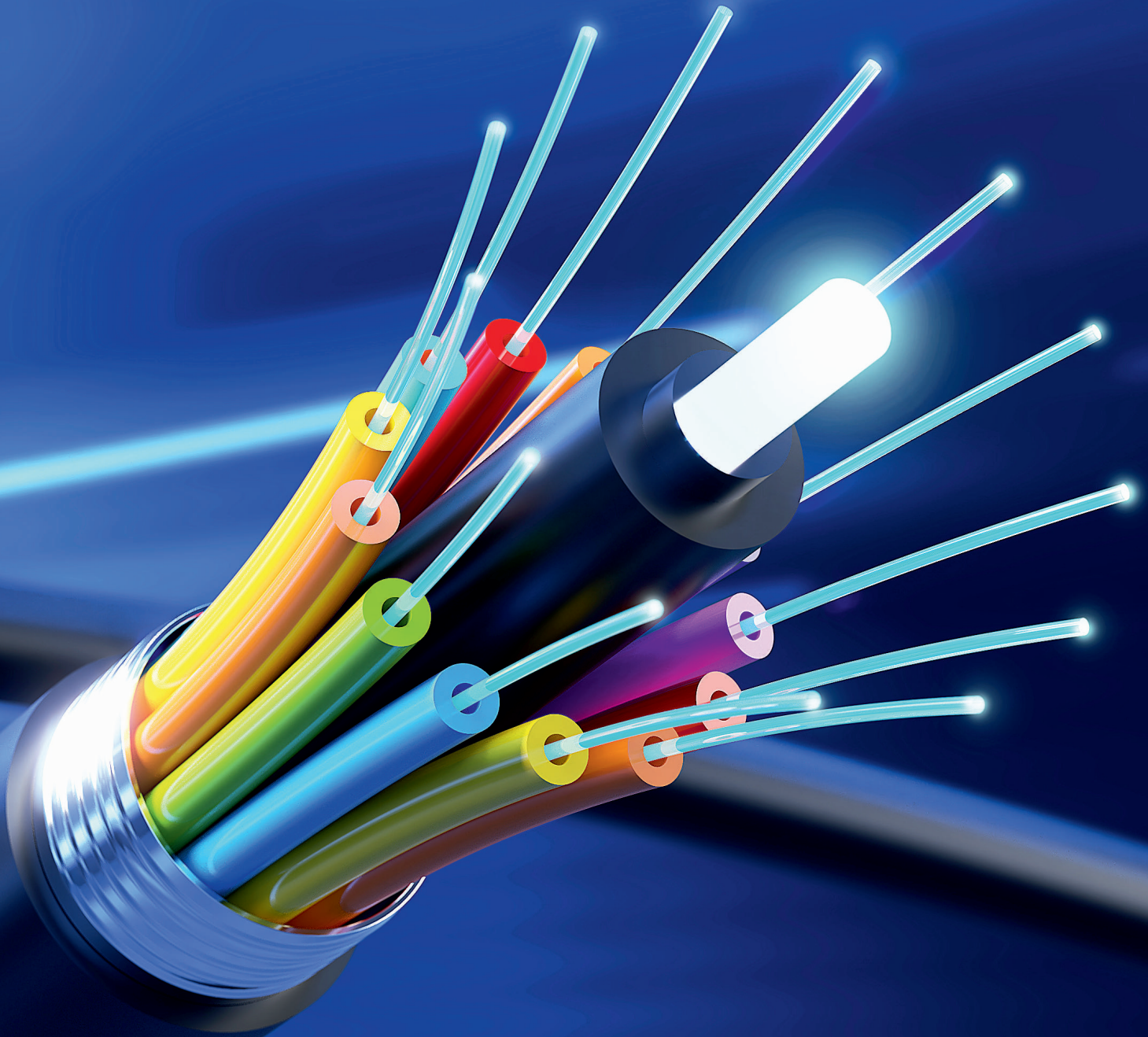


FORELIND®
Special Electrical Cables

Fiber Optic Division



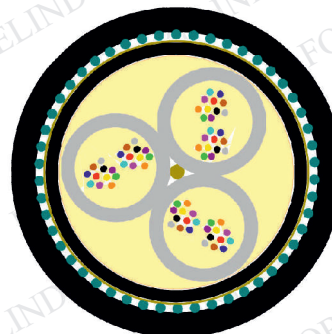
FIBER OPTIC CABLES

FIBER OPTIC CABLES

INTRODUCTION

For.El.Ind. Spa, in its wide range of products, includes also **FIBER OPTIC CABLE**. The aim of this brochure is only to be a brief and basic introduction of the product.

As **FIBER OPTIC CABLE** is subjected to several different constructions we suggest you contacting our sale department to get more technical details, information and quotation.



