



## OPTICAL CABLE FIBER-LAN INDOOR - EXP

### Construction

RoHS-2 Compliant
Dielectric
Tight Buffer
Singlemode or Multimode

### Description

Optical cable with singlemode or multimode optical fibers arranged in "tight" design. Optical fibers are coated with acrylate resin and a secondary coating of thermoplastic material. Dielectric strength members surround the set of fibers and a thermoplastic flame-retardant outer jacket covers it.

### Application

Installation Environment	Indoor
Operation Environment	Installation in ducts and connection between entrance rooms

### Standard

- ITU-T G.651: "Characteristics of a 50/125  $\mu\text{m}$  multimode graded index optical fibre and cable"
- ITU-T G.652: "Characteristics of a single-mode optical fibre and cable"
- ITU-T G.657: "Characteristics of a bending loss insensitive single mode optical fibre and cable for the access network"
- ICEA S-83-596: "Standard for optical fiber cable premises distribution cable"
- Telcordia GR-409-CORE: "Generic requirements for indoor fiber optic cable"
- ANSI/TIA-568.3-D: "Optical fiber cabling components standard".

### Certifications

ETL (OFNR) Listed - Report N°: 100824709CRT-001  
ETL (DMD) - Report N°: 3174638CRT-001

### Optical Fiber

SM (Singlemode), MM (Multimode) OM1, OM2, OM3, OM4 and OM5.

### Optical Characteristics

Fiber	Characteristics
Single mode	According to technical specification 2000 (Annex A)
Multi mode (OM1, OM2, OM3, OM4 and OM5)	According to technical specification 1999 (Annex B)

**Fiber Coating** Optical fiber with an acrylate coating.

Fiber Identification	Fiber	Color
	01	Blue
	02	Orange
	03	Green
	04	Brown
	05	Slate
	06	White
	07	Red
	08	Black
	09	Yellow
	10	Violet
	11	Pink
	12	Acqua

**Cabling**

Fiber Count	Sub-units Count	Fibers per sub-unit
2 a 12	Single core, no sub-units	
16	4	4
24	4	6
36	6	6
48	4	12
72	6	12

obs.: Sub-units jacket (16, 24, 36, 48 e 72 fibers cables) and external jacket are made of the same color material and sub-units are identified by numbers (#1, #2, #3, #4, #5 e #6).

**Strength member** Dielectric yarns

**Outer Jacket** Thermoplastic flame-retardant material. Outer and inner (when applicable) sheath color identification according to TIA-598-C, as table below.

CHARACTERISTIC	SINGLEMODE	MULTIMODE	MULTIMODE	MULTIMODE	MULTIMODE
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	9/125µm	50/125µm	62,5/125µm	50/125µm	50/125µm
				OM3/OM4	OM5
Outer sheath color	YELLOW	ORANGE	ORANGE	ACQUA	LIME GREEN
Inner sheath color					

Obs.: Other colors under consultation.

#### Cable Flammability Rating

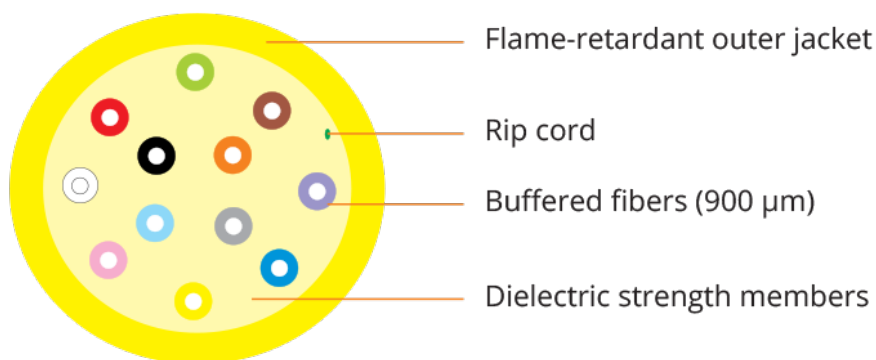
Cable Flammability Rating	
Optical cable for general propose	OFN
Optical cable "Riser"	OFNR
Optical cable with Low Smoke and Zero Halogen jacket	LSZH

Optical cable type **OFN**: Cable in accordance with international specification IEC 60332-3 - "Test On Electric Cables Under Fire Conditions".

