The OPTILAN Solution

FiberOptic Cables

TELDOR

The Best Connection™

www.teldor.com

OPTILAN PATCH Cables

	UNITS	Simplex	Duplex Zip	MT-RJ Cables	Flat Duplex
Maximum Allowed Tensile Load - Installation	N	260	450	220	450
Maximum Allowed Tensile Load - Operation	N	160	250	150	250
Maximum Allowed Compressive (Crush) Load	N/cm	150	220	150	220
Maximum Impact Energy Resistance**	N.m	1.5			
Minimum Bending Radius - Installation	D*	15			
Minimum Bending Radius - Operation	D*	10			
Maximum Repeated Bending	Cycles	10,000		1,000	
Operating Temperature Range	°C	-25 to +75			

OPTILAN INDOOR Cables

	UNITS	Flat Duplex	MTD 2 - 4 Fibers	Breakout 2 - 4 Fibers	MTD 6 - 72 Fibers	Breakout 6 - 36 Fibers
Maximum Allowed Tensile Load - Installation	N	450	900	500	1500	
Maximum Allowed Tensile Load - Operation	N	250	540	300	900	
Maximum Allowed Compressive (Crush) Load	N/cm	220			440	
Maximum Impact Energy Resistance**	N.m	1.5			3	
Minimum Bending Radius - Installation	D*	15				
Minimum Bending Radius - Operation	D*	10				
Maximum Repeated Bending	Cycles	1,000			300	
Operating Temperature Range	°C	-25 to +75				

OPTILAN INDOOR/OUTDOOR Cables

		MTD 4 Fibers		MTD 6 - 48 Fibers		Breakout 4 - 36 Fibers	
	UNITS	Armored	Nonarmored	Armored*	Nonarmored	Armored*	Nonarmored
Maximum Allowed Tensile Load - Installation	N	900		1500			
Maximum Allowed Tensile Load - Operation	N	540		900			
Maximum Allowed Compressive (Crush) Load	N/cm	800	220	800	440	800	40
Maximum Impact Energy Resistance**	N.m	4.5	3.0	4.5	3.0	4.5	3.0
Minimum Bending Radius - Installation	D*	20					
Minimum Bending Radius - Operation	D*	20	10	20	10	20	10
Maximum Repeated Bending	Cycles	25	300	25	300	25	300
Operating Temperature Range	°C	-40 to + 75					
Water Blocking		24 hrs. / 1m. water head / 1m. cable length					

* Armored versions available up to 24 fibers

OPTILAN OUTDOOR Cables

		MTD 4 - 48 Fibers		Breakout 4 - 36 Fibers		Single Loose Tube 2 - 12 Fibers	
	UNITS	Armored	Nonarmored	Armored	Nonarmored	Armored	Nonarmored
Maximum Allowed Tensile Load - Installation	N	2700					
Maximum Allowed Tensile Load - Operation	N	1600					
Maximum Allowed Compressive (Crush) Load	N/cm	800	440	800	440	800	440
Maximum Impact Energy Resistance**	N.m	4.5**	3**	4.5**	3**	4.5**	3
Minimum Bending Radius - Installation	D*	20					
Minimum Bending Radius - Operation	D*	20	10	20	10	20	10
Maximum Repeated Bending	Cycles	25	300	25	300	25	100
Operating Temperature Range	°C	-40 to +75					
Water Blocking		24 hrs. / 1m. water head / 1m. cable length					

* D is the cable outer diameter. See cable data sheet for actual diameter.
** Based on 20 Impact cycles on the same spot. Actual Impact Energy Resistance depends on cable outer diameter.

OPTILAN TACTICAL OUTDOOR Cables

For more details see the *OPTILAN* OUTDOOR CABLES insert.

	Tactical Distribution		Tactical Breakout	
	2 Fibers	4 Fibers	2 Fibers	4 Fibers
Cable Diameter	5.0 mm	6.0 mm	7.0 mm	8.0 mm
Cable Weight	25 Kg/Km	33 Kg/Km	42 Kg/Km	54 Kg/Km
Min. Bending Radius - No Load	5 x D*			
Min. Bending Radius - Under Load	10 x D*			
Max. Tensile Strength - Short Term	2500 N			
Max. Tensile Strength - Long Term	1500 N			
Flexing	10,000 cycles			
Maximum Impact Energy Resistance**	2.2 N.m			
Knot Test	500 N			
Max. Crush Resistance	800 N/cm			
Operating and Storage Temperature	-55 to +85 °C			
Cold Bend	-46 °C			
Waterblocking	24 hrs / 1m. water head / 1m. cable length			

* D is the cable outer diameter. ** Based on 200 Impact cycles on the same spot.

ADVANCED FIBERS FOR 1 AND 10 GIGABIT ETHERNET

Teldor now offers advanced fibers specially formulated for Gigabit Ethernet (GbE) and 10-Gigabit Ethernet (10GbE) applications.

Our Premium Grade 50/125 and 62.5/125 fibers are optimized for operation with Laser Diodes used in GbE. These fibers can operate at significantly longer distances than the conservative distances described in the GbE Standard (IEEE 802.3z), both at 850 nm (1000BASE-SX) and 1300 nm (1000BASE-LX). See the Table below for details. In addition, these fibers eliminate the need to use expensive mode conditioning patch cords, as prescribed in IEEE 802.3z.

