# Miniflex®
## Standard Cable

A BELDEN BRAND

Miniflex® standard fiber cable is a flexible, pushable fiber optic cable made from a crush resistant, durable polymer. It has exceptionally low weight for the level of strength and protection it provides. Miniflex® standard fiber cable is available with many different counts & types of fiber, including G.657A1 singlemode and G.651 OM3 multimode.

**Suitable for installation using blowing, pulling and pushing techniques**

## Advantages

- Fire Retardant
- UV Stabilized
- Features Miniflex® technology
- Lightweight/small diameter
- Grooving increases flexibility/bend radius
- Very high crush resistance
- Uses industry-standard fiber
- Ultra tough
- Class-leading combination of size, crush resistance, flexibility & fiber density

## Applications

- FTTH/FTTX – Indoor
- FTTH/FTTX – Outdoor
- Data Infrastructure
- Military
- Telecoms
- Rural Broadband
- Transportation
- DAS / FTTA

## Compatibility List

- ITU-T G.657 & G.651
- UL 2024 Optical Fiber Raceway
- Field splice and lab terminations
- Microduct – indoor, riser, plenum, outdoor, aerial & direct bury
- QuikPush® pre-terminated connector (SC & LC)

## Cable Material Information

| Fiber Count | Weight | OD | Sheath Thickness | Tension Strength | Minimum Bend Radius | | Crush |
|---|---|---|---|---|---|---|---|
| | | | | | Installation | Operation | |
| 250µm | (kg/km) | (mm) | (mm) | (n) | (mm) | (mm) | (n) |
| 1, 2, 4, 6, 8 & 12 | 8.1 | 3.0 | 0.8 | 100 | 15 | 30 | 950 |
| 1 (900 µm) | 8.1 | 3.0 | 0.8 | 100 | 15 | 30 | 950 |
| 24 | 9.2 | 4.0 | 0.7 | 100 | 20 | 40 | 650 |

| Material | Properties | Best for | Colour | Operating Temp | Installation Temp |
|---|---|---|---|---|---|
| PBT | Hardest & toughest outdoor material, some UV resistance | Indoor – (FR)<br>Outdoor – (UV stable) | Black* | -40°C to +80°C | -20°C to +60°C |

*** Other colors available upon request**

6176 E. Molloy Rd. East Syracuse, NY 13057 U.S.A. • customerservice@ppc-online.com • 1-800-800-6652 • +1 315-431-7200 • www.ppc-online.com

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## Transmission Performance Specification

| Item | Single-mode | Single-mode 900µm | Multi-mode |
|---|---|---|---|
| Specification | G657 A1 | G657 A2 | OM3 |
| Attenuation (850 / 1300 nm) | n/a | n/a | 3.5/1.5 dB/km |
| Attenuation (1310 / 1550 nm) | 0.4/0.3 dB/km | 0.4/0.3 dB/km | n/a |
| Attenuation at 1625 nm | < 0.24 dB/km | < 0.24 dB/km | n/a |
| Refractive Index at 1310nm, 1550nm | 1.467, 1.468 | 1.467, 1.468 | n/a |
| Refractive Index at 850nm, 1300nm | n/a | n/a | 1.482, 1.477 |
| Proof test | 0.69 GPa (100 kpsi), 1% min. | 0.69 GPa (100 kpsi), 1% min. | 0.69 GPa (100 kpsi), 1% min. |
| Cladding diameter | 125 ± 0.7µm | 125 ± 0.7 µm | 125 ± 1.0µm |
| Coated diameter | 235µm to 245µm | 235µm to 245µm | 237µm to 247µm |
| Core/Cladding concentricity error | ≤ 0.5µm | ≤ 0.5 µm | ≤ 1.0µm |
| Coating concentricity error<br>Macro bend loss | ≤ 12µm<br>(1550 nm) | ≤ 12µm<br>(1550 nm) | ≤ 6µm<br>(850 and 1300 nm) |
| 10 turns at 50mm diameter | ≤ 0.01 dB | n/a | ≤ 0.2 dB |
| 10 turns at 15 mm diameter | ≤ 0.2 dB | ≤ 0.03 dB | n/a |
| 1 turn at 10mm diameter | ≤ 0.2 dB | ≤ 0.10 dB | n/a |
| 1 turn at 7.5mm diameter | n/a | ≤ 0.50 dB | n/a |

## Fiber Cable Design