

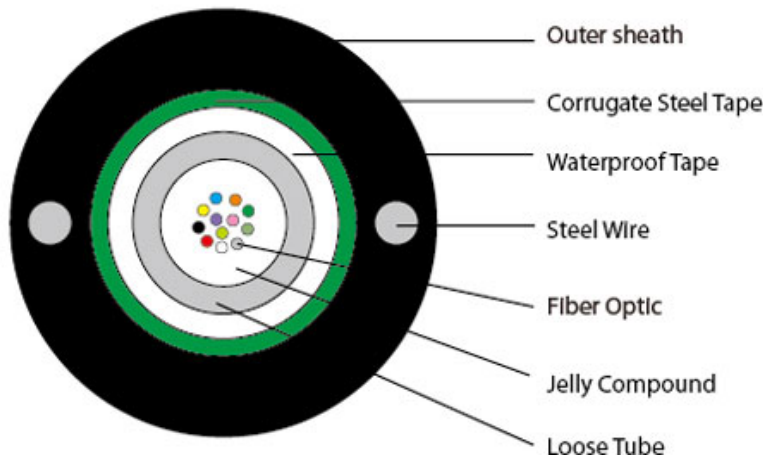


Outdoor Parallel Steel Uni-tube Fiber Optic

Two parallel steel wires aerial installation. With additional protection make it also available for

Wires & Steel Armored Cable

construction cable suits for corrugated steel tape duct installation



Structure & Environmental Characteristics

Feature	Description	
Loose Tube	Material	PBT
Peripheral Strength Member	Material	Steel
	Dimension	1.0mm
Wrapping	Material	Water Proof Tape
Moisture Barrier	Material	Corrugate Steel Tape
Sheath	Material / Color	PE/black
Installation Temperature	-20°C ~ +60°C	
Operation Temperature	-40°C ~ +70°C	
Storage/Transport Temperature	-40°C ~ +70°C	



Mechanical Characteristics

Fiber Count	Outside Diameter (mm)	Cable Weight (kg/km)	Tensile Load		Crush Load		Bend Radius	
			Short Term (N)	Long Term (N)	Short Term (N)	Long Term (N)	Static (mm)	Dynamic (mm)
04	8.7±0.3	82	1500	600	1000	300	10D	20D
06	8.7±0.3	82	1500	600	1000	300	10D	20D
08	8.7±0.3	85	1500	600	1000	300	10D	20D
12	8.7±0.3	90	1500	600	1000	300	10D	20D
24	9.8±0.3	131	1500	600	1000	300	10D	20D

Outdoor Parallel Steel Wires & Steel Armored Uni-tube Fiber Optic Cable, PE

Number of Fibers	9/125	50/125	62.5/125	50/125(OM3)	50/125(OM4)
4	V120041152	V121041152	V122041152	V123041152	V124041152
6	V120061152	V121061152	V122061152	V123061152	V124061152
8	V120081152	V121081152	V122081152	V123081152	V124081152
12	V120121152	V121121152	V122121152	V123121152	V124121152
24	V120241152	V121241152	V122241152	V123241152	V124241152
36	V120361152	V121361152	V122361152	V123361152	V124361152
48	V120481152	V121481152	V122481152	V123481152	V124481152
64	V120641152	V121641152	V122641152	V123641152	V124641152
96	V120961152	V121961152	V122961152	V123961152	V124961152
128	V120281152	V121281152	V122281152	V123281152	V124281152



Single Mode Optic Fiber

Optical Characteristics		1	2
Attenuation	@1310 nm	≤0.35 dB/KM	≤0.35 dB/KM
	@1383 nm	≤0.35 dB/KM (after H ₂ aging)	≤0.35 dB/KM (after H ₂ aging)
	@1550 nm	≤0.22 dB/KM	≤0.21 dB/KM
	@1625 nm	≤0.24 dB/KM	≤0.23 dB/KM
Attenuation vs. Wavelength	@1310 nm 1285~1330 nm	≤0.03 dB/KM	≤0.03 dB/KM
	@1550 nm 1525~1375 nm	≤0.02 dB/KM	≤0.02 dB/KM
Dispersion Coefficient	1530~1565 nm	-	-
	1565~1625 nm	-	-
	1285~1340 nm	-3.0~3.0 ps/(nm.km)	-
	@1550 nm	≤18 ps/(nm.km)	≤18 ps/(nm.km)
	@1625 nm	≤22 ps/(nm.km)	≤22 ps/(nm.km)
Zero Dispersion Wavelength		1302~1322 nm.km	1300~1324 nm.km
Zero Dispersion Slope		≤0.090ps/(nm ² .km)	≤0.092ps/(nm ² .km)
Zero Dispersion Slope (Typical)		≤0.086ps/(nm ² .km)	-
Polarization Mode Dispersion	Max. Individual Fiber	≤0.2 ps/√km	≤0.2 ps/√km
	Design Link (Value M=20.0=0.01%)	≤0.1 ps/√km	≤0.1 ps/√km
Cable Cut-off Wavelength		≤1260 nm	≤1260 nm
Mode Field Diameter	@1310 nm	9.2±0.4 μm	8.8±0.4 μm
	@1550 nm	10.4±0.5 μm	9.8±0.5 μm
Group Index of Refraction	@1310 nm	1.466	1.466
	@1550 nm	1.467	1.467
Geometrical Characteristics			
Cladding Diameter		124.8±0.7 μm	124.8±0.7 μm
Cladding Non-Circularity		≤0.7%	≤0.7%
Coating Diameter		245±5 μm	245±5 μm
Coating/Cladding Concentricity Error		≤12.0 μm	≤12.0 μm
Coating Non-Circularity		≤6.0%	≤6.0%
Core/Cladding Concentricity Error		≤0.5 μm	≤0.5 μm
Curl (Radius)		≥4 m	≥4 m
Environmental Characteristics (@1310 nm/@1550 nm)			
Attenuation at Temperature cycling Δα (-60°C~+85°C)		≤0.05 dB/KM	≤0.05 dB/KM
Attenuation at Temperature-Humidity Cycling (-10°C~+85°C, 98% R.H.)		≤0.05 dB/KM	≤0.05 dB/KM
Attenuation at Damp Heat Dependence (85°C, 98% R.H., 30 days)		≤0.05 dB/KM	≤0.05 dB/KM
Attenuation at Watersoak Dependence (23°C, 30 days)		≤0.05 dB/KM	≤0.05 dB/KM
Mechanical Characteristics			
Proof Test (Off Line)		≥9.0N (≥100 Kpsi)	≥9.0N (≥100 Kpsi)
Attention at Bending Dependence	1 Turn, 7.5 mm Radius	-	≤0.5 dB
	1Turn, 10 mm Radius	-	≤0. 1 dB
	1Turn, 15 mm Radius	-	≤0.03 dB
	1Turn, 25 mm Radius	≤0.05 dB	-
Coating Strip Force (Typical)		1.7N	1.7N
Dynamics Stress Corrosion Susceptibility Parameter (Nd, Typical)		>20	>20

