

Outside Plant Aerial Fiber Cables

Metallic Self-Supporting (MASS)

PIA Approved

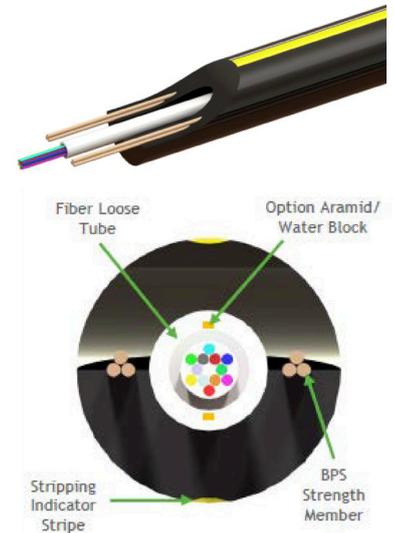


Features & Benefits

- Small diameter - up to 12 fibers in just 6 mm O.D. & up to 48 fibers in 7mm O.D.
- Light weight: approximately 26-34 kg/km
- Easy to handle - round concentric design
- Supported by existing poles and hardware
- Easy to strip – uses stripper No. 10-1323 (6 mm version); 10-1325 (7 mm version)
- Single loose-tube inner cable or 12F micro loose tubes for 24F, 36F and 48F
- Self-supporting spans up to 55 m in accordance with BT spec CW1500-11
- UV stabilized outer jacket guaranteed for 25 years outdoor use

Compatibility:

- ITU-T G.657A1 single-mode fiber
- Fusion and Mechanical Splice Practices
- Spiral (formed wire) and Wedge type clamps and dead-ends
- PIA compliant per relevant BT specs
- Suitable for use under power lines of - up to and including - 11kV, with a minimum vertical clearance of 1.8 m



Overview

PPC's self-supporting and ultra-light weight aerial cable has a loose tube design that is substantially lighter than traditional aerial fiber cables. The cable's light weight allows existing telephone poles to be used without the need for surveys, planning and remedial civil works, thereby facilitating rapid and cost-effective aerial fiber optic network deployment. As well as being more aesthetically pleasing, this design reduces the loading effect of wind and ice when compared to other cable designs.

Applications

- FTTX local access infrastructure
- Rural Broadband and SDU Deployments
- Aerial, Direct Bury and Sub-Duct Routing

Technical Data

Mechanical Performance

| Fiber Count | Cable O.D. | Nominal Weight | Cable Break Load | Min. Bend Radius | Crush Resistance |
|---------------|------------|----------------|------------------|------------------|------------------|
| <i>250 μm</i> | <i>mm</i> | <i>kg/km</i> | <i>N</i> | <i>mm</i> | <i>N</i> |
| 2 | 6.0 | 26.7 | 1350 - 2000 | 60 | 2000 |
| 4 | 6.0 | 26.7 | 1350 - 2000 | 60 | 2000 |
| 12 | 6.0 | 27.0 | 1350 - 2000 | 60 | 2000 |
| 24 | 7.0 | 33.9 | 1350 - 2000 | 70 | 2000 |
| 36 | 7.0 | 37.1 | 1350 - 2000 | 70 | 2000 |
| 48 | 7.0 | 40.3 | 1350 - 2000 | 70 | 2000 |

Fiber colors used are Blue, Orange, Green and Brown for the 4F cable and the standard 12 solid colors per EIA 598 for the 12F cable. For >12 fiber cables, the fibers are appropriately marked using ring marking or other suitable method.

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Environmental Performance

| Cable O.D. | Max. Span | Max. Fiber Strain | Max. Ice Load | Max. Wind Speed | Max. Wind Speed w/ Ice Load | Temperature Range |
|------------|-----------|-------------------|--------------------|-----------------|-----------------------------|-------------------|
| <i>mm</i> | <i>m</i> | <i>%</i> | <i>Radial - mm</i> | <i>km/hr</i> | <i>km/hr</i> | <i>°C</i> |
| 6.0 | 55 | 0.8 | 5 | 97 | 0 | -30 to 70 |
| 7.0 | 55 | 0.8 | 5 | 130 | 80 | -30 to 70 |

Span lengths of up to 68 m can be supported with reduced environmental performance

Transmission Performance

| Specification | G657 A1 |
|--|--|
| Attenuation (850/1300 nm) | n/a |
| Attenuation (1310/1550 nm) | ≤ 0.4/0.4 dB/km |
| Refractive Index at 1310nm, 1550nm | 1.467, 1.468 |
| Refractive Index at 850nm, 1300nm | n/a |
| Proof test - GPa (kpsi) | 0.69 (100 kpsi) 1% min. |
| Cladding diameter | 125 ± 0.7µm |
| Coated diameter | 235µm to 245µm |
| Core/Cladding concentricity error | ≤ 0.5µm |
| Coating concentricity error | ≤ 12µm |
| Macro bend loss | (1550 nm) |
| • 10 turns at Ø50mm | ≤ 0.01 dB |
| • 10 turns at Ø30mm | ≤ 0.2 dB |
| • 1 turn at Ø20mm | ≤ 0.2 dB |
| Temp. range (operation) -30°C to 70°C (-22°F to 158°F) | Max attenuation change: ≤ 0.1 dB/km |
| Coating Strip Force | 1.3 to 8.9 N |

Ordering Information

| Fiber Count | PPC Part No. | SKU Length | SKU Weight | Cable Weight | Reel Dimensions | Product Code Description |
|-----------------------|--------------|------------|------------|--------------|-----------------|--------------------------|
| <i>250 µm G.657A1</i> | | <i>m</i> | <i>kg</i> | <i>kg/km</i> | <i>mm</i> | |
| 2F | 10-0472-PIA | 2000 | 59.9 | 26.7 | 750x350x400 | MASS-026-PE-BLK (2km RL) |
| 4F | 10-1354-PIA | 2000 | 59.9 | 26.7 | 750x350x400 | MASS-046-PE-BLK (2km RL) |
| 12F | 10-1315-PIA | 2000 | 60.5 | 27.0 | 750x350x400 | MASS-126-PE-BLK (2km RL) |
| 24F | 10-1257-PIA | 2000 | 74.3 | 33.9 | 750x350x400 | MASS-247-PE-BLK (2km RL) |
| 36F | 10-1258-PIA | 2000 | 80.7 | 37.1 | 750x350x400 | MASS-367-PE-BLK (2km RL) |
| 48F | 10-1203-PIA | 2000 | 87.1 | 40.3 | 750x350x400 | MASS-487-PE-BLK (2km RL) |

Information on the stripping tools can be found at <https://www.ppc-online.com/aerial-fiber-cable-stripping-tools>.