TECHNICAL DATA SHEET
FOR
INDOOR
FLAT DROP CABLE

(SM 1 Fibers)

Prepared by

Chen Denggui

Technical Engineer

Approved by

_Su Jian__

Technical Director

1. SCOPE

1.1 This specification covers the general requirements and performance of GJXH 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 G657A2

2 REFERENCES

The GJXH 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 G657A2	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

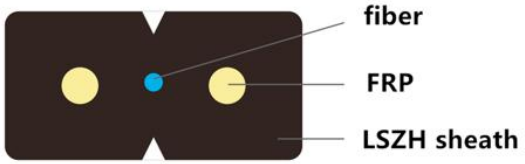
The properties of single mode optical fiber (ITU-T Rec. G.657A2)

S.No	Item	Specification
1	Fiber type	Single mode
2	Fiber material	Doped silica
3	Mode field diameter @1310nm	8.6±0.4 um
4	Cladding diameter (μm)	125±0.7um
5	Cladding non-circularity	≤0.5%
6	Core/clad concentricity error	≤0.5 um
7	Coating diameter (μm)	245±5 um
8	Cable Cut-off wavelength (λcc)	<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 10mm diameter, 1turn 15mm diameter, 15turn	 1550nm≤0.4dB/km 1625nm≤0.8dB/km 1550nm≤0.1 dB/km 1625nm≤0.2 dB/km 1550nm≤0.03 dB/km 1625nm≤0.1 dB/km

4 CONSTURCTURE AND SPEICFICATION FOR GJXH

POWTECH WWW.POWTECH-CN.COM	Non-metal (flame-retardant) layer-stranding optical cable specifications	Serial No:	PowtechG20260622
		Bid No:	

Cross section



GJXH-1B6a2

Cable Structure:

		GJXH-1B6a2
Optical fiber	Type	G657A2
	Color	Blue
Strength member	Material	FRP
	Diameter	2* 0.5mm
Sheath	Material	LSZH
	Color	Black
Crush resistance		Install:2200N/10cm Working: 1000N/10cm
Max. tensile load		Short term:200N, long term:100N
Cable diameter (nominal)		2.0(±0.1) mm × 3.0(±0.1)mm
Cable weight (approx)		7.5kg/km
Minimal dynamic bending radius		30D
Minimal static bending radius		15D

5 COLOR IDENTIFICATION OF FIBER

5.1 Fiber color code

Remark	Fiber No. & Color	
Color	1	
	Blue	

6 TEST REQUIREMENTS

NO	ITEM	TEST METHOD	ACCEPTANCE REQUIREMENTS
1	Tensile Strength IEC60794-1-E1	- Max. tension load - Length of cable under load: 55m - Duration time:1 min.	- Loss change ≤ 0.04 dB @1550 nm - No damage to outer jacket and inner elements.
2	Crush Test IEC 60794-1-E3	- Crush load - Plate: 100*100mm - Duration time: 1min	- Loss change ≤ 0.04 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 points: 3 - Impact number: 1	- Loss change ≤ 0.1 dB @1550 nm - No damage to outer jacket and inner elements.
4	Repeated Bending Test IEC 60794-1-E6	-Bending radius: 20* cable diameter - Cycle: 30	- Loss change ≤ 0.1 dB @1550 nm - No damage to outer jacket and inner elements.
5	Torsion Test IEC 60794-1-E7	- Length: 2m - Load: 20N - Twist angle: ±180° - No. of cycle: 5	- Loss change ≤ 0.1 dB @1550 nm - No damage to outer jacket and inner elements.
6	Bend Test IEC 60794-1-E11A	- Mandrel radius: 30mm - Turn number: 4 - Number of cycle: 3	- 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.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.