# Product Specifications

COMMSCOPE®

## FDWLCLC42

**TeraSPEED® LC to LC, Fiber Patch Cord, 1.6 mm Duplex, Plenum**

### Construction Materials

| | |
|---|---|
| Fiber Type | TeraSPEED®, zero water peak singlemode fiber (G.652.D or G.652.D \| OS2) |
| Total Fibers, quantity | 2 |

### Dimensions

| | |
|---|---|
| Cord Length, maximum | 999 ft \| 999 m |
| Cord Length, minimum | 1 ft \| 1 m |
| Diameter Over Jacket | 1.60 mm \| 0.06 in |
| Ordering Note | For lengths greater than 999 ft (304 m), orders must be in meters \| Minimum length may vary based on cable configuration |

### Environmental Specifications

| | |
|---|---|
| Environmental Space | Plenum |
| Operating Temperature | -10 °C to +60 °C (+14 °F to +140 °F) |

### General Specifications

| | |
|---|---|
| Color, connector A | Blue |
| Color, connector B | Blue |
| Construction Type | Duplex patch cord |
| Interface, connector A | LC |
| Interface, connector B | LC |
| Interface Feature, connector A | Standard |
| Interface Feature, connector B | Standard |

### Mechanical Specifications

| | |
|---|---|
| Cable Retention Strength, maximum | 4.40 lb @ 90 °<br>11.24 lb @ 0 ° |

### Regulatory Compliance/Certifications

| Agency | Classification |
|---|---|
| RoHS 2011/65/EU | Compliant |
| ISO 9001:2008 | Designed, manufactured and/or distributed under this quality management system |

RoHS COMPLIANT

### Included Products

P-002-ZC-8W-F16 (Product Component—not orderable) — 1.6mm Plenum Zipcord Cable

- CS-8W-TB (Product Component—not orderable) — TeraSPEED® Singlemode Fiber

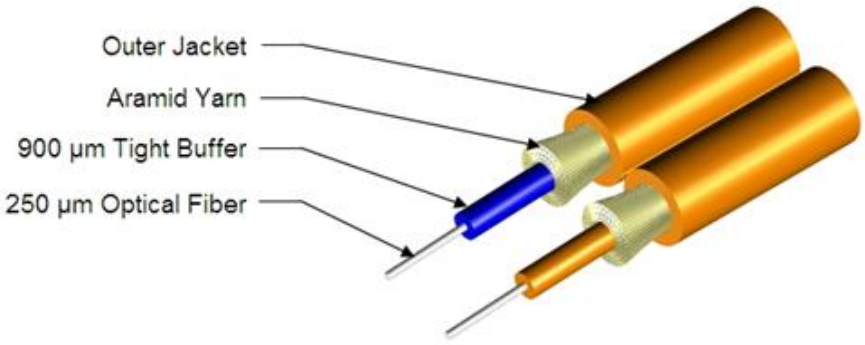
460125206 (Product Component—not orderable) — Pre-Radiused LC Connector duplex for 1.6 mm Fiber, single-mode

# Product Specifications

P-002-ZC-8W-F16

**1.6mm Plenum Zipcord Cable**

## Representative Image




## General Specifications

| | |
|---|---|
| Cable Type | Cordage |
| Construction Type | Non-armored |
| Subunit Type | Gel-free |

## Construction Materials

| | |
|---|---|
| Fiber Type Solution | TeraSPEED®, zero water peak singlemode fiber (G.652.D or G.652.D \| OS2) |
| Total Fiber Count | 2 |
| Fiber Type | TeraSPEED®, zero water peak singlemode fiber (G.652.D or G.652.D \| OS2) |
| Fiber Type, quantity | 2 |

## Dimensions

| | |
|---|---|
| Cable Weight | 4.0 lb/kft \| 6.0 kg/km |
| Height Over Jacket | 1.70 mm \| 0.07 in |
| Width Over Jacket | 3.50 mm \| 0.14 in |

