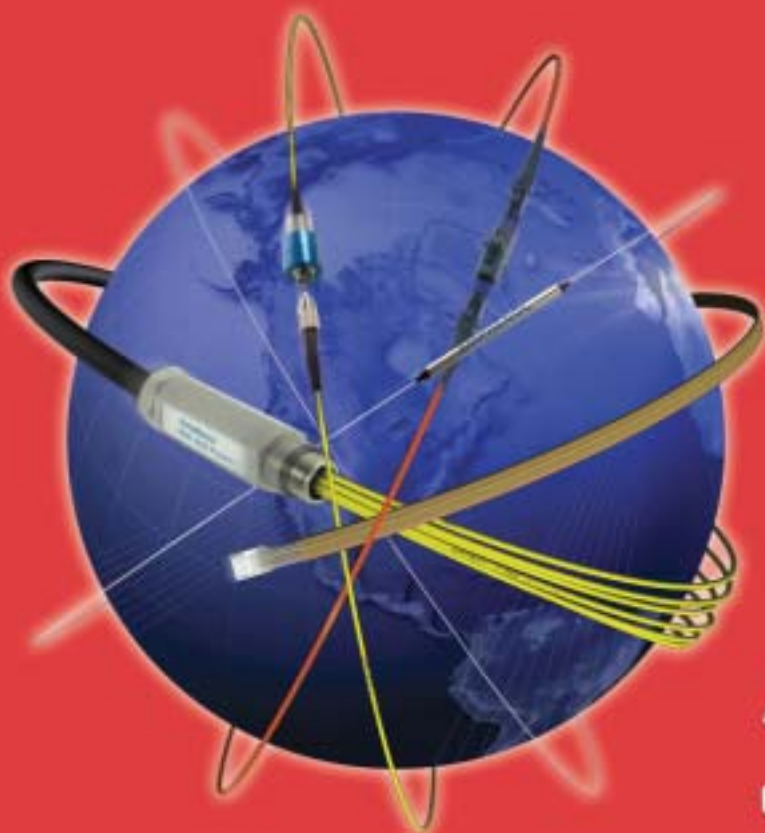


# Couplers/Splitters

## FIBER OPTIC CATALOG



**Amphenol®**  
FIBER OPTIC PRODUCTS  
60 Years of Interconnect Knowledge

# Couplers/Splitters

Amphenol Fiber Optic Products offers over 15 years experience in the manufacturing of fiber optic couplers through the fused biconic taper technology (FBT) and is licensed by British Telecom for this fabrication technique. An optical coupler is a passive device that precisely distributes light signals between two fibers over a broad-band operating window. Each device offers a bi-directional performance allowing for either power splitting or signal combining. Amphenol's couplers are manufactured using a precision computer-controlled 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. The excellent uniformity from unit to unit allows for ease in network design, saving our customers time and money.

In addition to Amphenol's standard product offering, we employ a full team of optical engineers to assist in the development of custom product configurations. We pride ourselves in offering innovative custom solutions to meet your application requirements with everything from integrated modular designs to working with specialty fibers. We challenge our customers to put the ownership on us to provide high-quality, integrated products that save you time, money and power.

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Single Mode Coupler Family

## Applications

- CATV networks
- Telecommunications networks
- Local/Wide Area Networks (LAN/WAN)
- Optical amplifiers & transceivers
- Test & Measurement instrumentation
- Signal monitoring devices

## Features

- Designed to meet Telcordia GR-1209 and GR-1221
- Proven FBT fabrication techniques
- Broadband performance
- Environmentally stable
- Low Insertion Loss (IL)
- Polarization insensitive
- Miniature or ruggedized package
- Standard connectors and cable leads available

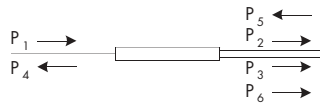
# Amphenol

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Customer Service 800-944-6446

## Fabrication Technology - Fused Biconic Taper (FBT)

Amphenol's coupler product line is designed around the fused biconic taper process (FBT). In the FBT process two fibers are heated, fused together and then elongated while maintaining precise temperature control. As the fibers are drawn, the individual fiber diameters and the distance between the two cores are reduced such that the evanescent field of one fiber, carrying an optical signal, extends outward until it starts to overlap the core of the second fiber. At this point, energy will start to transfer to the second fiber. Precise monitoring of the two output signals allows the process to be controlled and stopped when the desired results have been achieved.

The FBT process provides a high-quality, low-loss coupler with the specific characteristics desired. Keeping the light inside the fiber at all times provides environmentally reliable and stable performance while keeping the overall optical loss, back reflection and directivity extremely low. The FBT process has proven to yield couplers with the lowest excess-loss available in the market today.



$$\text{Insertion Loss (IL)}_2 = 10 \cdot \log_{10} \left[ \frac{P_2}{P_1} \right]$$

$$\text{Coupling Ratio (\%)} = \left[ \frac{P_2}{P_2 + P_3} \right] \cdot 100\%$$

$$\text{Insertion Loss (IL)}_3 = 10 \cdot \log_{10} \left[ \frac{P_3}{P_1} \right]$$

$$\text{Directivity} = 10 \cdot \log_{10} \left[ \frac{P_6}{P_5} \right]$$

$$\text{Excess Loss} = 10 \cdot \log_{10} \left[ \frac{P_2 + P_3}{P_1} \right]$$

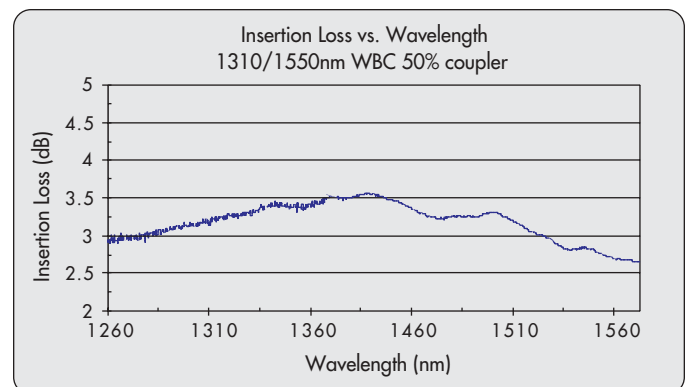
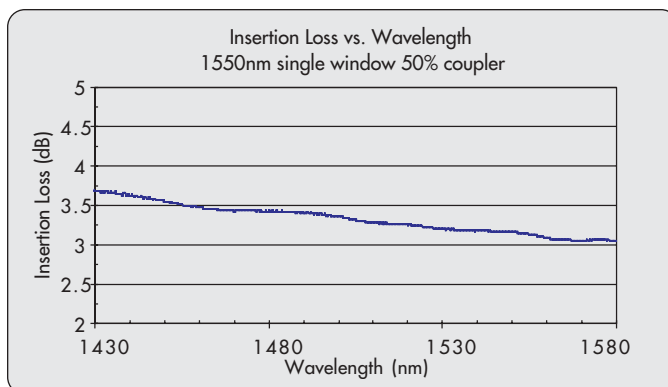
$$\text{Return Loss} = 10 \cdot \log_{10} \left[ \frac{P_4}{P_1} \right]$$

| Abr. | Key Concept              | Units | Description & Definition                  |
|------|--------------------------|-------|-------------------------------------------|
| CR   | Coupling Ratio           | %     | ratio of one output to sum of all outputs |
| EL   | Excess Loss              | dB    | overall loss from inputs to outputs       |
| IL   | Insertion Loss           | dB    | full loss at one output [IL = CR + EL]    |
| D    | Directivity              | dB    | ratio of power coupled to other ports     |
| R    | Reflectance, Return Loss | dB    | ratio of reflected power back to any port |
| U    | Uniformity (50/50 only)  | dB    | variation in IL values [IL max - IL min]  |

## Definitions

**Single Window Broadband Coupler (SWBBC):** Single mode optical coupler where a single device provides a flat wavelength response at 1310nm +/-40nm **or** 1550nm +/-40nm.

**Wideband Coupler (WBC):** Single mode optical coupler where a single device provides a flat wavelength response at 1310nm +/-40nm **and** 1550nm +/-40nm.



# 945 Single Mode Series Couplers (Splitters)

Amphenol's 1x2 and 2x2 couplers are available as either SWBBC or WBC devices with coupling ratios from 1/99 to 50/50. Amphenol couplers are available in a variety of packaging options and can be terminated with any industry standard connector. Each device is 100% optically tested for optical performance and provided with certified test data.



