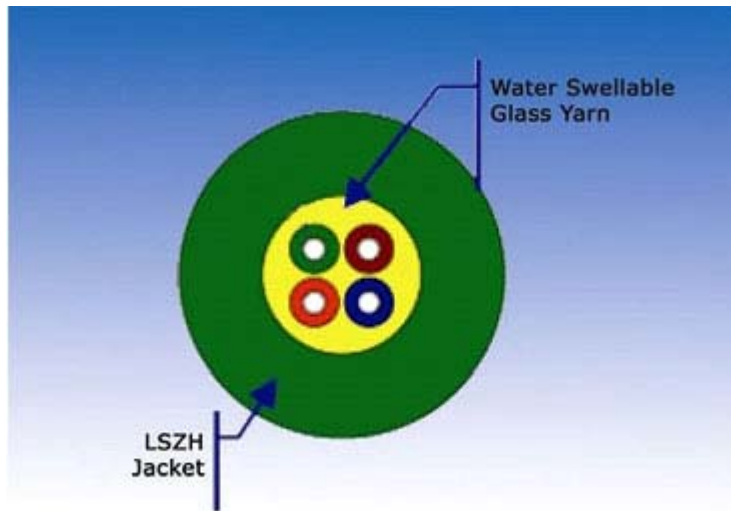




Tramco Fiber Optic Cable

Fiber- Optic Cables

Features



- 2 to 12 fibers
- Each fiber is enclosed in a 0.9mm made of a thermoplastic polymer
- They are color coded for easy identification
- Water swelling glass yarns are employed with the fibers to serve as peripheral strength members and to block the cable core from water penetration
- UV resistant, Low Smoke, Zero Halogen (LSZH) compound outer jacket is extruded over the cable core

Description

Each fiber is enclosed in a 0.9mm made of a thermoplastic polymer. Water swelling glass yarns are used with fibers to strengthen and block cable core from water penetration. Cable core is covered by a Low Smoke, Zero Halogen (LSZH) outer jacket.



Tramco Fiber Optic Cable

Specifications

Mechanical and Environmental Characteristics

Test	Detail Specifications	Test Procedure	
		IEC-60794-1-2 Test Method	TIA/EIA-455 FOTP No
Maximum Pulling Load 1	500 N	E1	33
Maximum Operating Load	60% of pulling load	E1	33
Minimum Bending Radius		E11	104
Installation	20 x cable O.D		
Long Term	10 x cable O.D		
Max. Compressive Loading	2,000N	E3	41
Repeated Impact	2.9 N.m (J) 3 x 2 impacts	E4	25
Twist (Torsion)	180°x10 times , 125 times the cable O.D.	E7	85
Storage Temperature Range	-20°C to +60°C	F1	3
Operating Temperature Range	-20°C to +50°C	F1	3

Cable Weight and diameter

No of Fibers	Nom. Cable Outer Diameter (mm)	Nom. Cable weight (kg/km)
2	4	17
4	5	25
8	6	33
12	7.5	45



Tramco Fiber Optic Cable

Specifications

Fiber-Optic Cable Standard Color Code

Unit Number	Color
1	Blue
2	Orange
3	Green
4	Brown
5	Grey
6	White

Unit Number	Color
7	Red
8	Black
9	Yellow
10	Violet
11	Pink
12	Turquoise



Tramco Fiber Optic Cable

Specifications

Single-Mode Fibers Standard Specifications

Parameter	Standard per ITU-T G.652D	Units
Attenuation		
@1310 nm	\leq 0.38	dB/km
@1550 nm	\leq 0.28	
Dispersion: between 1260 and 1360 nm		
(O Band):	\leq 3.5	ps/(nm*km)
between 1530 and 1565 nm		
(C Band)	\leq 18	
between 1565 and 1625 nm		
(L Band)	\leq 22	
Zero Dispersion Wavelength	1311 \pm 11	nm
Mode Field Diameter @ 1300 nm	9.2 \pm 0.5	μ m
@1550 nm	10.4 \pm 1.0	
Cable Cut-off Wavelength	\leq 1260	nm
PMD (Individual fiber)	\leq 0.2	ps/km ^{1/2}
Cladding Diameter	125 \pm 1.0	m
Core/Cladding Concentricity Error	\leq 0.5	m
Cladding Non-Circularity	\leq 1.0	%
Coating Diameter	245 \pm 10	m
Proof-Test Level	0.7	GN/m ²



Tramco Fiber Optic Cable

Specifications

Multi-Mode Fibers Standard Specifications

Parameter	50/125 m	50/125 μ m	62.5/125 m	Units
ISO/IEC 11801 Classification ⁽²⁾	OM2	OM3	OM1	-
Attenuation				
@850 nm	\leq	3.2	\leq 3.5	db/km
@1300 nm	\leq	1.0	\leq 1.0	
Bandwidth ⁽²⁾				MHz*km
@850 nm	\leq 500(₃)	\leq 2000(₄)	\leq 200	
@1300 nm	\leq 800(₃)	\leq 500	\leq 500	
Numerical Aperture	0.20 \pm 0.015		0.275 \pm 0.015	
Core Diameter	50 \pm 3		62.5 \pm 3	μ m
Cladding Diameter	125 \pm 2		125 \pm 2	μ m
Core Non Circularity	\leq 6		\leq 6	%
Cladding Non-Circularity	\leq 2		\leq 2	%
Core/Cladding Offset	\leq 3		\leq 3	μ m
Coating Diameter	245 \pm 10		245 \pm 10	μ m
Proof-Test Level	0.7		0.7	GN/m ²

1. Overfill launch measurement as per TIA-445-204
2. Effective Modal Bandwidth as per IEC 60793-2.10



Tramco Fiber Optic Cable

Specifications

Multi-Mode Fiber GbE and 10 GbE Link Lengths

Fiber Type	62.5/125 μm	50/125 μm	50/125 μm
11801 Classification ⁽²⁾	OM-1	OM-2	OM-3
Bandwidth ⁽³⁾ : @850 nm @1300 nm	200 MHz.km 500 MHz.km	500 MHz.km 500 MHz.km	2000 MHz.km 500 MHz.km
Link Length for GbE ⁽⁶⁾ @ 850 nm (1000BASE-SX) @ 1300 nm (1000BASE-LX)	220 m 550 m	550 m 550 m	970 m 550 m
Link Length for 10 GbE ⁽⁶⁾ @ 850 nm (10GBASE-SR) @1300 nm (10GBASE-LX4)	33 m 300 m	82 m 300 m	300 m ⁽⁸⁾ 300 m

1. For other fiber specification and additional details, consult RiT's sales department.
2. As per ISO/IEC 11801:2002 or EN 50173.
3. Overfill launch measurement as per TIA-455-204
4. Effective Modal Bandwidth as per IEC 60793-2.10
5. Per IEEE 802.3z, assuming the requirements of the standard and associated documents are met.
6. Per IEEE 802.3ae, assuming the requirements of the standard and associated documents are met.
7. Calculated using the 10GbE link model
8. This link length is assured provided that:
 - a. It is installed per the maximum channel insertion loss requirement of 2.6dB as outlined in the TIA 568 B.3-1, ISO 11801 2nd Ed, and IEEE 802.3ae. The maximum channel insertion loss requirement of 2.6 dB assumes a maximum connection loss of 1.5 dB and a maximum cable attenuation of 3.5 dB/km at 850nm.
 - b. It is used with an IEEE 802.3ae compliant 10GBASE-SR or 10GBASE-SW ports meeting the specifications, among other, for encircled flux as defined in Table 52.7 in IEEE 802.3ae.