## Physical Specifications

| | |
|---|---|
| Minimum Bend Radius, loaded | 5.0 cm \| 2.0 in |
| Minimum Bend Radius, unloaded | 3.0 cm \| 1.2 in |
| Tensile Load, long term, maximum | 15 lbf \| 67 N |
| Tensile Load, short term, maximum | 50 lbf \| 222 N |
| Vertical Rise, maximum | 500.0 m \| 1640.4 ft |

## Flame Test Specifications

| | |
|---|---|
| Flame Test Listing | NEC OFNP (ETL) and c(ETL) |
| Flame Test Method | NFPA 262 |

## Environmental Specifications

| | |
|---|---|
| Environmental Space | Plenum |
| Installation Temperature | 0 °C to +70 °C (+32 °F to +158 °F) |
| Operating Temperature | -20 °C to +70 °C (-4 °F to +158 °F) |
| Storage Temperature | -40 °C to +70 °C (-40 °F to +158 °F) |

## Mechanical Test Specifications

| | |
|---|---|
| Compression | 10 N/mm \| 57 lb/in |
| Compression Test Method | FOTP-41 \| IEC 60794-1-2, Section 7 |
| Flex | 300 cycles |
| Flex Test Method | FOTP-104 \| IEC 60794-1-2, Section 10 |
| Impact | 0.55 ft lb \| 0.74 N-m |
| Impact Test Method | FOTP-25 \| IEC 60794-1-2, Section 8 |
| Strain | See long and short term tensile loads |
| Strain Test Method | FOTP-33 \| IEC 60794-1-2, Section 5 |
| Twist | 10 cycles |
| Twist Test Method | FOTP-85 \| IEC 60794-1-2, Section 11 |

## Environmental Test Specifications

| | |
|---|---|
| Heat Age | -20 °C to +85 °C (-4 °F to +185 °F) |
| Heat Age Test Method | Not applicable |
| Low High Bend | -20 °C to +70 °C (-4 °F to +158 °F) |
| Low High Bend Test Method | FOTP-28 \| IEC 60794-1-2, Section 28 |
| Temperature Cycle | -20 °C to +70 °C (-4 °F to +158 °F) |
| Temperature Cycle Test Method | FOTP-3 \| IEC 60794-1-2, Section 22 |

## Qualification Specifications

| | |
|---|---|
| Cable Qualification Standards | ANSI/ICEA S-83-596-2001 \| Telcordia GR-409-CORE Issue 2 |

## Regulatory Compliance/Certifications

| Agency | Classification |
|---|---|
| RoHS 2011/65/EU | Compliant |
| ISO 9001:2008 | Designed, manufactured and/or distributed under this quality management system |

RoHS COMPLIANT

## Included Products

CS-8W-TB (Product Component—not orderable) — TeraSPEED® Singlemode Fiber

TeraSPEED®

CS-8W-TB

**TeraSPEED® Singlemode Fiber**

## Optical Specifications, Wavelength Specific

| | |
|---|---|
| Standards Compliance | ITU-T G.652.D |
| Attenuation, maximum | 0.50 db/km @ 1310 nm<br>0.50 db/km @ 1385 nm<br>0.50 db/km @ 1490 nm<br>0.50 db/km @ 1550 nm<br>0.50 db/km @ 1575 nm<br>0.70 db/km @ 1270 nm<br>0.70 db/km @ 1625 nm<br>1.00 db/km @ 1650 nm |
| Dispersion, maximum | 18 ps(nm-km) at 1550 nm \| 3.2 ps(nm-km) from 1285 nm to 1330 nm at 1310 nm |
| Mode Field Diameter | 9.2 µm @ 1310 nm<br>9.6 µm @ 1385 nm<br>10.4 µm @ 1550 nm |
| Mode Field Diameter Tolerance | ±0.3 µm @ 1310 nm \| ±0.5 µm @ 1550 nm \| ±0.6 µm @ 1385 nm |
| Index of Refraction | 1.467 @ 1310 nm<br>1.468 @ 1385 nm<br>1.468 @ 1550 nm |
| Polarization Mode Dispersion Link Design Value, maximum | 0.06 ps/sqrt(km) |
| Backscatter Coefficient | -82.1 dB @ 1550 nm<br>-79.6 dB @ 1310 nm |