Single Mode Coupler Family

## Common Specifications

|                        |                                           |
|------------------------|-------------------------------------------|
| Coupling ratio:        | 1/99 to 50/50                             |
| Directivity:           | ≥ 50 dB (1X2)<br>≥ 60 dB (2X2)            |
| Reflectance:           | ≤ -55 dB                                  |
| PDL:                   | ≤ 0.1 dB (≤ 0.3 dB for tap legs of ≤ 15%) |
| Operating Bandpass:    | +/- 40 nm                                 |
| Operating Temperature: | -40° to +85° C                            |
| Storage Temperature:   | -55° to +85° C                            |
| Standard Lead Length:  | 1 meter                                   |

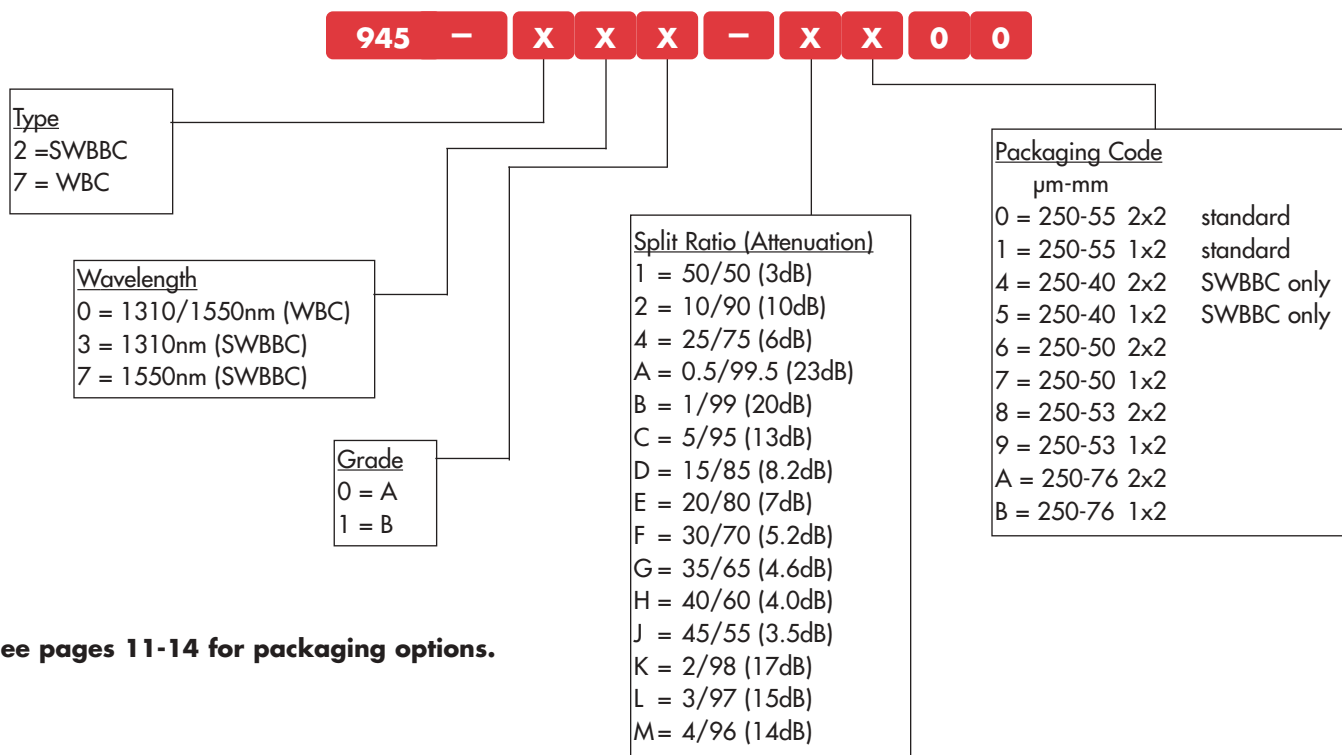
|            |       | SWBBC: 1310 or 1550nm ± 40nm |            |              |            | WBC: 1310/1550nm ± 40nm |            |              |            |
|------------|-------|------------------------------|------------|--------------|------------|-------------------------|------------|--------------|------------|
|            |       | Grade A                      |            | Grade B      |            | Grade A                 |            | Grade B      |            |
|            |       | EL: 0.1dB                    |            | EL: 0.2dB    |            | EL: 0.08dB              |            | EL: 0.2dB    |            |
|            |       | IL*                          | Uniformity | IL*          | Uniformity | IL*                     | Uniformity | IL*          | Uniformity |
| 1x2 or 2x2 | 50/50 | 3.40                         | 0.6        | 3.60         | 1.0        | 3.50                    | 0.8        | 3.80         | 1.2        |
| 1x2 or 2x2 | 45/55 | 3.90 / 2.90                  | n/a        | 4.20 / 2.10  | n/a        | 4.15 / 3.15             | n/a        | 4.15 / 3.35  | n/a        |
| 1x2 or 2x2 | 40/60 | 4.40 / 2.50                  | n/a        | 4.70 / 2.70  | n/a        | 4.70 / 2.70             | n/a        | 5.00 / 2.90  | n/a        |
| 1x2 or 2x2 | 35/65 | 5.10 / 2.20                  | n/a        | 5.30 / 2.30  | n/a        | 5.35 / 2.30             | n/a        | 5.65 / 2.50  | n/a        |
| 1x2 or 2x2 | 30/70 | 5.80 / 1.80                  | n/a        | 6.00 / 1.90  | n/a        | 6.00 / 1.90             | n/a        | 6.40 / 2.10  | n/a        |
| 1x2 or 2x2 | 25/75 | 6.70 / 1.60                  | n/a        | 6.90 / 1.70  | n/a        | 6.95 / 1.70             | n/a        | 7.50 / 1.80  | n/a        |
| 1x2 or 2x2 | 20/80 | 7.60 / 1.10                  | n/a        | 7.90 / 1.20  | n/a        | 7.90 / 1.40             | n/a        | 8.50 / 1.50  | n/a        |
| 1x2 or 2x2 | 15/85 | 9.00 / 0.96                  | n/a        | 10.00 / 1.10 | n/a        | 9.60 / 1.00             | n/a        | 10.60 / 1.10 | n/a        |
| 1x2 or 2x2 | 10/90 | 11.00 / 0.63                 | n/a        | 12.90 / 0.80 | n/a        | 11.00 / 0.70            | n/a        | 12.70 / 0.80 | n/a        |
| 1x2 or 2x2 | 5/95  | 14.60 / 0.40                 | n/a        | 18.40 / 0.50 | n/a        | 14.60 / 0.50            | n/a        | 18.50 / 0.60 | n/a        |
| 1x2 or 2x2 | 4/96  | 15.27 / 0.37                 | n/a        | 19.00 / 0.47 | n/a        | 15.53 / 0.46            | n/a        | 19.50 / 0.50 | n/a        |
| 1x2 or 2x2 | 3/97  | 16.63 / 0.34                 | n/a        | 20.00 / 0.45 | n/a        | 16.88 / 0.41            | n/a        | 20.30 / 0.47 | n/a        |
| 1x2 or 2x2 | 2/98  | 18.53 / 0.30                 | n/a        | 23.00 / 0.40 | n/a        | 18.79 / 0.36            | n/a        | 23.30 / 0.40 | n/a        |
| 1x2 or 2x2 | 1/99  | 21.6 / 0.30                  | n/a        | 25.00 / 0.35 | n/a        | 21.60 / 0.30            | n/a        | 25.00 / 0.35 | n/a        |

\* IL specifications: tap / throughput.