Optical cable type **OFNR**: Cable in accordance with UL 1666 - "Test for Flame Propagation Height of Electrical and Optical-Fiber Cables Installed Vertically in Shafts".

Optical cable type **LSZH** : The cable is in accordance with the international specification IEC 60332-3 ("Test On Electric Cables Under Fire Conditions") and additionally the LSZH jacket with IEC60754-2 (Acidity of smoke) and IEC 61034-2 ("Measurement of smoke density of cables burning under defined conditions").

#### Cross Section



**FIBER-LAN INDOOR 12 FIBERS**

#### Physical Characteristics

Minimum bending radius (mm)	- During Installation: 15 x outer diameter - After Installation: 10 x outer diameter
Maximum Tensile Load During Installation	- Cables up to 12F: 660 N

	- Cables with more than 12F: 1320 N
Installation Temperature	0 °C to 40 °C
Storage Temperature	0 °C to 40 °C
Operation Temperature	0 °C to 40 °C

Dimension	Nominal outer diameter (mm)	2 Fibers	4,8
		4 Fibers	5,2
		6 Fibers	5,4
		8 Fibers	6,0
		10 Fibers	6,3
		12 Fibers	6,5
		16 Fibers	14,4
		24 Fibers	14,4
		36 Fibers	17,5
		48 Fibers	16,5
		72 Fibers	20,5
	Nominal weight (kg/km)	2 Fibers	19
		4 Fibers	21
		6 Fibers	24
		8 Fibers	34
		10 Fibers	38
		12 Fibers	40
		16 Fibers	192
		24 Fibers	192
		36 Fibers	231
		48 Fibers	254
		72 Fibers	372
	Outer jacket nominal thickness (mm)	2 to12 Fibers	0,95
		16 to72 Fibers	1,6
	Inner jacket nominal thickness - sub-unit jacket (mm)	16 to72 Fibers	0,65

## Marking

Outer Sheath:

"FURUKAWA FIBER-LAN INDOOR y wF z x month/year k "Customer name" LOTE nL (\*\*)"

Inner Sheath:

"#n"

Where:

y = Type of optical fiber

SM Singlemode fiber

BLI Singlemode bending loss insensitive fiber

MM Multimode fiber

w = Fiber count

x = Cable protection grade

z = Denomination for special fiber

G-652D For singlemode ITU-T G-652D fiber

G-657A1 For singlemode ITU-T G-657A1 fiber

G-657A2 For singlemode ITU-T G-657A2 fiber

(62.5) For multimode 62.5µm fiber

(50) For multimode 50µm fiber

(50)OM3 For multimode 50µm EIA/TIA 492AAAC fiber

(50)OM4 For multimode 50µm EIA/TIA 492AAD fiber

(50)OM5 For multimode 50µm EIA/TIA 492AAAE fiber

month/year MM/YYYY

k = TYPE OFNR C(ETL)US

Note: ETL Listed certificate applicable only for cables with PVC jacket and up to 12 fibers count.

Customer name = when requested in the purchase order\*

\*Under consult for feasibility analysis.

nL = Lot number

(\*\*) = Length marking      xxxx m

n = Sub-unit number (1, 2, 3, 4, 5 and 6) printed each 60mm

Package Type	Wooden reel
Standard Length	cables with 2, 4, 6, 8, 10 or 12 fibers: 2100m cables with 16, 24 ou 36 fibras: 900m cables with 48 ou 72 fibras: 500m - Tolerance ±5%.

### [Part Numbers](#)