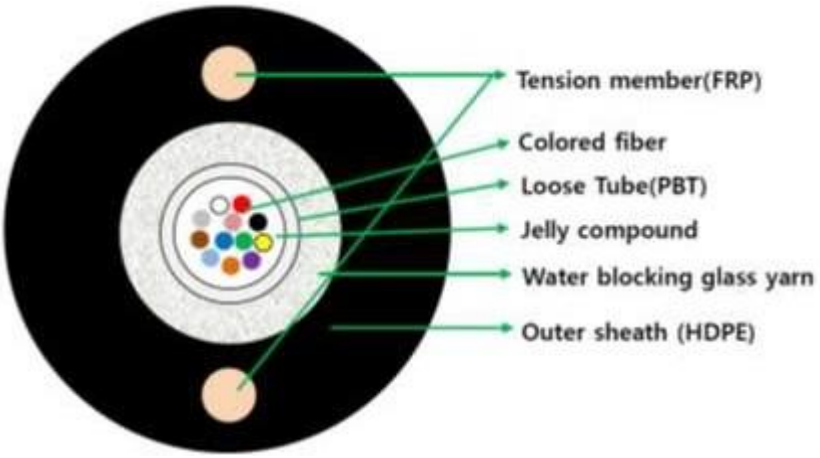
2F Aerial and Duct Access Cable

Good universal 2F SM Lead in cable, Duct and Aerial applications that will self-support up to 50m.
Constructed with G657.a2 Bend-insensitive fibre and HDPE sheath for strength and protection.

IDENTIFICATION
The Colour Code of the individual fibres
Table . The Colour Code of the fibres

Number	1	2
Colours	Blue	Orange

Outer jacket colour: Black



CABLE CONSTRUCTION

The construction of the cable shall be in accordance with Table.

ITEMS	DESCRIPTION
Number of Fibers	2Fo
Central Tube	PBT (Polybutylene Terephthalate) Diameter : 1.8mm ± 0.10
Dielectric Strength Member	Glass yans
Tensile Strength Member	FRP
Outer Jacket	PE Polyethylene
Sheath thickness	Nominal 1.3 mm
Cable Diameter	5.8 mm ± 0.3
Weight	Nominal 40 kg/km

PHYSICAL / MECHANICAL / ENVIRONMENTAL PERFORMANCE AND TESTS

Temperature Range

For the cables covered by this specification, the following temperature ranges apply:

-. Operating Temperature : -30 to +60℃

-. Installation temperature : -30 to +60℃

-. Storage and Shipping Temperature : - 30 to +60℃

Construction of the Cable	Items of Properties	Value
Geometrical Characteristics	Effective group index of refraction @1310nm @1550nm	 1.466 1.467
	Mode field diameter @1310nm	8.8 ± 0.4 μm
	Core/Clad concentricity error	≤ 0.5 μm
	Cladding diameter	125 ± 0.7 μm
	Cladding non-circularity	≤ 0.7 %
	Coating diameter (Uncolored)	245 ± 10 μm
Optical Characteristics	Cutoff wavelength (λ cc)	≤ 1260nm
	Attenuation coefficient @1310nm Maximum (Typical) @1383nm Maximum @1550nm Maximum (Typical) @1625nm Maximum	 ≤ 0.36 dB/km (≤ 0.35 dB/km) ≤ 0.35 dB/km ≤ 0.23 dB/km (≤ 0.22 dB/km) ≤ 0.25 dB/km
	Bending loss @1625nm 15mm mandrel radius, 10 turns	 ≤ 1.0 dB
	Attenuation uniformity	≤ 0.05 dB
	Chromatic dispersion coefficient @1285~1340nm @1550nm @1625nm	 ≤ 3.4 ps/nm.km ≤ 18 ps/nm.km ≤ 22 ps/nm.km
	Zero dispersion wavelength	1300~1324nm
	Zero dispersion slope	≤ 0.092 ps/nm$_2$.km
	PMD Link design value	≤ 0.1 ps/√ km
	PMD (maximum individual fiber)	≤ 0.2 ps/√ km
Mechanical Characteristics	Proof test level	100 kpsi (9.0 N)
	Coating strip (Nominal)	1.7 N/3cm
Environmental Characteristics (Uncabled fiber)	Temperature dependence (-60℃~+85℃)	≤ 0.05dB/km (@1310nm/@1550nm/@1625nm)
	Temperature-Humidity Cycling (-10℃~+85℃/98% relative humidity)	≤ 0.05dB/km (@1310nm/@1550nm/@1625nm)

Mechanical and Environmental Performance of the Cable

The mechanical and environmental performance of the cable shall be in accordance with Table 5 below.

The Mechanical and Environmental Performance of the Cable

ITEMS	TEST METHOD AND ACCEPTANCE CRITERIA
Tensile Performance Crush resistance Impact resistance	# Test method: IEC 60794-1-2 Method E1 -. Mandrel diameter: 30D (D = cable diameter) -. Length under tension: ≥ 50 m -. Applied tensile load: 1000 N # Test method: IEC 60794-1-2 Method E3 -. Applied load: 2000N/85mm -. Duration of loading: 5 minutes # Test method: IEC 60794-1-2 Method E4 -. Height of impact: 0.5m -. Drop hammer mass: 0.5kg -. No. of impact : 1 time # Acceptance Criteria -. Attenuation increment: ≤0.10 dB -. No jacket cracking and fiber breakage
Repeated Bending Temperature Cycling Torsion	# Test method: IEC 60794-1-2 Method E6 -. Sheave diameter: 15D (D = cable diameter) -. Applied load : 0.5kg -. No. of flexing cycles: 5 cycles -. Flexing speed: 2 seconds/cycle # Test method: IEC 60794-1-2 Method F1 -. Temperature cycling schedule 25℃→-30℃→60℃→-30℃→60℃→25℃ -. Soak time at each temperature: 8hours # Test method: IEC 60794-1-2 Method E7 -. Cable length twisted : 2m -. No. of twist cycles : 5 cycles -. Twist angle : ±180° -. Applied load : 0.5kg # Acceptance Criteria -. Attenuation Increment: ≤0.10 dB -. No jacket cracking and fiber breakage
Bend	# Test method: IEC 60794-1-2 Method E11 -. Mandrel : 10D (D : Cable diameter) # Acceptance Criteria -. Attenuation Increment: ≤0.10 dB