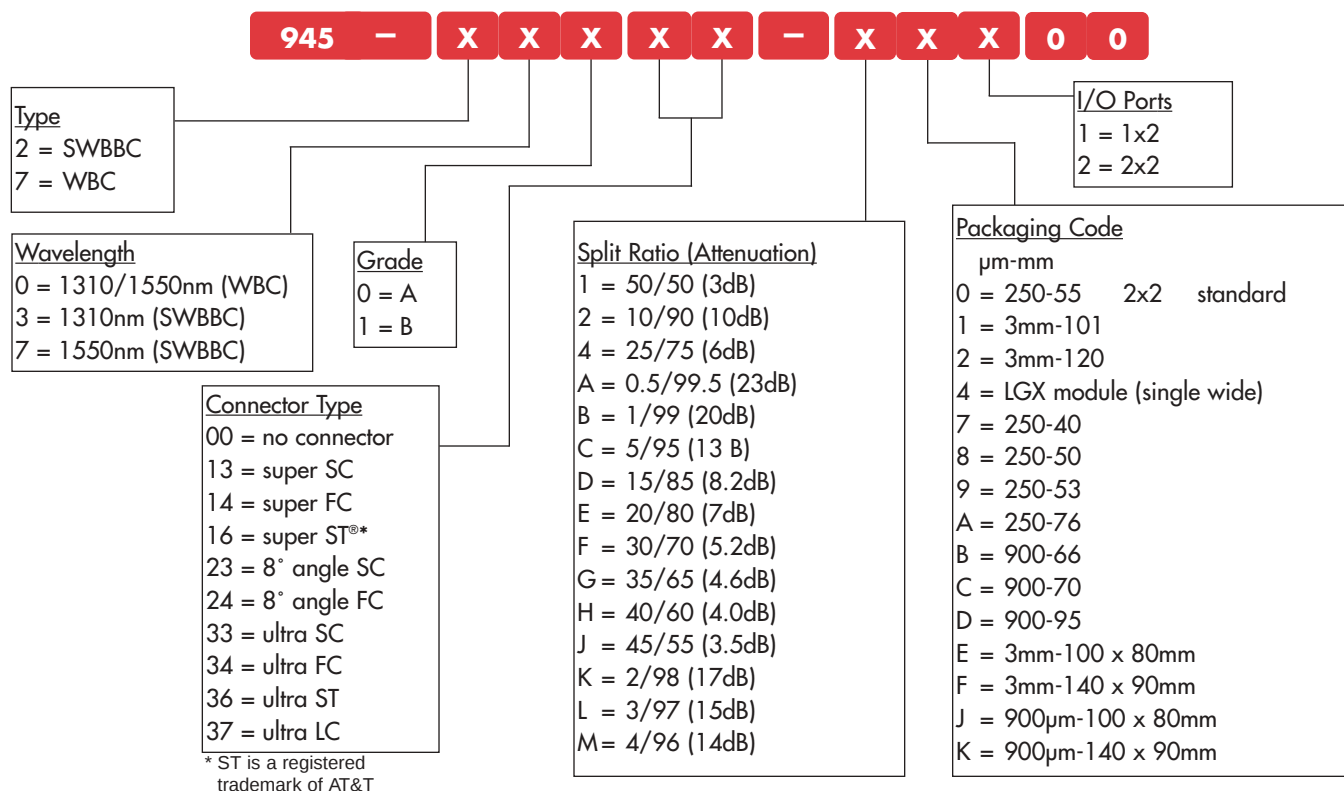
\* Maximum additional IL of 0.5dB per mated pair for terminated devices.

# Ordering Information

## 1x2 and 2x2 Miniature Couplers



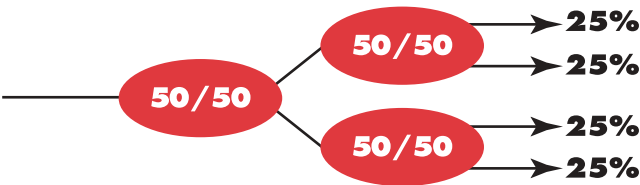
## 1x2 and 2x2 Terminated Couplers



**See pages 11-14 for packaging options.**

# 945 Series Single Mode 1XN Tree Couplers (Splitters)

Amphenol's single mode tree couplers are available as either SWBBC or WBC style devices. The couplers are bi-directional, multi-port devices offered in equal split or custom coupling ratios. Tree couplers are manufactured by concatenating multiple 1x2 (2x2) devices together to achieve the desired output configuration. With the consistency in performance of the standard 1x2 (2x2) devices, we are able to offer excellent uniformity in the 1xN configuration as well. Each device is 100% optically tested for optical performance and supplied with certified test data.



1XN Tree Couplers

## Common Specifications

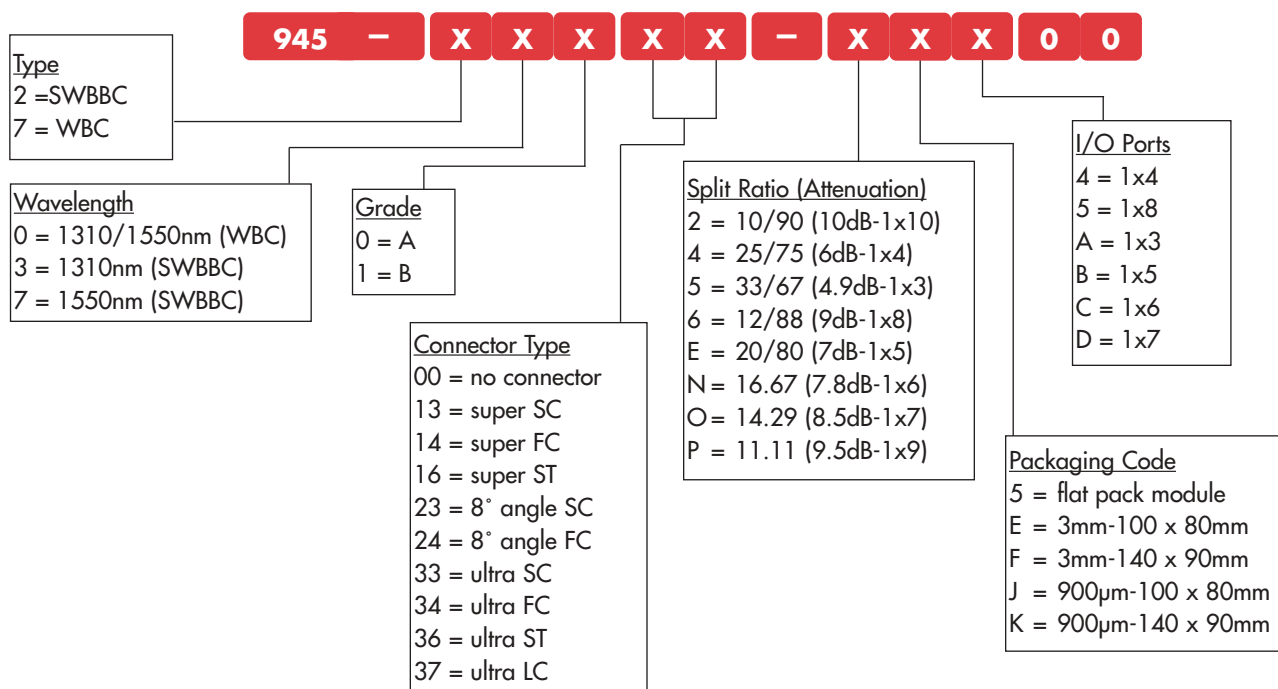
|                        |                                  |
|------------------------|----------------------------------|
| <b>Coupling ratio:</b> | <b>even, split, or custom</b>    |
| Directivity:           | $\geq 50$ dB                     |
| Reflectance:           | $\leq -55$ dB                    |
| PDL:                   | $\leq 0.3$ dB typical            |
| Operating Bandpass:    | $\pm 40$ nm                      |
| Operating Temperature: | $-40^{\circ}$ to $+85^{\circ}$ C |
| Storage Temperature:   | $-55^{\circ}$ to $+85^{\circ}$ C |
| Standard Length:       | 1 meter                          |

