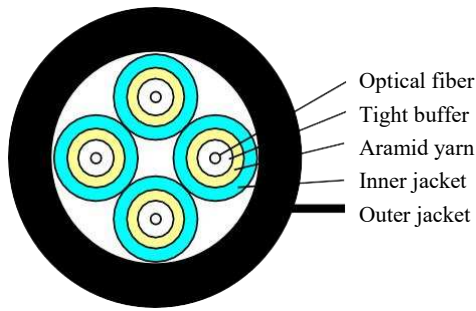


1. Cable cross-section



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) diagonal arrangement, LSZH outer jacket.

2.2 Fiber color code

No.	1
Color	Natural

2.3 Tight buffer color code

No.	1
Color	White

2.4 Optical fiber type and properties

G657A2 Characteristic of Optical Fiber

			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

Document Type	Spec. No.
Tech. Specification	20210115

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Dataprodukter utöver det vanliga

Other parameters meet standard ITU-T G.657

OM2 Characteristic of Optical Fiber

		Specification	
		OM2	
Core diameter		μm	50±2.5
Cladding diameter		μm	124.8± 0.7
Cladding non-circularity		%	≤1.0
Core/Clad concentricity error		μm	≤1.5
Coating diameter		μm	245 ± 10
Coating/cladding concentricity error		μm	≤12
OFL Bandwidth	850nm	MHz·km	≥ 500
	1300nm	MHz·km	≥ 500
Attenuation Coefficient	850nm	dB/km	≤ 2.4
	1300nm	dB/km	≤ 0.6
Proof stress level		kpsi	100

Other parameters meet standard IEC 60793-2-10

OM3 Characteristic of Optical Fiber

		Specification	
		OM3	
Core diameter		μm	50±2.5
Cladding diameter		μm	124.8± 0.7
Cladding non-circularity		%	≤1.0
Core/Clad concentricity error		μm	≤1.5
Coating diameter		μm	245 ± 10
Coating/cladding concentricity error		μm	≤12
OFL Bandwidth	850nm	MHz·km	≥ 1500
	1300nm	MHz·km	≥ 500
EMB Bandwidth	850nm	MHz·km	≥ 2000
Attenuation Coefficient	850nm	dB/km	≤ 2.4
	1300nm	dB/km	≤ 0.6
Proof stress level		kpsi	100

Other parameters meet standard IEC 60793-2-10

2.5 Cable structure and parameter

Item				
Optical Fiber	/	/	2	4
Cable structure	/	/	0+4	
Tight buffer fiber	Diameter	mm	0.85±0.05	
	Material	/	LSZH	
Strength member	Material	/	Aramid yarn	

Document Type	Spec. No.
Tech. Specification	20210115

inner jacket	Diameter	mm	1.9±0.1	
	Material	/	LSZH	
	Color	/	G657A2: Yellow OM2: Orange OM3: Aqua	
The difference of the units			Number (1#,2#,3#,4#) will be marked on the surface of the sub-unit with an interval of 100mm	
Filler	Diameter	mm	1.9±0.1	/
	Material	/	LSZH	
	Color	/	Black	
Outer jacket	Diameter	mm	6.9±0.1	
	Material	/	LSZH	
	Color	/	Black	
Tensile performance	Short term	N	200	
	Long term	N	100	
Crush	Short term	N/100mm	2000	
	Long term	N/100mm	1000	
Cable attenuation		dB/km	SM: ≦ 0.4 at 1310nm, ≦ 0.3 at 1550nm MM: ≦ 1.5 at 1300nm, ≦ 3.5 at 850nm	
Cable weight (Approx.)		kg/km	39.8	41.3

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: -40°C ~ +85°C Installation:
-40°C ~ +85°C

Storage/transportation: -40°C ~ +85°C

3.3 Main mechanical & environmental performance test (Single mode fiber)

Item		
Tensile Strength IEC 60794-1-2-E1	- Load: Short term tension - Length of cable: ≥ 50m - Load time: 5min	- Fiber strain ≤ 0.6% - Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
	- Load: Long term tension - Length of cable: ≥ 50m - Load time: 5min	- Fiber strain ≤ 0.2% - 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: 1min	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
	- Load: Long term crush - Load time: 10min	- 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 $\leq 0.1\text{dB}@1550\text{nm}$ 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 - Load: 20N	- Loss change $\leq 0.1\text{dB}@1550\text{nm}$ after test. - No fiber break and no sheath damage.
Torsion IEC 60794-1-2-E7	- Length: 1m - Twist angle: $\pm 180^\circ$ - No. of cycle: 10 - Load: 20N	- Loss change $\leq 0.1\text{dB}@1550\text{nm}$ after test. - No fiber break and no sheath damage.
Temperature Cycling IEC 60794-1-2-F1	- Temperature: $-20^\circ\text{C}\sim+70^\circ\text{C}$ - Time of each step: 8h - Number of cycle: 2	- Loss change $\leq 0.4\text{ dB}@1550\text{nm}$. - No fiber break and no sheath damage.
Kink IEC 60794-1-2-E10	- Loop diameter: 20 x OD	- No kink occurs.

3.4 Main mechanical & environmental performance test (Multi mode fiber)

Item		
Tensile Strength IEC 60794-1-2-E1	- Load: Short term tension - Length of cable: $\geq 50\text{m}$ - Load time: 5min	- Fiber strain $\leq 0.6\%$ - Loss change $\leq 0.2\text{dB}@1300\text{nm}$ after test. - No fiber break and no sheath damage.
	- Load: Long term tension - Length of cable: $\geq 50\text{m}$ - Load time: 5min	- Fiber strain $\leq 0.2\%$ - Loss change $\leq 0.2\text{dB}@1300\text{nm}$ after test. - No fiber break and no sheath damage.
Crush Test IEC 60794-1-2-E3	- Load: Short term crush - Load time: 1min	- Loss change $\leq 0.2\text{dB}@1300\text{nm}$ after test. - No fiber break and no sheath damage.
	- Load: Long term crush - Load time: 10min	- Loss change $\leq 0.2\text{dB}@1300\text{nm}$ 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 $\leq 0.2\text{dB}@1300\text{nm}$ 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 - Load: 40N	- Loss change $\leq 0.2\text{dB}@1300\text{nm}$ after test. - No fiber break and no sheath damage.
Torsion IEC 60794-1-2-E7	- Length: 1m - Twist angle: $\pm 180^\circ$ - No. of cycle: 10 - Load: 20N	- Loss change $\leq 0.2\text{dB}@1300\text{nm}$ after test. - No fiber break and no sheath damage.
Temperature Cycling IEC 60794-1-2-F1	- Temperature: $-20^\circ\text{C}\sim+70^\circ\text{C}$ - Time of each step: 8h - Number of cycle: 2	- Loss change $\leq 0.5\text{dB}@1300\text{nm}$. - No fiber break and no sheath damage.
Kink IEC 60794-1-2-E10	- Loop diameter: 20 x OD	- No kink occurs.