The drawing is only illustrative

GENERAL CONSTRUCTION AND SPECIFICATIONS

TYPE OF FIBER

Singlemode (SM)	9/125 G. 652/G. 655/G. 656/G. 657
Multimode (MM)	50/125 OM2/OM3/OM4 -- 62,5/125 OM1 -- 200/230

N° OF FIBER

1 up to 96 (or > 96 on request)

N° OF TUBE

Single tube	(1)
Multitube	(> 1)

TYPE OF COATING

Tight
Semi-tight
Loose

INNER SHEATH

PE
PUR
PVC
LSZH
Other material type on request

ARMOURING (Metallic)

Galvanized steel wires
Galvanized steel wire braid
Galvanized steel tapes
Longitudinal corrugated steel tapes
Multi layer AL/PE
Lead Coating

ARMOURING (NOT metallic)

Dielectric tapes
Dielectric rods
Dielectric flat rod
Aramide yarns
Water blocking aramide yarns
Glass yarns
Water blocking glass yarns
Aramide and glass yarns
Water blocking aramide and glass yarns

FIBER OPTIC CABLES

GENERAL CONSTRUCTION AND SPECIFICATIONS

OUTER SHEATH

PE
 PUR
 PVC
 LSZH
 Other material type on request

MINIMUM BENDING RADIUS

20 x Diam. (dynamic)
 10 x Diam. (static)

TYPE OF INSTALLATION

Indoor (for fire resistant cables)
 Outdoor (for low temperature cables)
 Indoor / Outdoor
 Tray / Conduit / Duct
 Direct Buried
 Aerial

FIRE / FLAME BEHAVIOUR

IEC 60332-3 EN 60332-3
 IEC 60331-25 for fire resistant cables
 IEC 60332-1 EN 60332-1
 Other reference standard on request

FO STANDARDS

IEC 60793-2-50
 IEC 11801
 IEC 60793-2
 IEC 60794-1
 ITU-T
 EIA/TIA 455
 EIA/TIA 492
 EIA/TIA 568
 EN 50173
 FDDI

FIBER OPTIC CABLES

SM F.O.

Characteristics

FIBRE TYPE	Single mode std	Single mode Bend insensitive	Single mode Bend insensitive xs	NZDSF
IEC 11801 classification	OS1/OS2	OS1/OS2	OS1/OS2	-
ITU-T type	G.652D	G.657A	G.657B	G.655/G.656

OPTICAL SPECIFICATION

Attenuation	1310 nm	dB/km (max)	≤ 0.35	≤ 0.35	≤ 0.35	≤ 0.40
	1550 nm		≤ 0.21	≤ 0.20	≤ 0.20	≤ 0.25
	1625 nm		≤ 0.23	≤ 0.21	≤ 0.21	≤ 0.28
Bending loss 1 turn D = 30 mm	1550 nm	dB	≤ 0.25	≤ 0.025	≤ 0.003	≤ 0.50
	1625 nm		≤ 1.0	≤ 0.1	≤ 0.01	-
Chromatic Dispersion	1285-1330 nm	ps/(nm km)	≤ 3.0	≤ 3.0	≤ 3.0	-10 ÷ -3
	1550 nm		≤ 18	≤ 18	≤ 18	8
	1625 nm		≤ 22	≤ 22	≤ 22	10

GEOMETRICAL SPECIFICATION

Mode field diameter	1310 nm	μm	9.0 ± 0.4	8.6 ÷ 9.5	6.3 ÷ 9.5	-
	1550 nm		10.1 ± 0.5	-	-	9.2 ± 0.5
Cladding diameter		μm	125 ± 0.7	125 ± 0.7	125 ± 0.7	125 ± 1.0
Coating diameter		μm	242 ± 7.0	242 ± 7.0	242 ± 7.0	242 ± 7.0

APPLICABLE DISTANCE

Gigabit Ethernet	Sx (1310 nm)	m	10,000	10,000	10,000	-
	Lx (1550 nm)		40,000	40,000	40,000	-
10 Gigabit Ethernet	Sx (1310 nm)		10,000	10,000	10,000	-
	Lx (1550 nm)					

FIBER OPTIC CABLES

MM F.O.

Characteristics

FIBRE TYPE		Multimode 62.5/125 std	Multimode 62.5/125	Multimode 50/125 std	Multimode 50/125	Multimode 50/125	Multimode 50/125	Multimode 200/230
IEC 11801 classification		OM1	OM1 +	OM2	OM2 +	OM3	OM4	-
ITU-T type		-	-	G.651	G.651	G.651	G.651	-
OPTICAL SPECIFICATION								
Attenuation	850 nm	dB/km (max)	≤ 3.5	≤ 2.8	≤ 2.8	≤ 3.5	≤ 2.8	≤ 2.2
	1300 nm		≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	-
Bending loss 100 turn D = 75 mm	850 nm	dB	≤ 0.05	≤ 0.05	≤ 0.5	≤ 0.5	≤ 0.5	-
	1300 nm		≤ 0.05	≤ 0.05	≤ 0.5	≤ 0.5	≤ 0.5	-
Bandwidth	850 nm	MHz x km	≤ 200	≤ 1500	≤ 500	≤ 600	≤ 1200	≤ 3500
	1300 nm		≤ 500	≤ 500	≤ 500	≤ 1200	≤ 600	≤ 500



FORELIND[®]

Special Electrical Cables

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