

## DUCT OPTICAL CABLE

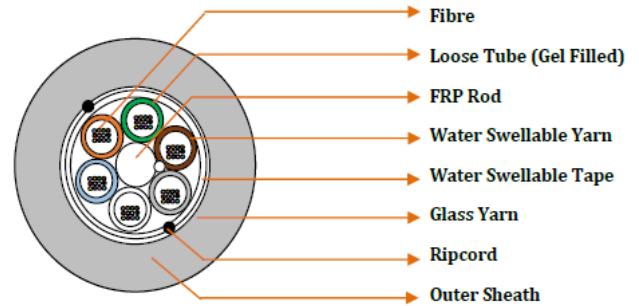
Part Number: DUCT-xFG657A1-100x

### Description

Duct Optical Fibre Cable

### Key Features

- Optical Fiber containing elements laid up around central strength member
- Water blocked loose tubes and Water blocked core interstices
- Glass Yarn as additional strength member
- Polyethylene sheath as outer protection



### Applications

- Duct network

### Standards

- IEC 60793-1
- IEC 60793-2
- IEC 60794-3-10 ANSI/ICEA-S-87-640
- Telcordia GR-20
- ITU-T
- RoHS
- REACH

## Product Specifications

### Cable Construction

Parameter	Structure/Layout/Material						
Fibre Count	12	24	48	72	96	144	288
Fibres per tube	12						
Loose Tube	1	2	4	6	8	12	9+15
Filler – HDPE Black	5	4	2	0			
Loose Tube OD	1.8 ± 0.1 mm						2.0 ± 0.1 mm
Central Strength Member – FRP Rod	1.8 ± 0.1 mm			2.25 mm upcoated to 3.0 mm		2.8 mm upcoated to 5.4 mm	3.0 mm upcoated to 4.0 mm

Moisture Barrier	Water Swellable Yarn & Water Swellable Tape			
Peripheral Strength Member	Glass Yarn			
Outer Sheath	1.0 mm (min.) – HDPE – Black			
RipCORDS	2			
Cable Diameter	8.5 ± 0.5 mm	9.6 ± 0.5 mm	11.9 ± 0.5 mm	14.8 ± 0.5 mm
Cable Weight	60 ± 10 kg/km	75 ± 10 kg/km	115 ± 10 kg/km	165 ± 15 kg/km

### Colour Coding

Fiber Colour EIA/TIA 598	Bl	Or	Gr	Br	Sl	Wh	Rd	Bk	Yl	Vi	Pk	Aq
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Loose Tube Colour EIA/TIA 598	Bl	Or	Gr	Br	Sl	Wh	Rd	Bk	Yl	Vi	Pk	Aq
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Loose tube Colour EIA/TIA 598	Bl	Or	Gr	Br	Sl	Wh	Rd	Bk	Yl			
	Bl	Or	Gr	Br	Sl	Wh	Rd	Bk	Yl	Vi	Pk	Aq
Tracer Mark	Bl	Or	Gr									

### Cable & Fibre Characteristics

Tensile Strength (0,6% fibre strain)	12~72F: 1800N; 96~144F: 2600N; 288F: 3000N		IEC-60794-1-21-E1
Crush Resistance	1000N/10 cm		IEC-60794-1-21-E3
Impact Strength	1 J		IEC-60794-1-21-E4
Torsion	±180°		IEC-60794-1-21-E7
Repeated Bending	20 x D, 25 cycles		IEC-60794-1-21-E6
Minimum Bend Radius	Installation: 20 x D Operation: 10 x D		IEC-60794-1-21-E11
Kink	12 x D		IEC-60794-1-21-E10
Water Penetration Test	1 m water head, 3 m sample, 24 hours		IEC-60794-1-22-F5
Environmental Performance	Installation	-30°C to +60°C	IEC-60794-1-22-F1
	Operation	-40°C to +70°C	
	Storage	-40°C to +70°C	

Fibre Type	G.657A1			
Attenuation	1310 nm		≤ 0.36 dB/km	
	1550 nm		≤ 0.22 dB/km	
Chromatic Dispersion	1285-1330 nm		≤ 3.5 ps/nm.km	
	1550 nm		≤ 18 ps/nm.km	
	1625 nm		≤ 22 ps/nm.km	
PMD (Max. Individual)	≤ 0.15 ps/√km			
PMD (Link design value)	≤ 0.06 ps /√km			
Cable cut off wavelength λ <sub>cc</sub>	≤ 1260 nm			
MFD	1310 nm		9.1 ± 0.3 μm	
	1550 nm		10.3 ± 0.5 μm	
Bending Induced Attenuation	1 Turn	φ 20	1550 nm	≤ 0.75 dB
			1625 nm	≤ 1.5 dB
	10 Turn	φ 30	1550 nm	≤ 0.25 dB
			1625 nm	≤ 1.0 dB
Core-Cladding Concentricity Error	≤ 0.5 μm			
Cladding Diameter	125 ± 0.7 μm			
Cladding Non Circularity	≤ 0.8 %			
Primary Coating Diameter (Uncoloured)	242 ± 5 μm			

## Cable Length

Cable Length	4.0 km ± 5%
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