

TECHNICAL DATA SHEET FOR ROUND DROP CABLE

(SM 1 Fibers)

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1. SCOPE

1.1 This specification covers the general requirements and performance of GJPFJH which Powtech offered including optical characteristics, electrical characteristics, mechanical characteristics, geometrical characteristics.

1.2 The single mode optical fiber cable comply with the requirements of this specification and generally meet any latest relevant ITU-T recommendation G652

2 REFERENCES

The GJPFJH which Powtech offered shall be designed, manufactured and tested according to international standards as follows:

ISO9001	Quality Management Systems
ISO14001	Environmental Management Systems
IEC 60793-1	Optical fiber Part1: Generic specifications
IEC 60793-2	Optical fiber Part2: Product specifications
IEC 60794-4	Optical fiber cables – Part4: Sectional specification – Aerial optical cables along electrical power lines
IEC 60794-1-2	Optical fiber cables Part 1-2: Generic specification Basic optical cable test procedures
EIA/RS-359	Color code of fiber optic cables
ITU-T G.650	Definition and test methods for the relevant parameters of single-mode fibers
ITU-T G652	Characteristics of a single-mode optical fiber cable
ITU-T G655	Characteristics of a non-zero dispersion shifted single-mode optical fiber cable

3 OPTICAL FIBER: Type G. 657A2

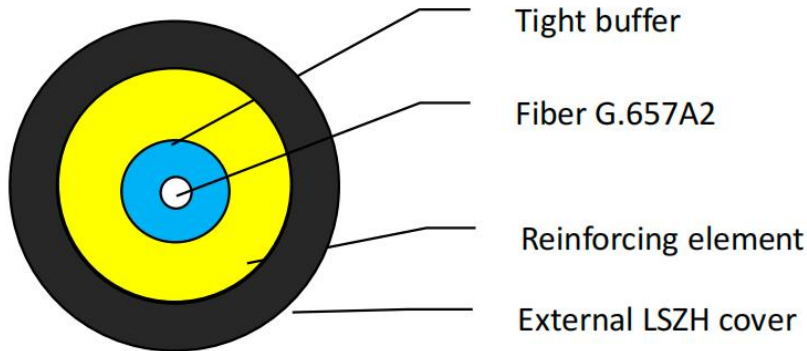
The properties of single mode optical fiber (ITU-T Rec. G.657A2)

S.No	Item	Specification
1	Fiber type	Single mode
2	Fiber material	Doped silica
3	Mode field diameter @1310nm	8.6±0.4 μm
4	Cladding diameter (μm)	125±0.7μm
5	Cladding non-circularity	≤0.5%
6	Core/clad concentricity error	≤0.5 μm
7	Coating diameter (μm)	245±5 μm
8	Cable Cut-off wavelength (λ _{cc})	<1260nm
9	Attenuation @1310nm	≤0.36 dB/km
	Attenuation @1550nm	≤0.22dB/km
10	Zero dispersion wavelength (nm)	1300~1322 nm
	Zero dispersion slope [ps/(nm ² ·km)]	≤0.091 ps/(nm ² ·km)
	Chromatic dispersion @1285~1330nm @1550nm	≤3.5ps/(nm·km) ≤18.0ps/(nm·km)
11	Minimum proof stress	≥0.69GPa,1%
12	Fatigue coefficient (n)	≥20
13	Attenuation with bending loss 7.5mm diameter, 1turn	1550nm≤0.5dB/km 1625nm≤1.0dB/km
	10mm diameter, 1turn	1550nm≤0.1 dB/km 1625nm≤0.2 dB/km
	15mm diameter, 15turn	1550nm≤0.03 dB/km 1625nm≤0.1 dB/km

4 CONSTRUCTION AND SPECIFICATION FOR GJPFJH

POWTECH WWW.POWTECH-CN.COM	Serial No:	PowtechG20260622
	Bid No:	

Cross section



Cable Structure:

Item	Description	
Fiber	1core, G657A2	
Tight buffered	LSZH	color: Blue Diameter: 0.90um+/-0.05um
Reinforcing element	Aramid yarn	Reinforcing element
Jacket	Material	LSZH
	Color	Black
Cable diameter (mm)	3.0+/-0.1mm	
Sheath thickness	0.55+/-0.15mm	
Cable weight	8.0+/-1.0 kg/km	
Maximum tension (MAT)	700N	
Crush resistance (N)	220N/10cm	
Operating temperature	-30° C +65° C	
Application	Aerial/Duct	
Lifespan	20years	

5 COLOR IDENTIFICATION OF FIBER

5.1 Fiber color code

No	1
Color	Blue

6 TEST REQUIREMENTS

NO	ITEM	TEST METHOD	ACCEPTANCE REQUIREMENTS
1	Tensile Strength IEC60 794-1-E1	- Load: - Length of cable under load: 55m - Load time:10 min.	- Loss change ≤ 0.1 dB @1550 nm - No damage to outer jacket and inner elements.
2	Crush Test IEC 60794-1-E3	- Load:2200N - Plate: 100*100mm - Load time: 5min	- Loss change ≤ 0.1 dB @1550 nm - No damage to outer jacket and inner elements.
3	Impact Test IEC 60794-1-E4	-Radius:12.5mm - Impact load: 1J -Impact height: 1m - 3points, 5times per each point	- Loss change ≤ 0.1 dB @1550 nm - No damage to outer jacket and inner elements.
4	Repeated Bending IEC 60794-1-E11A	- Load: 20*diameter of cable - No. of cycle: 30 - L=1.0m	- Loss change ≤ 0.1 dB @1550 nm - No damage to outer jacket and inner elements.
5	Torsion IEC 60794-1-E7	- Test length: 2m - Load: 20N - Twist angle: $\pm 180^\circ$ - No. of cycle: 10	- Loss change ≤ 0.1 dB @1550 nm - No damage to outer jacket and inner elements.
6	Water penetration IEC60794-1-2- F5	Under the temperature of 20 \pm 5 $^\circ$ C Cable length:3m Water height :1m duration :24h	No water penetration
7	Temperature Cycling IEC 60794-1-F1	- Temperature step: +20 $^\circ$ C \rightarrow -20 $^\circ$ C \rightarrow +65 $^\circ$ C \rightarrow +20 $^\circ$ C - Time per each step: 12 hrs - Number of cycle: 2	- Loss change ≤ 0.1 dB @1550 nm - No damage to outer jacket and inner elements.

7. Packing and Marking

Packed in carton, coiled on Wooden reel. Standard length of cable shall be 1,000m or 2,000m. The cable ends shall be securely fastened to the reel to prevent the cable from becoming loose in transit or during placing operations. Each reel shall be well packed in individual carton box.