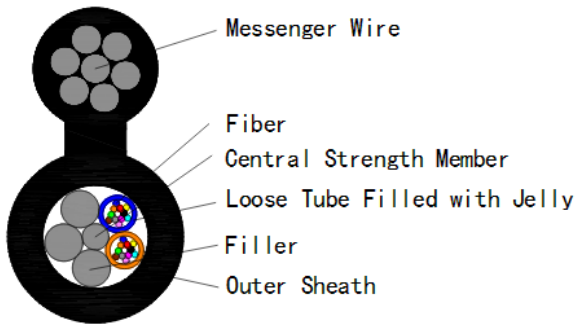


Aerial Figure 8 Optic Cable

Cable Design



No. cable	24
Design	2 Tube+3 Filler
Fiber type	G.652D
Messenger Wire	7*1.0
Central Strength Member	FRP
Cable Diameter	8.3*15.3mm
Outer Sheath	HDPE
Application	Aerial

Optical fiber characteristics (G.652D FIBER)

Category	Description	Specifications	
		G.652D	
Optical Specifications	Attenuation	@1310nm	≤0.35dB/km
		@1383nm	≤0.35dB/km
		@1550nm	≤0.22dB/km
		@1625nm	≤0.25dB/km
	Attenuation discontinuity	≤0.05 dB	
	Attenuation vs. Wavelength	@1285~1330nm	≤0.05 dB/km
		@1525~1575nm	≤0.05 dB/km
	Zero Dispersion Wavelength	1300~1324nm	
	Zero Dispersion Slope	≤0.092ps/(nm ² .km)	
	Dispersion	@1310nm	≤3.5 ps/nm.km
		@1550nm	≤18 ps/nm.km
	Polarization Mode Dispersion (PMD)	≤0.2ps/km ^{1/2}	
Cable Cutoff Wavelength(λ _{cc})	≤1260nm		
Effective Group Index of Refraction	@1310nm	1.4675	
	@1550nm	1.4681	
Macro bend loss (30mm radius ,100turns) 1625nm	≤0.1 dB		
Geometric Specifications	Mode Field Diameter	@1310nm	9.2±0.6μm
		@1550nm	10.4±0.8μm
	Cladding Diameter	125±1μm	
	Cladding Non-Circularity	≤1.0%	
	Coating Diameter	245±5μm	
	Coating/Cladding Concentricity Error	≤8μm	
Mechanical Specifications	Core/Cladding Concentricity Error	≤0.8μm	
	Proof Test level	≥1.0%	
	Fiber Curl Radius	≥4.0m	
	Peak Coating Strip Force	1.3~8.9N	

Technical data

Messenger Wire	Material	mm	FRP
	Size($\pm 0.1\text{mm}$)		7*1.0
Central Strength Member	Material	mm	FRP
	Diameter ($\pm 0.05\text{mm}$)		1.5
Loose Tube	Material	mm	PBT
	Diameter ($\pm 0.05\text{mm}$)		1.9
	Thickness ($\pm 0.03\text{mm}$)		0.32
	MAX.NO. /per		/
Outer Sheath	Material	mm	HDPE
	Thickness		1.5 (nominal)
	color		black.
Cable Weight($\pm 10.0\text{kg/km}$)		kg/km	108
Allowable Tensile Strength	Short Term	N	2000
	Long Term		900
Allowable Crush Resistance	Short Term	N/100	≥ 1000
	Long Term	mm	≥ 300
Attenuation	1310nm	dB/km	≤ 0.35
	1550nm		≤ 0.21
Min. bending radius	Without Tension	mm	$10.0 \times \text{Cable-}\phi$
	Under Maximum Tension		$20.0 \times \text{Cable-}\phi$
Temperature range ($^{\circ}\text{C}$)	Installation	$^{\circ}\text{C}$	-20~+60
	Transport&Storage		-40~+70
	Operation		-40~+70

Identification

No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	blue	orange	green	brow	grey	white	red	black	yellow	violet	pink	aqua

Loose tube & Filler color

No.	1	2	Filler	Filler	Filler
Color	blue	orange	FR	FR	FR

Test

Parameter	Test method	Test conditions	Acceptance criteria*
Tensile strength	IEC 60794-1-2-E1	Load: As per cable maximum tensile strength in table above.	Change in Attn <0.05 dB/Km. No damage or rack to cable & no fiber break
Crush	IEC 60794-1-2-E3	Short time: 10 min Long time: 120 min Load: As per maximum crush resistance in table above Number of positions: 3 adjacent sections (ensuring one over tube and one over lay reversal)	
Impact	IEC 60794-1-2-E4	Weight: 1.5 kg Height: 1.0 m Anvil radius: 12.5 mm Impacts: 1	
Torsion	IEC 60794-1-2-E7	Sample length: 1 m Bends: 360° (1turn) clockwise and after measurement (one minute) 720° (2turns) anticlockwise (two minutes)	
Bend	IEC 60794-1-2-E11	Mandrel diameter: 180 mm Bend: 360° (1turn)	
Bend under tension	Concurrent to tensile test IEC 60794-1-2-E18	Mandrel diameter: 360 mm Bend: 360° (1turn)	
Temperature cycling	IEC 60794-1-2-F1	Sample length: 1000 m (minimum) Temperature range: From -10°C to +70°C	
Compound Flow Test	IEC 60794-1-2	Sample length: 300mm in an air oven(24Hour) Temperature of 50 °C No Dripping	
Water penetration	IEC 60794-1-2-F5B	Sample length=3m, Water height=1m	

Marking:

The color of marking is white, but if the remarking is necessary, the **white color** marking shall be printed newly on a different position.

An occasional unclear of length marking is permitted if both of the neighboring markings are clear.

The both cable ends are sealed with heat shrinkable end caps to prevent water ingress