

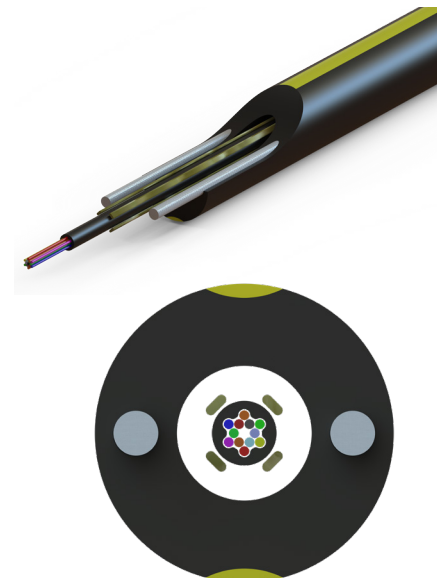
Outside Plant Aerial FiberCables

All Dielectric Self-Supporting (ADSS)



Features & Benefits

- Small diameter - up to 12 fibers in 6 mm OD; 24 to 48 fibers in 7 mm OD
- Lightweight - approximately 22-35 kg/km (15-24 lbs/kft)
- Easy to handle - round concentric design
- Supported by existing poles and hardware
- All Dielectric Self Supporting (ADSS) construction
- Easy to strip – uses stripper Nos. 10-1323 (6 mm version) & 10-1325 (7 mm version)
- Self-supporting spans up to 110 m (360 ft)
- UV stabilized outer jacket guaranteed for 25 years outdoor use



Compatibility:

- ITU-T G.657A1 single-mode & G.651
- Fusion and mechanical splice practices
- Spiral (formed wire) and wedge-type clamps and dead-ends

Overview

PPC's ultra-light weight ADSS cable has an all dielectric construction that is substantially lighter than traditional aerial fiber cables. The cable's light weight allows existing 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. Due to the all dielectric construction, the cable can be safely located near high voltage overhead power lines.

The ADSS cable from PPC is smaller than competing self-support aerial cables; in-part because the strength members are embedded within the round cable jacket design. As well as being more aesthetically pleasing this reduces the loading effect of wind and ice when compared to other cable designs.

PPC's self-supporting ADSS cable uses a loose tube design with fiber counts of 2, 4, 8, and 12 depending on the total fiber count of the final cable. Utilizing a separate loose tube reduces the risk of fiber strain and offers better protection from abrasion, impacts and crushing forces, whilst simplifying fiber management and cable stripping.

Applications

- FTTX Backbone Aerial Fiber
- Metropolitan Subscriber Networks
- Rural Broadband and SDU Deployments
- Direct Bury and Sub-Duct Routing

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Technical Data

Mechanical Performance

| Fiber Count | PPC Part Number | Cable O.D. | Weight | Min. Bend Radius | Crush Resistance |
|-------------|-----------------|---------------------------|-------------|--------------------------|----------------------------|
| 250 μ m | numeric | mm (in) | kg (lbs/km) | mm (in) | N |
| 1 | 10-1021 | 6.0 (24) | 22.2 (49) | 60 (2.4) | 2000 |
| 2 | 10-1232 | 6.0 (.24) | 22.4 (49.4) | 60 (2.4) | 2000 |
| 4 | 10-1233 | 6.0 (.24) | 22.6 (49.8) | 60 (2.4) | 2000 |
| 12 | 10-0891 | 6.0 (.24) | 23.2 (51.1) | 60 (2.4) | 2000 |
| 24 | 10-1180 | 7.0 (.28) | 32.8 (72.3) | 70 (2.8) | 2000 |
| 36 | 10-1181 | 7.0 (.28) | 33.1 (73.0) | 70 (2.8) | 2000 |
| 48 | 10-1182 | 7.0 (.28) | 34.8 (76.7) | 70 (2.8) | 2000 |
| Jacket | Loose Tube | Operating Temp | | Install Temp | Storage Temp |
| | | °C (°F) | | °C (°F) | °C (°F) |
| PE | PBT | -30 to 70 (-22 to 158) | | -20 to 50 (-4 to 122) | -30 to +70 (-22 to 158) |

