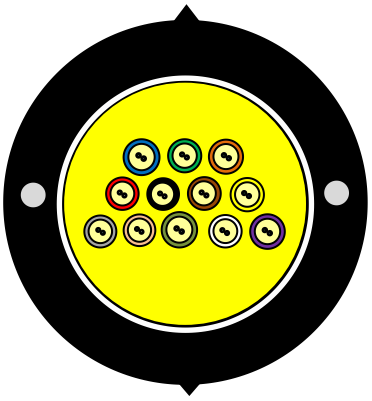
Outdoor- Riser Cable Specification

Cable Design

Micro-Module Optical Fiber Cable-Dielectric-Single Sheath-G.657A1 Fiber



- **Micro Module:** thermoplastic material, containing 4 fibers （2 natural fibers as filling）.
- **Water penetration：** water blocking yarns and tape
- **Aramid yarns:** reinforcement members
- **Strength member:** GFRP inside the outer sheath.
- **Outer Sheath:** LSZH-HFFR.(Black)

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Cable Specification

Cable Cores		**48**
No. of Module		24
Fibers per Module		4(containing 2 filling fibers)
Nominal Cable Diameter	mm	10.5
Nominal Cable Weight	Kg/km	75
Sub-unit Tensile max	N	6
Tensile max	N	1000

Cable Application

Temperature Range		**Minimum Bend Radius**	
Storage	-20~+60℃	Load	20×D
Operation	-20~+60℃	Unload	10×D

Main Mechanical and Environmental Characteristics

Test	**Test Standard**	**Specified Value**	**Acceptance Criteria**
Tensile	IEC 60794-1-2-E1	Tensile, 10min	△α reversible, no damage
Crush	IEC 60794-1-2-E3	1000N/10cm, 1min	△α reversible, no damage
Impact	IEC 60794-1-2-E4	3J, R=300mm,3points	△α reversible, no damage
Torsion	IEC 60794-1-2-E7	5cycles, +/-180^0	△α reversible, no damage
Repeated Bending	IEC 60794-1-2-E6	R=10D, 40N, 20cycles	△α reversible, no damage
Temperature Cycling	IEC 60794-1-2-F1	-25~+70℃, 2cycles	△α reversible, no damage
Water Penetration	IEC 60794-1-2-F5	No water leakage	No water leakage

Fiber & Tube Color

Color Identification of Fiber

Number	1	2	3	4
Color	Blue	Blue*	Natural	Natural

* fiber will be marked black ring.

Color Identification of module

Number	1	2	3	4	5	6	7	8	9	10	11	12
Color	Red	White	Yellow	Blue	Green	Violet	Brown	Black	Orange	Aqua	Pink	Grey
Number	13	14	15	16	17	18	19	20	21	22	23	24
Color	Red*	White*	Yellow *	Blue*	Green*	Violet*	Brown *	Black*	Orange *	Aqua*	Pink*	Grey*
Number	25	26	27	28	29	30	31	32	33	34	35	36
Color	Red**	White **	Yellow **	Blue**	Green **	Violet **	Brown **	Black **	Orange **	Aqua **	Pink **	Grey **
Number	37	38	39	40	41	42	43	44	45	46	47	48
Color	Red***	White ***	Yellow ***	Blue ***	Green ***	Violet ***	Brown ***	Black ***	Orange ***	Aqua ***	Pink ***	Grey ***

* means that 13~24# micro module will be marked black ring.

** means that 25~36# micro module will be marked two black rings.

*** means that 37~48# micro module will be marked three black rings.

Cabled Fiber Performance (G.657A1)

Characteristics		Acceptance Value
Attenuation	@1310nm	≤0.35dB/km
	@1383nm	≤0.34dB/km
	@1550nm	≤0.21dB/km
	@1625nm	≤0.23dB/km
Mode Field Diameter	@1310nm	8.8±0.4μm
	@1550nm	9.8±0.5μm
Dispersion	@1300 +30/-15nm	≤3.5ps/(nm·km)
	@1550nm	≤18ps/(nm·km)
	@1625nm	≤22ps/(nm·km)
Zero-Dispersion Wavelength		1300nm ~ 1324nm
Zero-Dispersion Slope		≤0.092ps/(nm^2·km)
Cable Cutoff Wavelength λ_{cc}(nm)		≤1260nm

Macrobend loss	15mm radius, 10 turn, @1550	≤0.25dB
	15mm radius, 10 turn, @1625	≤1.00dB
	10mm radius, 1 turn, @1550	≤0.75dB
	10mm radius, 1 turn, @1625	≤1.5dB
Effective group index (Neff)	@1310nm	1.4683
	@1550nm	1.4688
	@1625nm	1.4688
Cladding Diameter		125±0.7μm
Cladding Non-circularity		≤0.7%
Core/Cladding Concentricity Error		≤0.5μm
Proof Test		≥0.69GPa (100kpsi)
Dynamic Fatigue		≥20

Sheath Marking

The outer sheath is marked in 1 meter intervals as follows:

48 x SM G.657A1 - Microfocus - Façade cable - TCB103249 2023 {batch} ****m

Delivery Lengths

Standard delivery length will be 1/2km.