|               |                | SWBBC: 1310 or 1550nm $\pm 40$ nm |            |                      |            | WBC: 1310/1550nm $\pm 40$ nm |            |                      |            |
|---------------|----------------|-----------------------------------|------------|----------------------|------------|------------------------------|------------|----------------------|------------|
|               |                | Grade A<br>EL: 0.1dB              |            | Grade B<br>EL: 0.2dB |            | Grade A<br>EL: 0.08dB        |            | Grade B<br>EL: 0.2dB |            |
| Configuration | Coupling Ratio | IL*                               | Uniformity | IL*                  | Uniformity | IL*                          | Uniformity | IL*                  | Uniformity |
| 1x3           | 33.0%          | 5.70                              | 0.8        | 6.00                 | 1.1        | 5.80                         | 0.8        | 6.20                 | 1.2        |
| 1x4           | 25.0%          | 7.00                              | 0.8        | 7.40                 | 1.2        | 7.20                         | 0.9        | 7.60                 | 1.4        |
| 1x5           | 20.0%          | 8.00                              | 1.1        | 8.50                 | 1.8        | 8.20                         | 1.2        | 8.70                 | 2.0        |
| 1x6           | 16.7%          | 9.00                              | 1.2        | 9.60                 | 2.3        | 9.30                         | 1.4        | 9.90                 | 2.5        |
| 1x7           | 14.3%          | 9.80                              | 1.3        | 10.80                | 2.7        | 10.10                        | 1.7        | 11.00                | 2.9        |
| 1x8           | 12.5%          | 10.60                             | 1.4        | 11.50                | 3.0        | 11.00                        | 1.7        | 11.70                | 3.2        |
| 1x9           | 11.1%          | 11.20                             | 1.5        | 12.00                | 3.1        | 11.40                        | 1.7        | 12.20                | 3.3        |
| 1x10          | 10.0%          | 11.70                             | 1.7        | 12.80                | 3.2        | 11.80                        | 1.8        | 13.80                | 3.4        |
| 1x16          | 6.3%           | 14.00                             | 2.4        | 15.30                | 3.8        | 14.50                        | 2.6        | 15.50                | 4.0        |

\* IL specifications

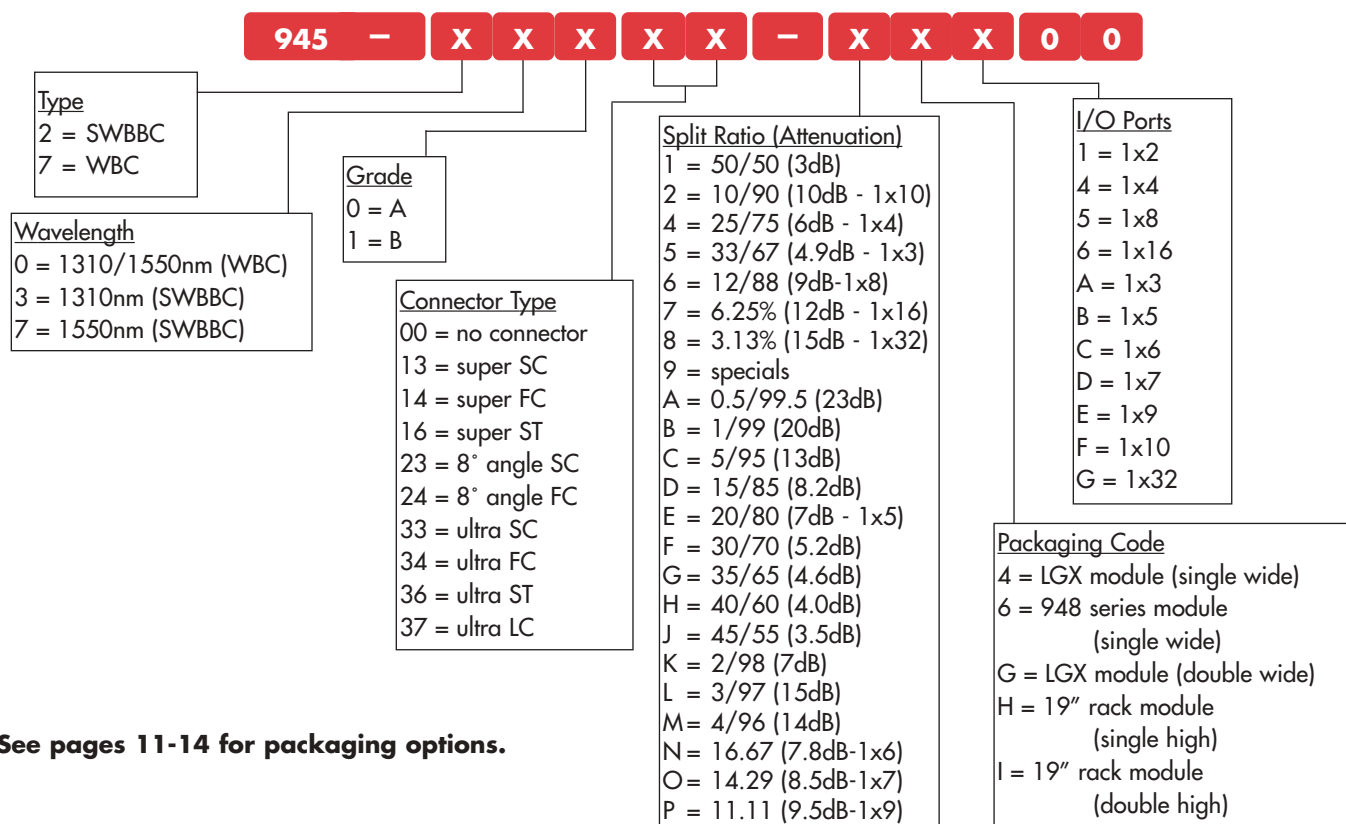
# Ordering Information

## Tree Couplers



See pages 11-14 for packaging options.

## LGX & 948 Fiber Management Modules

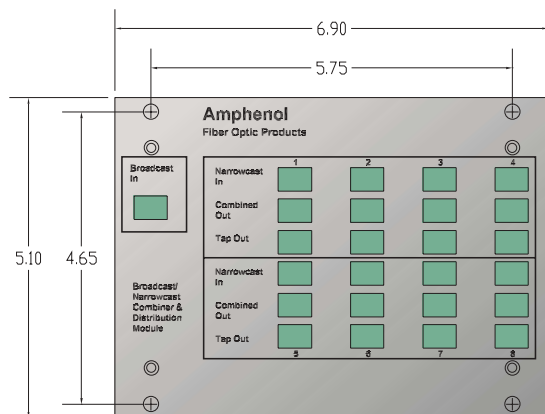
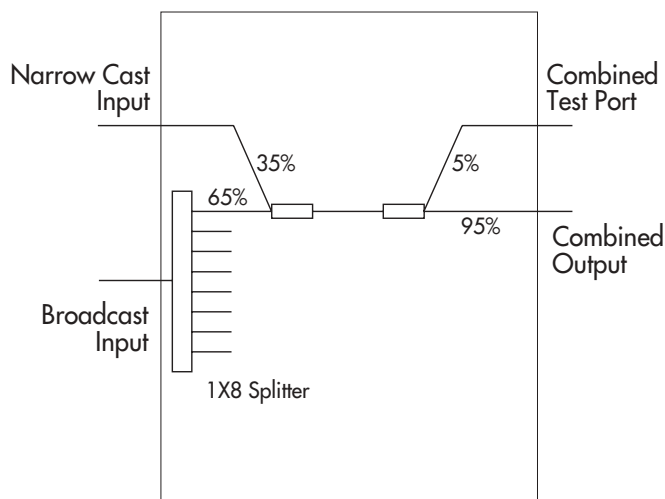


See pages 11-14 for packaging options.

# TSC Module

The Targeted Service Combiner (TSC) module provides Amphenol's customers with a simple solution in one compact housing to feed multiple nodes in a DWDM system. The multi-coupler module allows for the combination of a general broadcast signal with unique customer and targeted service signals while tap outputs provide signal monitoring. By combining a 1x8 coupler (1x2 and 1x4 also available) with 35% and 5% couplers into a single housing, our customers are able to reduce space requirements, overall loss and installation time while achieving tighter channel to channel uniformity.

Amphenol's TSC module is based upon the proven fused biconic taper (FBT) technology and is available in either a single wavelength or dual wavelength device. Standard packaging is LGX compatible and available in 1x2, 1x4, and 1x8 configurations. Custom housing available upon request.



