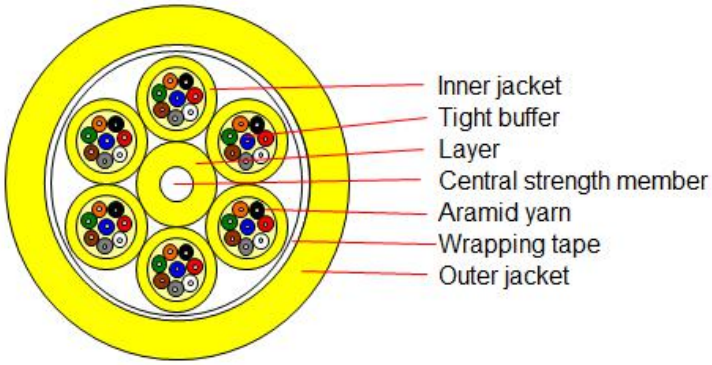
GJPFJH-48B6

1. Cable cross-section



2. Cable Specification

2.1 Introduction

Tight buffer fibers, aramid yarn as strength member, LSZH inner jacket constitute a subunit; elements (subunits and filler rods when necessary) laid up around non-metallic central strength member, wrapping tape, LSZH outer jacket.

2.2 Fiber color code

No.	1
Color	Natural

2.3 Tight buffer color code

No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Gray	White
No.	7	8				
Color	Red	Black				

2.4 Optical fiber type and properties

G657A2 Characteristic of Optical Fiber

Item		Unit	Specification
			G. 657A2
Mode field diameter	1310nm	μm	8.6 ± 0.4
	1550nm	μm	9.6 ± 0.5
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

Item		Unit	Specification
			G. 657A2
	1550nm	dB/km	≤0.21
Macro-bend loss (1 turn,7.5mm radius)	1550nm	dB	≤0.5
	1625nm	dB	≤1.0
Proof stress level		kpsi	≥100

Other parameters meet standard ITU-T G.657.

2.5 Cable structure and parameter

Item	Contents	Unit	Value
Optical Fiber	/	/	48
Cable structure	/	/	1+6
Tight buffer fiber	Diameter	mm	0.9±0.05
	Material	/	LSZH
Strength member	Material	/	Aramid yarns
Inner jacket	Diameter	mm	4.8±0.1
	Material	/	LSZH
	Color	/	Yellow
	Difference	/	Marking “1#, 2#… 5#, 6#” for difference.
Outer jacket	Diameter	mm	17.7±0.5
	Material	/	LSZH
	Color	/	Yellow
	Thickness	mm	1.5±0.1
Tensile performance	Short term	N	1200
Crush	Short term	N/100mm	1000
Cable attenuation		dB/km	≦ 0.4 at 1310nm, ≦ 0.3 at 1550nm
Cable weight (Approx.)		kg/km	275

3. Characteristic of Optical Cable

3.1 Min. bending radius

Static: 10 x cable diameter

Dynamic: 20 x cable diameter

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: 5min	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.

Item	Test Method	Acceptance Condition
Crush Test IEC 60794-1-2-E3	- Load: Short term crush - Load time: 1min	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Impact Test IEC 60794-1-2-E4	- Points of impact: 3 - Times of per point: 1 - Impact energy: 1J	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Repeated Bending IEC 60794-1-2-E6	- Bending radius: 20 x OD - No. of cycle: 100	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Torsion IEC 60794-1-2-E7	- Length: 1m - Twist angle: ±180° - No. of cycle: 10	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Cable bend IEC 60794-1-2-E11	- Diameter of mandrel:20 x OD - Number of turns: 6 - Number of cycles: 10	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Temperature Cycling IEC 60794-1-2-F1	- Temperature: -20℃~+70℃ - Time of each step: 8h - Number of cycle: 2	- Loss change ≤ 0.4dB/km@1550nm. - No fiber break and no sheath damage.
Flame retardant IEC 60332-1	- Pass the single cable vertical flame propagation test.	