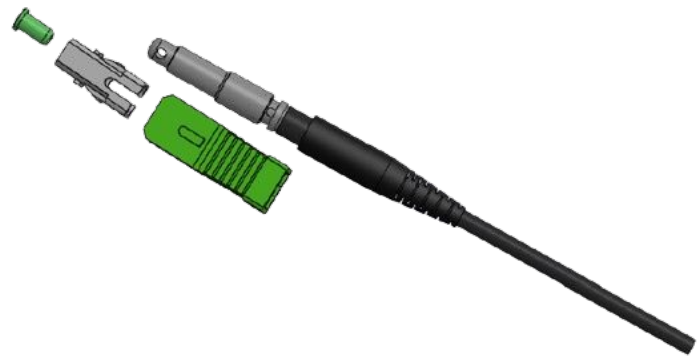


# OptoPull

## Hardened SC/APC Connectorized Drop Cable G.657.A2 Single Mode Optical Fiber



### Product Details

STL OptoPull factory terminated single fiber drop cables are designed to significantly reduce cable installation time required for subscriber connection, thereby reducing the total cost to connect.

### Applications

Suitable for

- Underground in Duct
- Aerial Self Supporting Drop
- Direct Buried

### Optical Specifications

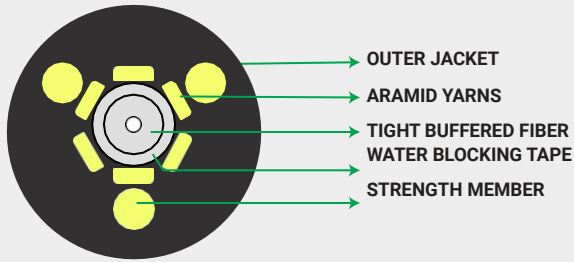
Parameter	Specification
Connector Type	OptoPull SC/APC
Insertion Loss	$\leq 0.30\text{dB}$
Return Loss	$\geq 60\text{dB}$

### Ordering Information

Series Name	Connector at End 1 (Inner Side)	Type of Cable	Cable Length	Connector at End 2 (Outer Side)	Packaging <sup>1</sup>	Cable Printing
OptoPull	P - OptoPull SCA S - OptoBolt SCA N - No Connector 1 - Standard SCA	RD - Round (5mm)	XXXX M XXXX F	P - OptoPull SCA S - OptoBolt SCA N - No Connector 1 - Standard SCA	1- Standard	STL
		R3 - Round (3mm)				

**Note 1.** Standard packaging is a cardboard coil and multiple coils are packed in a box with a cable length <350m and a drum for the length more than 350m.

## Round Drop Cable (5mm)



\* Typical Construction Diagram - Not to Scale

### Product Details

The OptoPull with 5mm Round drop cable jacket has three integral aramid rods for excellent crush resistance and bend management and can provide additional support when deployed into conduits. In this round cable design, we overcome the preferential bending of oval/flat cables to ease installation and slack management.

These cable assemblies are available in multiple lengths and can be supplied with a single connector and a cable stub end or with a connector on both ends.

### Features

- GR-20 for the drop cable
- Manufactured with UV stabilized jacket & designed for superior crush resistance
- IEC and ITU-T standard complaint
- RoHS Compliant

### Cable Performance Standards

Cable complies to the standards: GR 20/ ICEA-110-717, IEC, ITU-T, and RoHS.

Physical Characteristics	
Fiber Count	1F
Fiber Type	STL Fiber ITU-T G657A2
Maximum Cabled Attenuation (dB/km)	1310nm : 0.4 & 1550nm : 0.3
Fiber Color	White
Semi-Tight Buffer	Semi-Tight LSZH Buffer (20mm single strip, <10N Strip Force)
Tight Buffer Color	White
Tight Buffer Size	0.90 ± 0.05 mm
Water blocking elements	Water Swellable Tape
Peripheral Strength Elements	Aramid Yarns
Embedded Strength Members	3 ARP (Aramid Reinforced Plastic) embedded in the outer sheath
Outer Sheath Material	UV Stabilized, Black Polyethylene
Nominal Sheath Thickness (mm)	1.3mm
Cable Diameter [mm]	4.9 ± 0.3
Cable Weight [kg/km]	16 ± 2

