

BICC

SPECIFICATION

FOR

Optical Fiber Cable

2-48 Core Tight Buffered Indoor

Fiber Cable in CMR/OFNR or LSZH Jacket

Form one singlemode fiber

Item	Unit	Specification
Attenuation	dB/km	1310nm ≤ 0.35 1550nm ≤ 0.25
Dispersion	Ps/nm.km	1285~1330nm ≤ 3.5 1550nm ≤ 18.0
Zero dispersion wavelength	Nm	1300~1324
Zero dispersion slope	Ps/nm.km	≤ 0.095
Fiber cutoff wavelength	Nm	≤ 1260
Mode field diameter	Um	9.3 ± 0.5
Mode field concentricity	Um	≤ 0.8
Cladding diameter	um	125 ± 1.0
Cladding non-circularity	%	≤ 1.0
Coating/cladding concentricity error	Um	≤ 12.5
Coating diameter	um	245 ± 1.0
bending, dependence attenuation	induced	1550nm, 1turns, 32mm diameter 100turns, 60mm diameter
Proof test	kpsi	≥ 100

Form two multimode fiber

Item	Unit	Specification
Attenuation	dB/km	850 nm ≤ 3.0 1300 nm ≤ 1.0
Bandwidth	MHz • km	50/125um 62.5/125 um 850 nm ≥ 400 850 nm ≥ 200 1300 nm ≥ 500 1300 nm ≥ 500
Cladding diameter	um	125 ± 1.0
Cladding non-circularity	%	≤ 1.0
Coating/cladding concentricity error	Um	≤ 12.5
Coating diameter	um	245 ± 1.0
bending, dependence attenuation	induced	850nm, 1300nm 100turns, 75mm diameter ≤ 0.5 at 850 nm \ 1300 nm
Proof test	kpsi	≥ 100

Each requirement

- 1 Fiber count-----2/4/6/8/12/24/48
- 2 Fiber characteristic -----OD: 242 ± 7 um
- 3 Characteristic of tight buffered -----OD: 0.93 ± 0.05 mm
- 4 Thickness of buffered jacket: 0.32 ± 0.02 mm
- 5 Aramid yarns for round strength
- 6 Outer jacket : CMR/OFNR or LSZH (meets IEC 61034-1/2, IEC 754-1/2 and IEC 332-3C)

Cable Weight and Sizes:

Model	Fiber account	OD (mm)	Nominal Weight (kg /km)	Max. Tension (N)		Max. Crushing Resistance (N/100)	
				Short-term	Long-term	Short-term	Long-term
IDLH	2	4.8+0.2	20	350	100	2000	300
IDLH	4	5.2+0.2	25	430	130	2000	300
IDLH	6	5.5+0.2	30	480	160	3000	500
IDLH	8	6.0+0.2	38	660	220	3000	500
IDLH	12	7.0+0.3	47	720	240	3000	500
IDLH	24	7.8+0.3	70	850	280	3000	500
IDLH	48	11.8+0.5	132	1600	520	3000	500

The true weight of optical cable may have some tolerance with the above stated value.

Applications

- As building to building connecting cable
- As indoor soft cable along the wall, ceiling, between layers and in conduits
- As pigtailed, movable connectors and patch cords for communication equipment

Cable Characteristics

- High strength aramid yarn strength member
- Small outer diameter, light weight, flame-retardant
- Suitable for installation, operation and convenient for maintenance
- Complied with G657A1

Cable Standards

- National Electrical Code® (NEC®) OFNR, FT-4
- ANSI/TIA/EIA-568-B.1, 568-B.3-2000, 569-A. 570-A, 606
- CMR/OFNR - UL-1666 and CSA FT-4 (for riser and general building applications);
ICEA S-83596

- LSZH - meets IEC 61034-1/2, IEC 754-1/2 and IEC 332-3C

Cable Sheath marking

Black color printing at each meter distance of cable sheath

The standard printing contents are as below,

- Print legend: BICC 12CORE SM/TB G657A1 INDOOR FIBER CABLE (9/125) 01/19 0001M

Labelling of wooden reel

The standard label contents are as below (alternative labelling available on request).

- Model name of cable
- Fiber count
- Length of cable packed on reel
- Gross weight KGS
- Total no. of reel of the batch of cargoes
- Manufacture month and year

Fiber color code

No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Purple	Pink	aqua

Optical Fiber Characteristics

Fiber type	Attenuation				OFL bandwidth	Effective model bandwidth	10G Ethernet SX	Min bend radius
Conditions	1310/1550nm		850/1300nm		850/1300nm	850nm	850nm	/
	Typical	Maximum	Typical	Maximum				
Unit	dB/km	dB/km	dB/km	dB/km	MHZ.km	MHZ.km	m	mm
G652D	0.30/0.23	0.35/0.25	---	---	---	---	---	16
G657A1	0.30/0.23	0.35/0.25	---	---	---	---	---	10
G657A2	0.3/0.23	0.35/0.25	---	---	---	---	---	7.5
50/125	---	---	3.0/1.0	3.5/1.5	≥500/500			30
62.5/125	---	---	3.0/1.0	3.5/1.5	≥200/500			30
OM3	---	---	3.0/1.0	3.5/1.5	≥1500/500	≥2000	≤300	30
OM4	---	---	3.0/1.0	3.5/1.5	≥3500/500	≥4700	≤550	30
BI-OM3	---	---	3.0/1.0	3.5/1.5	≥1500/500	≥2000	≤300	7.5
BI-OM4	---	---	3.0/1.0	3.5/1.5	≥3500/500	≥4700	≤550	7.5

Section picture of optical cable