1x8 TSC Module



1x4 TSC Module

## Applications

- Broadband communications
- Data convergence

## Features

- Designed to meet Telcordia GR-1209 and GR-1221
- Custom coupling ratios
- Environmentally reliable and stable
- LGX compatible
- Polarization insensitive
- Standard connector configurations available
- Attenuator inputs available for signal leveling

# TSC Module

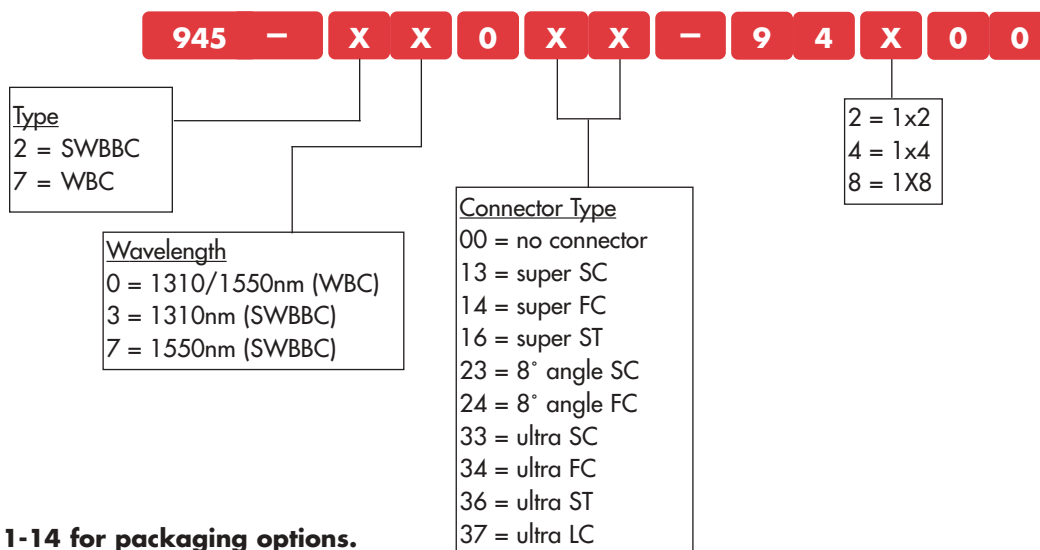
## Common Specifications

|                                    |                 |
|------------------------------------|-----------------|
| Operating wavelengths:             | 1310/1550± 40nm |
| Optical power handling capability: | +25dBm          |
| Return Loss:                       | 45dB            |
| IL stability over temperature:     | ± 0.1dB         |
|                                    | (no connectors) |
| Operating temperature:             | -20°C to +65°C  |
| Storage temperature:               | -40°C to +85°C  |

| Parameter                              | 1x2                          | 1x4                           | 1x8                            |
|----------------------------------------|------------------------------|-------------------------------|--------------------------------|
| IL: Bcast input to thru output         | 5.9dB typical, 6.3dB maximum | 9.2dB typical, 9.7dB maximum  | 12.5dB typical, 13.0dB maximum |
| IL: Bcast input to tap output          | 20.5dB maximum               | 24.2dB maximum                | 27.5dB maximum                 |
| Uniformity: Bcast input to thru output | 0.5dB typical, 0.7dB maximum | 0.75dB typical, 1.0dB maximum | 0.75dB typical, 1.0dB maximum  |
| IL: TSI to thru output                 | 6.5dB maximum                | 6.5dB maximum                 | 6.5dB maximum                  |
| IL: TSI to tap output                  | 21.0dB maximum               | 21.0dB maximum                | 21.0dB maximum                 |
| Polarization Dependent Loss (PDL)      | ≤ 0.4dB                      | ≤ 0.4dB                       | ≤ 0.5dB                        |

## Ordering Information

### TSC Module



See pages 11-14 for packaging options.

# C&L Band

Amphenol's C&L Band optical couplers provide our customers with the opportunity to expand their existing optical networks by tapping into the unused wavelengths that standard SMF-28 fiber can accommodate. The C&L Band couplers are designed to operate from 1530 - 1625nm while offering a low-loss, environmentally stable device.

## Common Specifications

|                        |                                          |
|------------------------|------------------------------------------|
| Coupling ratio:        | 1/99 to 50/50                            |
| Directivity:           | ≥ 50 dB (1X2)<br>≥ 60 dB (2X2)           |
| Reflectance:           | ≤ -55 dB                                 |
| PDL:                   | ≤ 0.1 dB (≤ 0.3dB for tap legs of ≤ 15%) |
| Operating Bandpass:    | 1530 - 1625nm                            |
| Operating Temperature: | -40° to +85° C                           |
| Storage Temperature:   | -55° to +85° C                           |
| Standard Length:       | 1 meter                                  |

| C&L Band   |            |            |
|------------|------------|------------|
| EL: 0.08dB |            |            |
|            | IL*        | Uniformity |
| 50/50      | 3.60       | 0.8        |
| 45/55      | 3.90/2.90  | n/a        |
| 40/60      | 4.40/2.50  | n/a        |
| 35/65      | 5.10/2.20  | n/a        |
| 30/70      | 5.80/1.80  | n/a        |
| 25/75      | 6.70/1.60  | n/a        |
| 20/80      | 7.60/1.10  | n/a        |
| 15/85      | 9.00/0.96  | n/a        |
| 10/90      | 11.00/0.63 | n/a        |
| 5/95       | 14.60/0.40 | n/a        |
| 4/96       | 15.27/0.37 | n/a        |
| 3/97       | 16.63/0.34 | n/a        |
| 2/98       | 18.53/0.30 | n/a        |
| 1/99       | 21.6/0.30  | n/a        |

\* IL specifications: tap / throughput

\* Maximum additional IL of 0.5dB per mated pair for terminated devices.

## Ordering Information

### C&L Band Couplers

| 945 - 7 2 P - X X 0 X            |  |  |     |  |                                  |            |  |  |  |
|----------------------------------|--|--|-----|--|----------------------------------|------------|--|--|--|
| <u>Split Ratio (Attenuation)</u> |  |  |     |  | <u>Split Ratio (Attenuation)</u> |            |  |  |  |
| 1 = 50/50 (3dB)                  |  |  |     |  | 2 = 10/90 (10dB)                 |            |  |  |  |
| 4 = 25/75 (6dB)                  |  |  |     |  | A = 0.5/99.5 (23dB)              |            |  |  |  |
| B = 1/99 (20dB)                  |  |  |     |  | C = 5/95 (13dB)                  |            |  |  |  |
| D = 15/85 (8.2dB)                |  |  |     |  | E = 20/80 (7dB)                  |            |  |  |  |
| F = 30/70 (5.2dB)                |  |  |     |  | G = 35/65 (4.6dB)                |            |  |  |  |
| H = 40/60 (4.0dB)                |  |  |     |  | J = 45/55 (3.5dB)                |            |  |  |  |
| K = 2/98 (17dB)                  |  |  |     |  | L = 3/97 (15dB)                  |            |  |  |  |
| M = 4/96 (14dB)                  |  |  |     |  |                                  |            |  |  |  |
| <u>Packaging Code</u>            |  |  |     |  |                                  |            |  |  |  |
| µm -mm                           |  |  |     |  |                                  |            |  |  |  |
| 0 = 250-55                       |  |  | 2x2 |  |                                  | (standard) |  |  |  |
| 1 = 250-55                       |  |  | 1x2 |  |                                  | (standard) |  |  |  |
| 4 = 250-40                       |  |  | 2x2 |  |                                  |            |  |  |  |
| 5 = 250-40                       |  |  | 1x2 |  |                                  |            |  |  |  |
| 6 = 250-50                       |  |  | 2x2 |  |                                  |            |  |  |  |
| 7 = 250-50                       |  |  | 1x2 |  |                                  |            |  |  |  |
| 8 = 250-53                       |  |  | 2x2 |  |                                  |            |  |  |  |
| 9 = 250-53                       |  |  | 1x2 |  |                                  |            |  |  |  |
| A = 250-76                       |  |  | 2x2 |  |                                  |            |  |  |  |
| B = 250-76                       |  |  | 1x2 |  |                                  |            |  |  |  |

or packaging options.

See pages 11-14 for packaging options.

