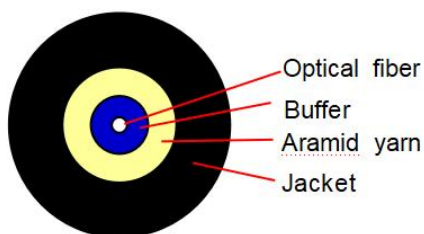


GJFJU

TPU circular introduction single core optical cable

Cable cross-section



Cable Specification

1 Introduction

Simplex cable uses single buffer fiber as optical communication medium, buffer fiber wrapped with a layer of aramid yarns as strength member and finally the cable is completed with TPU jacket.

2 Fiber color code

NO.	1
Fiber color	Natural

3 Buffer color code

NO.	1
Buffer color	Blue

4 Optical fiber type and properties

G657B3 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	124.3~125.0
Cladding non-circularity		%	≤ 1.0
Core concentricity error		μm	≤ 0.5
Coating diameter		μm	245 ± 5
Coating/cladding concentricity error		μm	≤ 10
Cable cut-off wavelength		nm	≤ 1260
Attenuation Coefficient	1310nm	dB/km	≤ 0.35
	1550nm	dB/km	≤ 0.21
Macro-bend loss (1 turn, 7.5mm radius)	1550nm	dB	≤ 0.5
	1625nm	dB	≤ 1.0

2.5 Cable structure and parameter

Item	Contents	Unit	Value
Fiber cores	Count	/	1
Buffer fiber	Diameter	mm	0.9±0.05
	Material	/	LSZH
Strength member	Material	/	Aramid yarns
Outer jacket	Diameter	mm	3.0±0.1
	Material	/	TPU
	Color	/	Black
Tensile strength	Short term	N	700
Crush	Short term	N/100mm	500
Cable attenuation		dB/km	≤0.4 at 1310nm, ≤ 0.3 at 1550nm
Cable weight (Approx.)		kg/km	8.0

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: -10℃ ~ +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: 30min	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Crush Test IEC 60794-1-2-E3	- Load: Short term crush - Load time: 5min	- 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 - Striking surface:300mm	- 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.
Repeated Bending IEC 60794-1-2-E6	- Bending radius: 20 x OD - No. of cycle: 25 - Load: 20N	- 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 $\leq 0.5\text{dB}@1550\text{nm}$. - No fiber break and no sheath damage.
Flame resistance	-IEC 60332-1	

4. Packing

2Km/Roll/Box

Size: 39.5*31.5*39.5cm Weight: 21.5KG