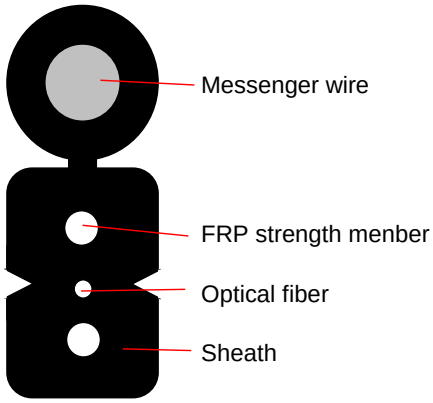
GJYXFCH-1/2B6

1. Cable cross-section



2. Cable Specification

2.1 Introduction

The optical fiber unit is positioned in the center. Two parallel fiber reinforced plastics (FRP) are placed at two sides. A steel wire as the additional strength member is also applied. Then the cable is completed with black LSZH sheath.

2.2 Fiber color code

1	2
Natural	Blue

2.3 Optical fiber type and properties

Item		Unit	Specification
			G. 657A1
Mode field diameter	1310nm	μm	9.2 ± 0.4
Cladding diameter		μm	125.0 ± 0.7
Cladding non-circularity		%	≤1.0
Core concentricity error		μm	≤0.5
Coating diameter		μm	245 ± 5
Coating/cladding concentricity error		μm	≤12
Cable cut-off wavelength		nm	≤ 1260
Attenuation Coefficient	1310nm	dB/km	≤0.35
	1550nm	dB/km	≤0.21
Macro-bend loss (1 turn, 10mm radius)	1550nm	dB/km	≤0.75
	1625nm	dB/km	≤1.5
Proof stress level		kpsi	≥100

Other parameters meet standard ITU-T G.657.

2.4 Cable structure and parameter

Item		Parameters
No. of fibers	Count	1/2
Strength member	Diameter	0.5 mm
	Material	FRP
Messenger wire	Diameter	1.0 mm
	Material	Steel wire
Outer jacket	Diameter	5.2(±0.2)*2.0(±0.1) mm
	Material	LSZH
	Color	Black
Tensile performance	Short term	600 N
	Long term	300 N
Crush	Short term	2200 N/100mm
	Long term	1000 N/100mm
Cable attenuation		≦ 0.4 dB/km at 1310nm, ≦ 0.3 dB/km at 1550nm
Cable weight (Approx.)		18.5 kg/km

3. Characteristic of Optical Cable

3.1 Min. bending radius (Without messenger wire)

Static: 20 mm

Dynamic: 40 mm

3.2 Application temperature range

Operation: - 20℃ ~ +70℃

Installation: - 5℃ ~ +60℃

Storage & Transportation: - 20℃ ~ +70℃

3.3 Main mechanical & environmental performance test

Item	Test Method	Acceptance Condition
Tensile Strength IEC 60794-1-2-E1	- Load: Short term tension - Length of cable: ≥ 50m - Load time: 1min	- Fiber strain ≤ 0.4% - No fiber breakage and no sheath damage.
Crush Test IEC 60794-1-2-E3	- Load: Short term crush - Load time: 1min	- No fiber breakage and no sheath damage.
Impact Test IEC 60794-1-2-E4	- Points of impact: 3 - Times of per point: 1 - Impact energy: 1J	- No fiber breakage and no sheath damage.
Repeated Bending IEC 60794-1-2-E6	- Bending radius: 30x H - No. of cycle: 300 -Load: 20N	- Fiber additional attenuation ≤ 0.4dB; - No fiber breakage and no sheath damage.
Torsion	- Length: 1m	- No fiber breakage and no sheath damage.

Item	Test Method	Acceptance Condition
IEC 60794-1-2-E7	- Twist angle: ±180° - No. of cycle: 20	
Temperature Cycling IEC 60794-1-2-F1	- Temperature: - 20℃ ~ +70℃ - Time of each step: 8h - Number of cycle: 2	- Fiber additional attenuation ≤ 0.4 dB/km; - No fiber breakage and no sheath damage.