### C&L Band Terminated Couplers

|                             |  |  |  |  |                           |  |  |  |  |                                 |  |  |  |  |                         |  |  |  |  |                    |  |  |  |  |
|-----------------------------|--|--|--|--|---------------------------|--|--|--|--|---------------------------------|--|--|--|--|-------------------------|--|--|--|--|--------------------|--|--|--|--|
| 945 - 7 2 P X X - X X X 0 0 |  |  |  |  |                           |  |  |  |  | I/O Ports<br>1 = 1x2<br>2 = 2x2 |  |  |  |  |                         |  |  |  |  |                    |  |  |  |  |
| Connector Type              |  |  |  |  | Split Ratio (Attenuation) |  |  |  |  | Split Ratio (Attenuation)       |  |  |  |  | Packaging Code          |  |  |  |  |                    |  |  |  |  |
| 00 = no connector           |  |  |  |  | 1 = 50/50 (3dB)           |  |  |  |  | 2 = 10/90 (10dB)                |  |  |  |  | µm-mm                   |  |  |  |  | µm-mm              |  |  |  |  |
| 13 = super SC               |  |  |  |  | 4 = 25/75 (6dB)           |  |  |  |  | A = 0.5/99.5 (23dB)             |  |  |  |  | 0 = 250-55 2x2 standard |  |  |  |  | B = 900-66         |  |  |  |  |
| 14 = super FC               |  |  |  |  | B = 1/99 (20dB)           |  |  |  |  | C = 5/95 (13dB)                 |  |  |  |  | 1 = 3mm-101             |  |  |  |  | C = 900-70         |  |  |  |  |
| 16 = super ST               |  |  |  |  | D = 15/85 (8.2dB)         |  |  |  |  | E = 20/80 (7dB)                 |  |  |  |  | 2 = 3mm-120             |  |  |  |  | D = 900-95         |  |  |  |  |
| 23 = angle SC               |  |  |  |  | F = 30/70 (5.2dB)         |  |  |  |  | G = 35/65 (4.6dB)               |  |  |  |  | 7 = 250-40              |  |  |  |  | E = 3mm-100x80mm   |  |  |  |  |
| 24 = angle FC               |  |  |  |  | H = 40/60 (4.0dB)         |  |  |  |  | J = 45/55 (3.5dB)               |  |  |  |  | 8 = 250-50              |  |  |  |  | F = 3mm-140x90mm   |  |  |  |  |
| 33 = ultra SC               |  |  |  |  | K = 2/98 (17dB)           |  |  |  |  | L = 3/97 (15dB)                 |  |  |  |  | 9 = 250-53              |  |  |  |  | J = 900µm-100x80mm |  |  |  |  |
| 34 = ultra FC               |  |  |  |  | M = 4/96 (14dB)           |  |  |  |  |                                 |  |  |  |  | A = 250-76              |  |  |  |  | K = 900µm-140x90mm |  |  |  |  |
| 36 = ultra ST               |  |  |  |  |                           |  |  |  |  |                                 |  |  |  |  |                         |  |  |  |  |                    |  |  |  |  |
| 37 = ultra LC               |  |  |  |  |                           |  |  |  |  |                                 |  |  |  |  |                         |  |  |  |  |                    |  |  |  |  |

# Multimode Couplers

Amphenol's multimode couplers precisely divide light signals between two multimode fibers. The couplers are bi-directional in performance for either power splitting or combining and operate 800nm to 1300nm.

Amphenol's multimode couplers are offered with standard 50/125µm or 62.5/125µm fiber. The devices can be assembled into miniature or ruggedized packages and can be terminated with industry standard multimode connectors.



3mm Ruggedized Multimode Coupler

## Applications

- Telecommunication systems
- Local/Wide Area Networks (LAN/WAN)
- Test and Measurement instrumentation
- Premise distribution networks
- Fiber optic sensors

## Features

- Environmentally reliable and stable
- Low insertion loss
- Miniature or ruggedized package options
- Standard connector/cable leads available

## Common Specifications

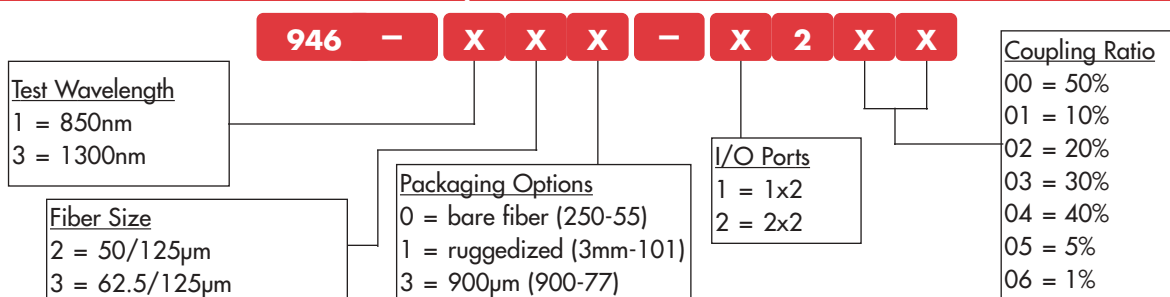
|                        |                  |
|------------------------|------------------|
| Operating Wavelength:  | 850nm or 1300nm  |
| Coupling Ratios:       | 1% - 50%         |
| Directivity:           | ≤ -40dB          |
| Operating Temperature: | -40° C to +85° C |
| Storage Temperature:   | -55° C to +85° C |
| Port Configuration:    | 1x2 or 2x2       |
| Standard Length:       | 1 meter          |

|       | EL: 0.7dB                  |            |
|-------|----------------------------|------------|
|       | Thermal Stability: < 0.2dB |            |
|       | IL*                        | Uniformity |
| 50/50 | 3.90                       | 0.7        |
| 40/60 | 4.9 / 3.0                  | n/a        |
| 30/70 | 6.2 / 2.3                  | n/a        |
| 20/80 | 8.0 / 1.8                  | n/a        |
| 10/90 | 11.3 / 1.25                | n/a        |
| 5/95  | 14.9 / 0.9                 | n/a        |
| 1/99  | 22.1 / 0.7                 | n/a        |

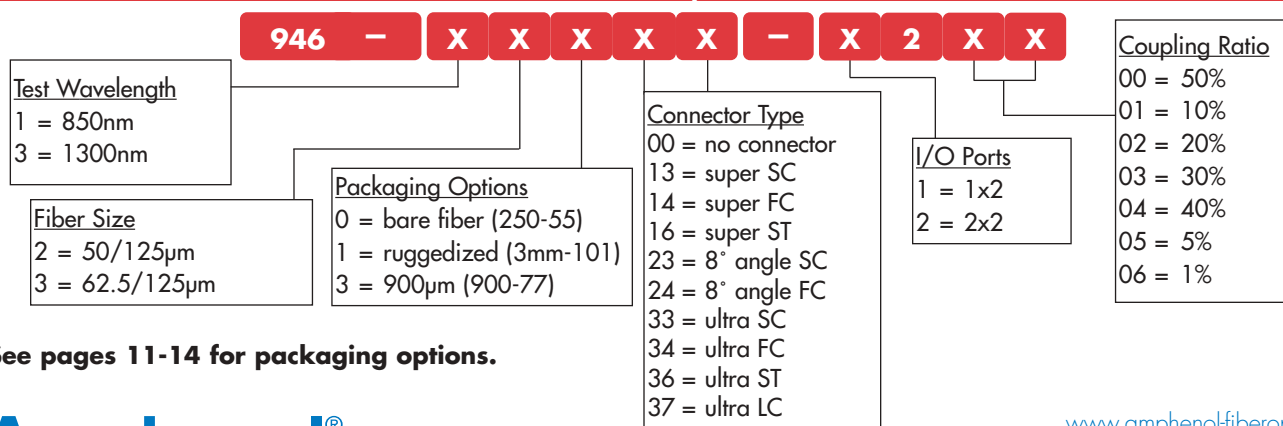
\* IL specifications: tap / throughput

## Ordering Information

### 1x2 and 2x2 Miniature Multimode Couplers



### 1x2 and 2x2 Miniature Multimode Terminated Couplers



See pages 11-14 for packaging options.

# Packaging Options (Units: inches [mm])

bare fiber packages

Package Description

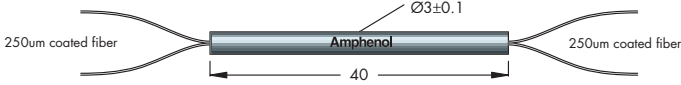


Diagram of the 250-40 package showing a central Amphenol connector with a diameter of  $\varnothing 3 \pm 0.1$  mm and a length of 40 mm. It is connected to two 250um coated fibers.