Tensile Strength

| Specification | 1-24F | 36F & 48F |
|--------------------------|------------------|------------------|
| Max Stringing Tension | 250 N (55 lbs) | 250 N (55 lbs) |
| Max Installation Tension | 445 N (100 lbs) | 445 N (100 lbs) |
| Max Loaded Tension/MRCL | 1000 N (225 lbs) | 1200 N (270 lbs) |
| Rated Breaking Strain | 3000 N (674 lbs) | 4000 N (899 lbs) |

Installation Performance

| Cable Size | Installation Sag | Light | Medium | High |
|------------|------------------|-----------------------|---------------------------|---------------------------|
| | | [no ice, <90mph wind] | [¼ inch ice, <40mph wind] | [½ inch ice, <40mph wind] |
| | % | Max Span m (ft) | Max Span m (ft) | Max Span m (ft) |
| 6 mm | 0.5 | 80 (262) | 55 (180) | 30 (98) |
| 6 mm | 1.0 | 105 (344) | 70 (229) | 35 (114) |
| 7 mm | 0.5 | 85 (278) | 45 (147) | 30 (98) |
| 7 mm | 1.0 | 90 (295) | 50 (164) | 35 (114) |

Reel (Packaging) Information

| Reel Diameter | Reel Width | Total Weight |
|---------------|------------|--------------|
| mm (in) | mm (in) | kg (lbs) |
| 750 (30) | 400 (16) | 6.5 (14.3) |



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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 GPa (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 |
|-------------------|--------------|-------------|--------------|-----------------|------------------------------|--------------------------------|
| 250 µm G.657A1 | | m (ft) | kg (lb) | kg/km (lbs/kft) | mm (in) | |
| 1F | 10-1021 | 2000 (6500) | 51.0 (112.4) | 22.2 (14.9) | 750x350x400 (29.5x13.8x15.7) | ADSS-016-PE-BLK-PBT-WHT-A1-250 |
| 2F | 10-1232 | 2000 (6500) | 51.3 (113.1) | 22.4 (15.0) | 750x350x400 (29.5x13.8x15.7) | ADSS-026-PE-BLK-PBT-WHT-A1-250 |
| 4F | 10-1233 | 2000 (6500) | 51.7 (114.0) | 22.6 (15.2) | 750x350x400 (29.5x13.8x15.7) | ADSS-046-PE-BLK-PBT-WHT-A1-250 |
| 12F | 10-0891 | 2000 (6500) | 52.9 (116.6) | 23.2 (15.6) | 750x350x400 (29.5x13.8x15.7) | ADSS-126-PE-BLK-PBT-WHT-A1-250 |
| 24F | 10-1180 | 2000 (6500) | 72.1 (159.0) | 32.8 (22.0) | 750x350x400 (29.5x13.8x15.7) | ADSS-247-PE-BLK-PBT-WHT-A1-250 |
| 36F | 10-1181 | 2000 (6500) | 72.7 (160.3) | 33.1 (22.2) | 750x350x400 (29.5x13.8x15.7) | ADSS-367-PE-BLK-PBT-WHT-A1-250 |
| 48F | 10-1182 | 2000 (6500) | 76.1 (167.8) | 34.8 (23.4) | 750x350x400 (29.5x13.8x15.7) | ADSS-487-PE-BLK-PBT-WHT-A1-250 |

NOTES

1. All part numbers are supplied on a standard reel (see Reel Information above) with 2000m or 6500ft of cable
2. 1F to 4F count cables use a 1.4 mm loose tube
3. 12F, 24F, 36F & 48F cables use 1, 2, 3, or 4 12F loose tubes as appropriate
4. 24F count cable can also be supplied with one (1) 24F loose tube of 2.2mm OD

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

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