

FORTEX® DT CABLE - LIGHT ARMOR



Construction	Corrugated steel tape armored	
	Totally-Dry core	
	Loose tube	
	SM or NZD	
Description	Optical cables, with singlemode optical fibers coated with acrylate, protected by totally dry loose tubes, protected by waterblocking yarns. Tubes gathered around the central member. The cable core is dry protected by hydroexpansive materials. Around the core it is applied a corrugated steel tape (anti-rodent protection). This agregation is covered by an outer jacket of black thermoplastic or LSZH material.	
Application	Installation Environment	Outdoor
	Operation Environment	Aerial lashed Underground installations against rodents attacks. In ducts Directly buried
Supports IEEE 802.3ae - 10 Gbs Ethernet ,ANSI T11.2 - Fibre Channel e IEE 802.3-2015 Seção 6 40/100 Gbs Ethernet		
Standard	Applicable requirements of the standards: <ul style="list-style-type: none"> • ITU-T G.652 "Standard for non-dispersion shifted single-mode fiber"; • ITU-T G.655 "Standard for non-zero dispersion-shifted single-mode optical fiber"; • ANSI/ICEA S-87-640 "Standard for Optical Fiber Outside Plant Communications Cable"; • Telcordia GR-20 CORE Issue 2 "Generic Requirements for Optical Fiber and Optical Fiber Cable". • ANSI/TIA/EIA 598-D "Optical Fiber Cable Color Coding"; • IEC-60794-1 "Standard fibre optics Optical fibre cables". • IEC-60793-1 "Standard Optical fibres - Measurement methods and test procedures" • ANSI/TIA-568.3-D "Optical Fiber Cabling and Components Standard" • IEC 60332-3 "Tests on electric and optical fibre cables under fire conditions" (Low Smoke Zero Halogen) • IEC 61034-2 "Measurement of smoke density of cables burning under defined conditions" (Smoke density) • IEC 60754-2 "Test on gases evolved during combustion of materials from cables" (Acidity of smoke) 	
Optical Fiber	Singlemode optical fibers ITU-T G652D or NZD ITU-T G655 covered by UV cured acrylate	

Optical Characteristics	Singlemode Fiber Transmission Characteristics - G-652D			
	Wavelength (nm)	Maximum Optical Characteristics (dB/km)		
		Low Water	Zero Water	Zero Water

	Peak (3WM)	Peak (3BE)	Peak (3LE)
1310	0.35	0.35	0.35
1385	0.35	0.31	0.31
1490	N/A	0.27	0.27
1550	0.22	0.25	0.22
1625	0.25	0.25	0.25

NZD Transmission Characteristics - G-655

Wavelength (nm)	Maximum Optical Characteristics(dB/km)
	NZD TrueWave RS (626)
1550	0.23

Other characteristics:

Fiber	Characteristics
Singlemode	According to technical specification 2000 (Annex A)
NZD	According to technical specification 1902 (Annex C)

Fiber Coating Optical fiber with an acrylate coating.

Fiber and Loose Tube Identification

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

Buffer Tube Gel-free loose tubes of thermoplastic material protected with waterblocking yarns in order to prevent water penetration. Loose tubes shall protect the optical fibers from mechanical tensions

Central Member Dielectric-material element located in the center of the core cable to prevent the efforts of the cable tension. As central member, it is applied a bar of plastic material reinforced by FRP (Fiber Reinforced Plastic) fiberglass.

Core The tubes are gathered together to form the cable core. The core shall be protected with water blocking material to prevent water intrusion. If necessary, filler rods may be applied to maintain a cylindrical core.

Core Lay up

Loose tubes quantity	Cable fiber count		
	<u>Construction with 06</u> Fibers per Tube	<u>Construction with 08</u> Fibers per Tube	<u>Construction with 12</u> Fibers per Tube
01	06F	08F	12F
02	12F	16F	24F
03	18F	24F	36F

04	24F	32F	48F*
05	30F	40F	60F
06	36F	48F	72F
07	42F	56F	84F
08	48F	64F	96F
09	54F	72F	108F
10	60F	80F	120F
11	66F	88F	132F
12	72F	96F	144F
13	78F	104F	156F
14	84F	112F	168F
15	90F	120F	180F
16	96F	128F	192F
17	102F	136F	204F
18	108F	144F	216F
19	114F	152F	228F
20	120F	160F	240F
21	126F	168F	252F
22	132F	176F	264F
23	138F	184F	276F
24	144F	192F	288F

Important: For cables with a number of fibers different from those provided in the previous table, consult the manufacturer.

*44F - Formation: 3 loose tubes of 12 fibers + 1 loose tube of 8 fibers

Minimal Rodent Protection Thickness	Corrugated steel tape, longitudinally applied over the cable core. Two ripcords are applied under the corrugated steel tape.
Outer Jacket	Black Polyethylene resistant to weathering and sunlight. A ripcord is included under the outer jacket. For installation in indoor / outdoor environment the jacket will be made of a flame propagating compound, with low emission of smoke and halogen free (LSZH).

Cross Section



Physical Characteristics	Maxiumum Rated Cable Load (MRCL)	2700 N
	Everyday Stress (EDS)	800 N

Crush Resistance	2200 N/10cm
Minimum radius of curvature (mm)	- Under tension: 15 x cable diameter - Without tension: 10 x cable diameter - On the reel: 10 x cable diameter
Installation temperature	-30 °C to 60 °C
Operation temperature	-60 °C to 70 °C
Storage temperature	-40 °C to 75 °C

Dimension	Loose tubes Qty	Cable outer diameter (mm) Tolerance ± 1 (mm)	Nominal cable Weight (kg/km)
	01 to 05		11.5
06		12.1	122
07 to 08		13.9	160
09 to 10		15.6	197
11 to 12		17.4	236
13 to 18		17.2	217
19 to 20		18.0	238
21 to 24		19.7	284

Marking	Cables will be provided with the following marking in bas-relief or in a well readable marking on the cable surface in length intervals of 1 meter: "FURUKAWA AT-fffH2Yx-nnn month/year nnnF "Customer name" LOTE nL (**)"
	Where: fff = Fiber characteristics 3WM = Singlemode fibers Low Water Peak 3BE = Singlemode fibers Zero Water Peak 3LE = Singlemode fibers Zero Water Peak 626 = Fibras TrueWave NZD x = fibers per tube 6 = cables with 6 fibers per tube 8 = cables with 8 fibers per tube T = cables with 12 fibers per tube nnn = Cable fiber count month/year = Date of manufacture (MM/YYYY) "Customer name" = When required on the order (under consult) (**) = Sequential metric marking xxxxxx m nL = lot number

Package Type	Wooden reel
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Standard Length	4000 meters $\pm 2,0$ %
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Observations	Optical cables covered by this datasheet are designed and manufactured considering a minimum lifespan of 25 years, when used in normal and appropriate conditions.
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This lifespan is applicable to products in good conditions, installed according to the good practices, free of damages caused by bad installation, handling and/or inappropriate storage.

[Codification](#)