250-40

Available for: 1x2, 2x2, SWBBC only

mm

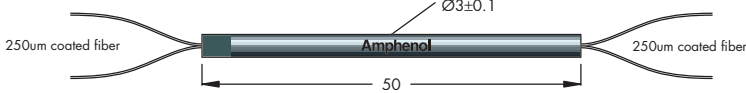


Diagram of the 250-50 package showing a central Amphenol connector with a diameter of  $\varnothing 3 \pm 0.1$  mm and a length of 50 mm. It is connected to two 250um coated fibers.

250-50

Available for: 1x2, 2x2, SWBBC, WBC

mm

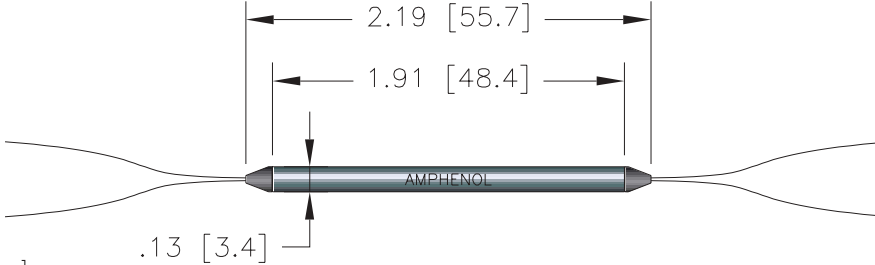


Diagram of the 250-55 package showing a central AMPHENOL connector with a diameter of  $\varnothing 3 \pm 0.1$  mm. The package length is 2.19 [55.7] inches, and the connector length is 1.91 [48.4] inches. The connector is connected to two 250um coated fibers. The distance from the fiber entry point to the connector is .13 [3.4] inches.

250-55

Available for: 1x2, 2x2, SWBBC, WBC

900um packages

Package Description

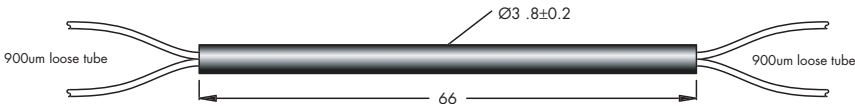


Diagram of the 900-66 package showing a central Amphenol connector with a diameter of  $\varnothing 3.8 \pm 0.2$  mm and a length of 66 mm. It is connected to two 900um loose tube fibers.

900-66

Available for: 1x2, 2x2, SWBBC, WBC

mm

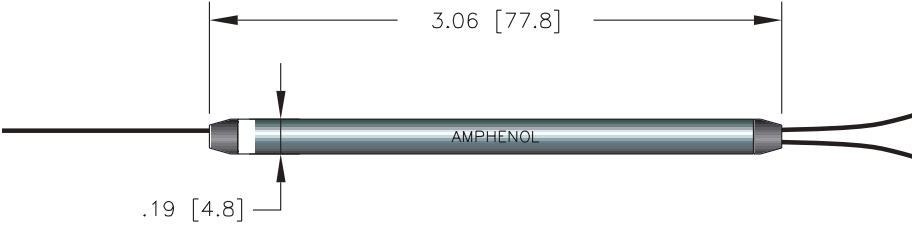


Diagram of the 900-77 package showing a central AMPHENOL connector with a diameter of  $\varnothing 3.8 \pm 0.2$  mm. The package length is 3.06 [77.8] inches, and the connector length is .19 [4.8] inches. The connector is connected to two 900um loose tube fibers.

900-77

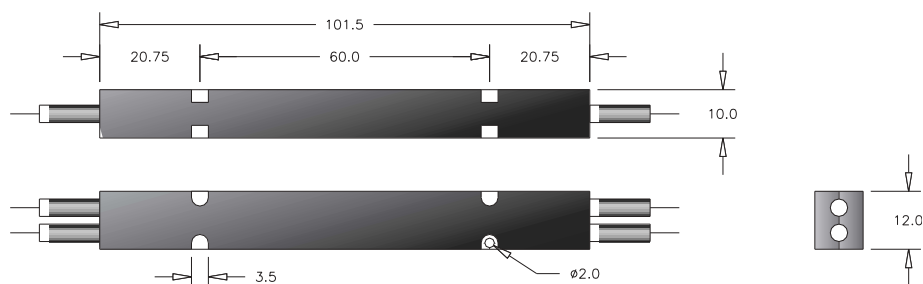
Available for: 1x2, 2x2, SWBBC, WBC

in[mm]

# Packaging Options (Units: inches [mm])

## 3mm/900µm jacketed packages

## Package Description



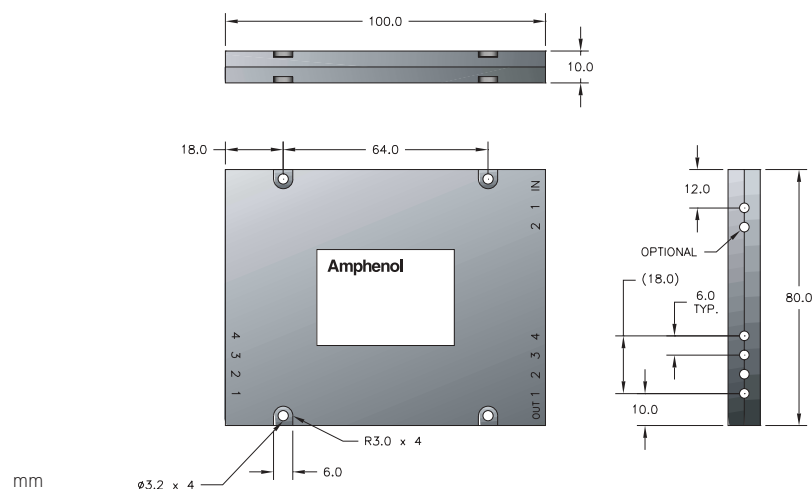
**3mm-101**  
(3mm, 900µm, or bare fiber)

Available for: 1x2, 2x2, SWBBC,  
WBC

mm

## Tree coupler packages

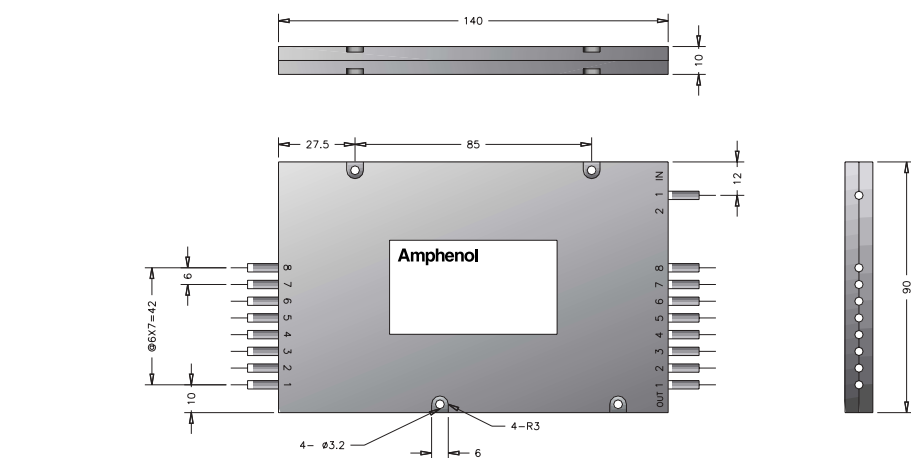
## Package Description



**3mm-100x80**  
(3mm, 900µm, or bare fiber)

Available for: 1x3, 1x4 SWBBC,  
WBC

mm



**3mm-140x90**  
(3mm, 900µm, or bare fiber)

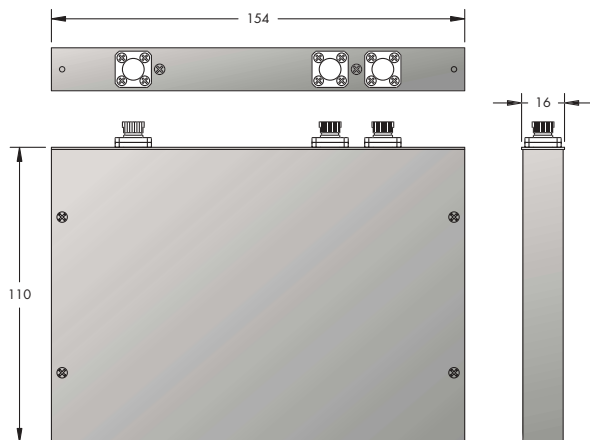
Available for: 1x5, 1x6, 1x7, 1x8  
SWBBC, WBC