Multi-Mode Optic Fiber

Optical Characteristics		OM1	OM2	OM3	OM4
Attenuation	@ 850 nm	≤3.0 dB/KM	≤3.0 dB/KM	≤2.8 dB/KM	≤2.8 dB/KM
	@1300 nm	≤0.8 dB/KM	≤0.8 dB/KM	≤0.7 dB/KM	≤0.7 dB/KM
Bandwidth	@ 850 nm	≥200 Mhz.KM	≥500 Mhz.KM	≥1500 MHz.KM@LED ≥2000 MHz.KM@laser	≥3500 MHz.KM@LED ≥4700 MHz.KM@laser
	@1300 nm	≥500 Mhz.KM	≥500 Mhz.KM	≥500 Mhz.KM	≥500 Mhz.KM
10Gb/s Ethernet Link Distance (10GBASE-SR)	@ 850 nm	33 M	82 M	300 M	300 M
Zero Dispersion Wavelength		1320~1365 nm	1295~1320 nm	1295~1320 nm	1295~1320 nm
Group Index of Refraction (Typical)	@ 850 nm	1.496	1.482	1.482	1.482
	@1300 nm	1.491	1.477	1.477	1.477
Geometrical Characteristics					
Core Diameter		62.5±2.5 μm	50±2.5 μm	50±2.5 μm	50±2.5 μm
Cladding Diameter		124.8±1.0 μm	124.8±1.0 μm	124.8±1.0 μm	124.8±1.0 μm
Cladding Non-Circularity		≤1.0%	≤1.0%	≤1.0%	≤1.0%
Coating Diameter		245.8±7 μm	245.8±7 μm	245.8±7 μm	245.8±7 μm
Coating/Cladding Concentricity Error		≤12.0 μm	≤12.0 μm	≤12.0 μm	≤12.0 μm
Coating Non-Circularity		≤6.0%	≤6.0%	≤6.0%	≤6.0%
Core/Cladding Concentricity Error		≤1.5 μm	≤1.5 μm	≤1.5 μm	≤1.5 μm
Environmental Characteristics (@850 nm/@1300nm)					
Attenuation at Temperature cycling Δα (-60°C~+85°C)		≤0.10 dB/km	≤0.10 dB/km	≤0.10 dB/km	≤0.10 dB/km
Attenuation at Temperature-Humidity Cycling (-10°C~+85°C, 98% R.H.)		≤0.10 dB/km	≤0.10 dB/km	≤0.10 dB/km	≤0.10 dB/km
Attenuation at Damp Heat Dependence (85°C, 98% R.H., 30 days)		≤0.10 dB/km	≤0.10 dB/km	≤0.10 dB/km	≤0.10 dB/km
Attenuation at Watersoak Dependence (23°C, 30 days)		≤0.10 dB/km	≤0.10 dB/km	≤0.10 dB/km	≤0.10 dB/km
Mechanical Characteristics					
Proof Test (Off Line)		≥9.0 N (≥100 kpsi)	≥9.0 N (≥100 kpsi)	≥9.0 N (≥100 kpsi)	≥9.0 N (≥100 kpsi)
Macrobend Loss (100 Turn, 25mm Radius)	850 nm	≤0.05 dB	≤0.05 dB	≤0.05 dB	≤0.05 dB
	1300 nm	≤0.05 dB	≤0.05 dB	≤0.05 dB	≤0.05 dB
Coating Strip Force (Typical)		1.5 N	1.5 N	1.5 N	1.5 N
Dynamics Stress Corrosion Susceptibility Parameter(Nd, Typical)		≥27	≥27	≥27	≥27