## Physical Specifications

| | |
|---|---|
| Cladding Diameter | 125.0 µm |
| Cladding Diameter Tolerance | ±0.7 µm |
| Cladding Non-Circularity, maximum | 1 % |
| Coating Diameter (Colored) | 254 µm |
| Coating Diameter (Uncolored) | 245 µm |
| Coating Diameter Tolerance (Colored) | ±7 µm |
| Coating Diameter Tolerance (Uncolored) | ±10 µm |
| Coating/Cladding Concentricity Error, maximum | 12 µm |
| Core/Clad Offset, maximum | 0.5 µm |

## Optical Specifications, General

| | |
|---|---|
| Cabled Cutoff Wavelength, maximum | 1260 nm |
| Point Defects, maximum | 0.10 dB |
| Zero Dispersion Slope, maximum | 0.090 ps/[km-nm-nm] |
| Zero Dispersion Wavelength, maximum | 1322 nm |
| Zero Dispersion Wavelength, minimum | 1302 nm |

## Mechanical Specifications

| | |
|---|---|
| Coating Strip Force, maximum | 8.9 N \| 2.0 lbf |
| Coating Strip Force, minimum | 1.3 N \| 0.3 lbf |

| | |
|---|---|
| Dynamic Fatigue Parameter, minimum | 20 nd |
| Fiber Curl, minimum | 4.0 m \| 13.1 ft |
| Macrobending, 32 mm mandrel, 1 turn | 0.05 dB @ 1550 nm |
| Macrobending, 50 mm mandrel, 100 turns | 0.05 dB @ 1550 nm |
| Proof Test | 0.69 N/mm² \| 100.00 psi |

## Environmental Specifications

| | |
|---|---|
| Heat Aging, maximum | 0.05 dB @ 85 °C |
| Temperature Dependence, maximum | 0.05 dB |
| Temperature Humidity Cycling, maximum | 0.05 dB |
| Water Immersion, maximum | 0.05 dB @ 23 °C |

## Regulatory Compliance/Certifications

| Agency | Classification |
|---|---|
| ISO 9001:2008 | Designed, manufactured and/or distributed under this quality management system |

## * Footnotes

| | |
|---|---|
| Temperature Dependence, maximum | Temperature dependence is conducted at -60 °C to +85 °C (-76 °F to +185 °F) |
| Temperature Humidity Cycling, maximum | Temperature humidity cycling is conducted at -10 °C to +85 °C (+14 °F to +185 °F) up to 95% relative humidity |

# Product Specifications

460125206

**Pre-Radiused LC Connector duplex for 1.6 mm Fiber, single-mode**

## Construction Materials

| | |
|---|---|
| Fiber Type | TeraSPEED®, zero water peak singlemode fiber (G.652.D or G.652.D \| OS2) |
| Ferrule Geometry | Pre-radiused |
| Ferrule Material | Zirconia |

## Dimensions

| | |
|---|---|
| Compatible Cable Diameter | 1.6 mm \| 0.1 in |
| Length | 50.30 mm \| 1.98 in |

## General Specifications

| | |
|---|---|
| Interface | LC |
| Body Style | Duplex |
| Interface Feature | Standard |
| Color | Blue |
| Package Quantity | 2 |

## Mechanical Specifications

| | |
|---|---|
| Cable Retention Strength, maximum | 5.10 kg @ 0 °<br>11.24 lb @ 0 ° |

## Optical Performance

| | |
|---|---|
| Insertion Loss, typical | 0.20 dB |
| Return Loss, minimum | 55.0 dB |
| Insertion Loss Change, mating | 0.30 dB |
| Insertion Loss Change, temperature | 0.30 dB |

## Optical Specifications

| | |
|---|---|
| Optical Components Standard | ANSI/TIA-568-C.3 |

## Regulatory Compliance/Certifications

| Agency | Classification |
|---|---|
| RoHS 2011/65/EU | Compliant |
| ISO 9001:2008 | Designed, manufactured and/or distributed under this quality management system |

## * Footnotes

| | |
|---|---|
| Insertion Loss Change, mating | Maximum insertion loss change after 500 matings |
| Insertion Loss Change, temperature | Maximum insertion loss change from -10 °C to +60 °C (+14 °F to +140 °F) |