mm

# Packaging Options (Units: inches [mm])

MB packages

Package Description



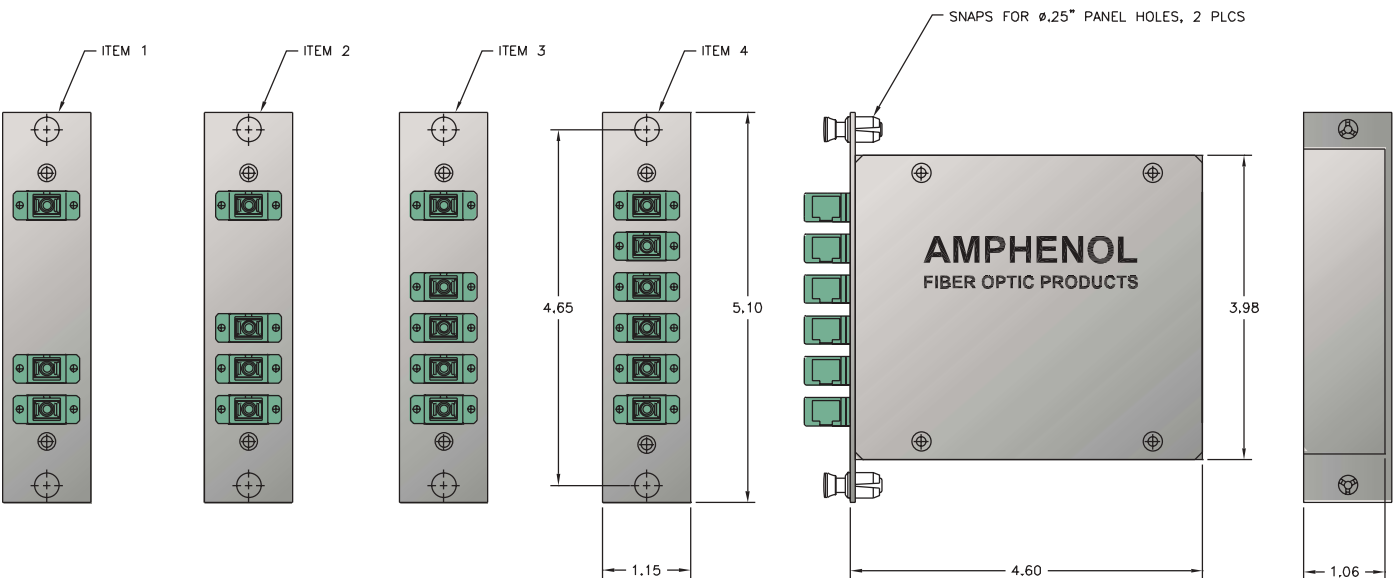
module - 110 x 154

Available for:  
1x2, 1x3, 1x4 SC  
1x2, 1x3, 1x4, 1x5, 1x6, 1x7,  
1x8 FC, SWBBC, WBC

mm

LGX compatible modules

Package Description



mm

## Configurations

| Item # | Part #          | Configuration |
|--------|-----------------|---------------|
| 1      | 945-70023-14101 | 1X2           |
| 2      | 945-70023-54A01 | 1X3           |
| 3      | 945-70023-44401 | 1X4           |
| 4      | 945-70023-E4B01 | 1X5           |

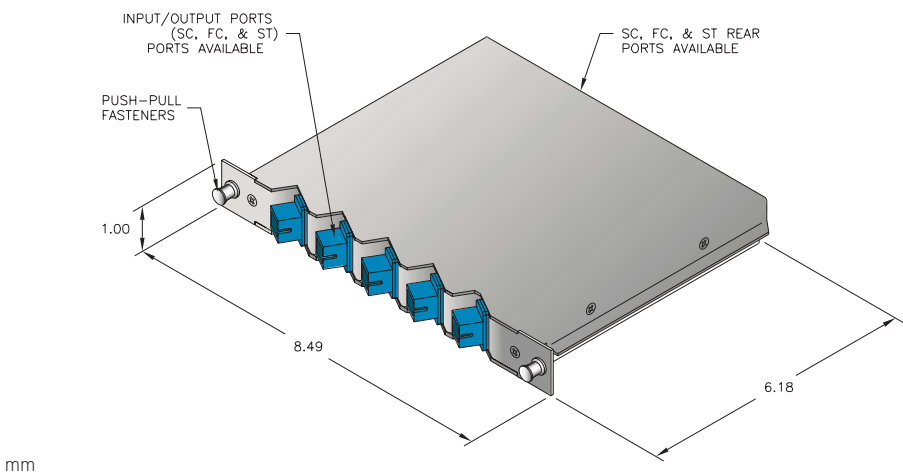
LGX Compatible

Available for: 1x2 SWBBC,  
1xN SWBBC, 2xN SWBBC,  
1x2 WBC, 1xN WBC, 2xN WBC

# Packaging Options (Units: inches [mm])

948 modules

Package Description

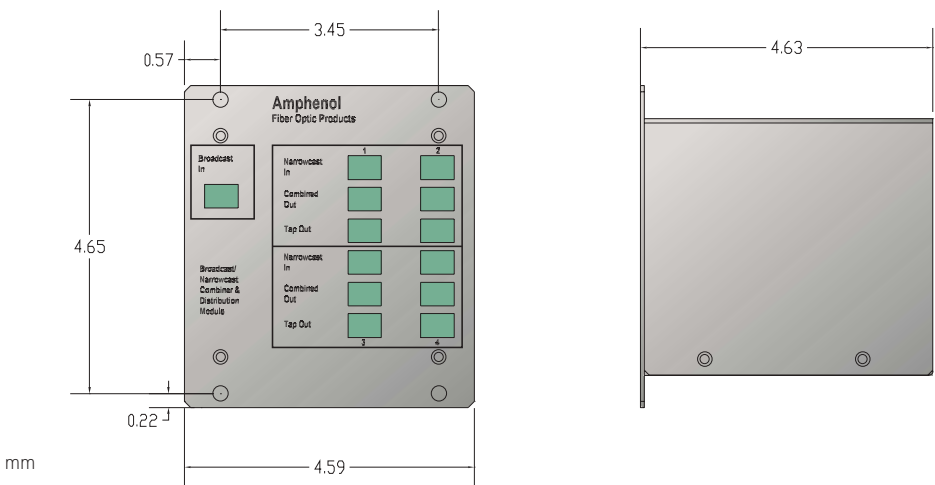


948 module

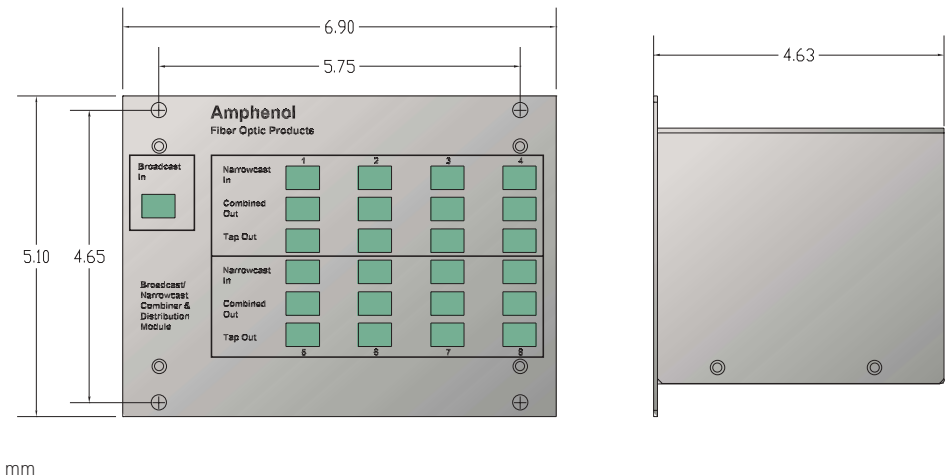
Available for: 1x2 SWBBC,  
1xN SWBBC, 2xN SWBBC,  
1x2 WBC, 1xN WBC, 2xN WBC

TSC modules

Package Description



1x4 TSC module



1x8 TSC module

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## www.amphenol.com

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