**Mechanical & Environmental Characteristics <sup>2</sup>**

Cable Characteristics	Testing Standards	Cable Performance
Tensile Strength (Max allowable) (N)	440N at <1.20%	GR 20/ICEA_S-110-717
Maximum Breaking Load (N)	1350 ~ 2450 N	GR 20/ICEA_S-110-717
Crush Resistance (N/100 mm)	1000N	GR 20/ICEA_S-110-717
Impact Strength(Nm)	2.9Nm	GR 20/ICEA_S-110-717
Torsion	±180°	GR 20/ICEA_S-110-717
Min. Bend Radius	10 x D	
Water Penetration Test	1m waterhead, 3m samples, 24 h	GR 20/ICEA_S-110-717
Temperature Performance		GR 20/ICEA_S-110-717
Installation	-10°C to +75°C	
Operation	-40°C to +70°C	
Storage/Transport	-40°C to +70°C	

**Note 2.** All tests shall be carried out as per GR 20 standard, change in attenuation shall be  $\leq$  0.4 dB at 1550 nm

**Loading Conditions - Maximum Span Distance**

Installation Sag	NESC Light ft (m)	NESC Medium ft (m)	NESC Heavy ft (m)
1.5%	230 (70)	75 (23)	N/A
3%	276 (84)	98 (30)	N/A

## Round Drop Cable (3mm)



\* Typical Construction Diagram - Not to Scale

### Product Details

The construction of OptoPull with 3mm round drop cable features an FR TPU sheath, ensuring it meets higher fire safety requirements. It is equipped with an easily removable, rugged thermoplastic jacket that offers UV protection. The cable is flexible, lightweight, and easy to handle and install, making it highly user-friendly. Additionally, the  $850 \pm 50 \mu\text{m}$  tight-buffered fibers support fast field installations, enhancing its practicality for various applications.

### Features

- Easily strip and splice, simplify the installation and maintenance
- The construction with FR TPU sheath makes cable suitable for higher fire safety requirement
- Easily removable rugged thermoplastic jacket, with UV protection
- Flexible, light weight, easy to handle and install
- $850 \pm 50 \mu\text{m}$  Tight buffered fibers support fast field installations
- IEC and ITU-T standard complaint
- RoHS Compliant

### Cable Performance Standards

Cable complies to the standards: IEC 60793, IEC 60794, IEC 60794-2-50, ITU-T, RoHS, REACH.

Physical Characteristics	
Fiber Count	1F
Fiber Type	STL Fiber ITU-T G657A2
Maximum Cabled Attenuation (dB/km)	1310nm : 0.4 & 1550nm : 0.3
Fiber Color	Blue
Tight Buffer Fiber	Cladding Diameter $125 \pm 0.7 \mu\text{m}$ Coating Diameter Uncolored fibre $242 \pm 7 \mu\text{m}$
Tight Buffer Material	Low Smoke Zero Halogen (LSZH) or Poly Vinyl Chloride (PVC)
Tight Buffer Color	Blue/Natural
Tight Buffer Diameter	$0.85 \pm 0.05 \text{ mm}$
Strength Members	Water blocking type aramid yarns distributed over and around tight buffer
Outer Sheath Material	UV Proof Black TPU
Cable Diameter (mm)	$3 \pm 0.2$
Cable Weight (kg/km)	$8 \pm 10\%$

**Mechanical & Environmental Characteristics <sup>3</sup>**

Cable Characteristics	Testing Standards	Cable Performance
Tensile Strength (Max allowable) (N)	Short term:150 Long term: 500	IEC-60794-1-21-E1
Crush Resistance (N/100 mm)	2000	IEC-60794-1-21-E3
Impact Strength(Nm)	10	IEC-60794-1-21-E4
Torsion	±180°	IEC-60794-1-21-E7
Kink Diameter (mm)	15	IEC-60794-21-E10
Min. Bend Radius (During Installation)	20 x D	IEC-60794-1-21-E11
Min. Bend Radius (After Installation)	10 x D	IEC-60794-1-21-E11
Water Penetration Test	1m waterhead, 3m samples, 24 h	IEC-60794-1-22 F5B
Temperature Performance		IEC-60794-1-22-F1
Installation	-20°C to +65°C	
Operation	-20°C to +60°C	
Storage/Transport	-20°C to +60°C	

**Note 3.** All tests shall be carried out as per IEC 60794 standard.

**Loading Conditions - Maximum Span Distance**

Installation Sag	NESC Light ft (m)	NESC Medium ft (m)	NESC Heavy ft (m)
1%	348 (106)	141 (43)	66 (20)
1.5%	377 (115)	148 (45)	69 (21)
3%	466 (142)	174 (53)	79 (24)

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