Teldor's LaserDor fiber is a new type of fiber especially formulated to enable 10-Gigabit Ethernet (10GbE) transmission over distances of up to 300 meters using the low cost Vertical Cavity Surface Emitting Laser (VCSEL) at 850 nm with the 10GBASE-SR/SW interface per IEEE 802.3ae. It is a 50/125 multimode fiber referred to by some as "10 Gigabit Ethernet multimode fiber" or as OM-3 (perISO/IEC 11801) and is defined in TIA/EIA-492AAAC and IEC60793-2-10, fiber type A1a.2. Its key difference, relative to legacy multimode fibers, is the additional stringent optical requirements. This fiber allows a smooth migration path from 100 Mbps Ethernet (Fast Ethernet), through GbE up to 10GbE, and provides the most cost effective solution for 10-GbE implementation in Local Area Network installations.

OPTICAL and TRANSMISSION PROPERTIES

				Min. Bandwidth [4]		Guaranteed Distance for Gigabit Ethernet [5]		Guaranteed Distance for 10GbE [6]
		Max. Att. (dB/Km)		(MHz·Km)		(m)		(m)
		850 nm	1300 nm	850 nm	1300 nm	850 nm	1300 nm	850 nm
50/125µm Graded Index Multimode Optical Fiber	LaserDor (OM-3)[2]	3.2	1.0	2000	500	1000	600	300
	Premium Grade[3]	3.2	1.0	--	--	750	2000	>82
	Standard Grade[1]	3.5	1.2	400	600	500	550	69
	Patch Cord Grade	3.5	1.2	150	200	--	--	--
62.5/125µm Graded Index Multimode Optical Fiber	Premium Grade[3]	3.5	1.0	--	--	500	1000	>35
	Standard Grade[1]	3.5	1.5	200	600	275	550	35
	Patch Cord Grade	3.5	1.5	150	200	--	--	--
		1310 nm	1550 nm	MFD @1310 nm				
SM Standard Matched Clad Single Mode Optical Fiber	Premium Grade	0.4	0.25	9.2 ± 0.5 µm				
	Standard Grade[7]	0.5	0.5	9.2 ± 0.5 µm				

1. Exceeds EIA/TIA 568B.
2. Laser optimized multimode fiber per ISO/IEC 11801 type OM-3, TIA-492AAAC and IEC-60793-2-10 type A1a.2.
3. Exceeds IEEE 802.3z requirements. Fiber optimized for Gigabit Ethernet by controlling the Differential Mode Delay (DMD).
4. Measured in the Overfill Launch Method (OFL) per IEC-60793-1-41.
5. When all other system components meet the requirements of IEEE 802.3z.
6. For lowest cost 10GBASE-SR/SW Ethernet at 850 nm only, when all other system components meet the requirements of IEEE 802.3ae.
7. As per ITU-T G.652

FIBER CODES

3	= **LaserDor** - OM-3 Graded Index Multimode 50/125µm fiber for 10GbE (10GBASE-SR/SW)
5	= **50/125**µm Graded Index Multimode Optical Fiber
6	= **62.5/125**µm Graded Index Multimode Optical Fiber
9	= **SM** Standard Matched Clad Single Mode Optical Fiber

A wide range of composite (mixed fiber types) cables is available. Contact our FiberOptic sales team for details.

BUFFER & GRADE CODES

Code	Secondary Coating	Buffer Material	Fiber Performance
Q	Tight Buffer	Halogen Free Material	LaserDor: OM-3 for 10 Gigabit Ethernet
L			Premium Grade: Extended Link Length for Gigabit Ethernet
M			**Standard Grade**
K			Patch Cord Grade
U	Tight Buffer	Flame Retardant PVC	LaserDor: OM-3 for 10 Gigabit Ethernet
E			Premium Grade: Extended Link Length for Gigabit Ethernet
A			**Standard Grade**
J			Patch Cord Grade
R	Semi-Tight Buffer	Halogen Free Material	LaserDor: OM-3 for 10 Gigabit Ethernet
G			Premium Grade: Extended Link Length for Gigabit Ethernet
B			**Standard Grade**
C			Patch Cord Grade
T	Bare Fibers (For Loose Tube cables)		LaserDor: OM-3 for 10 Gigabit Ethernet
Y			Premium Grade: Extended Link Length for Gigabit Ethernet
X			**Standard Grade**

JACKET COLOR CODES

B = Black	N = Brown	Y = Yellow	H = Teal	O = Orange
G = Grey	P = Purple	E = Green	I = Ivory	R = Red
K = Pink	U = Blue	F = Light Green	L = Light Grey	W = White

TEST METHODS

Property	ANSI/EIA/TIA-455 FOTP No.	IEC-60794-1 Test Method
Tensile Load	33	E1
Compressive (Crush) Load	41	E3
Impact Energy Resistance	25	E4
Bending Radius	33	E11
Repeated Bending	104	E6
Operating Temperature Range	3	F1
Water Blocking	82	F5

Introducing TELDOR'S NEW LINE OF TACTICAL FO CABLES

For details see the *OPTILAN* OUTDOOR CABLES insert.

TELDOR BRAND NAMES

The OPTILAN Solution
Fiber Optic Data Transmission Cables.

The TERADOR Solution
1200 MHz, "Category 8", 100 Ω, Data Transmission Cables.

The HI-GIGA Solution
900 MHz, "Category 8", 100 Ω, Data Transmission Cables.

The GIGA Solution
600 MHz, Category 7, 100 Ω, Data Transmission Cables.

The GIGA-STAR Solution
250 MHz Category 6, 100 Ω, Data Transmission Cables.

The BASIC Solution
100 MHz, Category 5e, 100 Ω, Data Transmission Cables.

The FLEX Solution
Patch, jumpers and work-area Data Transmission Cables.

The OUTDOOR Solution
Horizontal, Backbone & Flexible Copper Data Transmission Cables.

The DIGICOM Solution
100 Ω/120 Ω, ISDN, XDSL & Digital Communication Cables.

The CONTROL Solution
Instrumentation and TelSec security and intrusion-detection Cables.

The BUSDOR Solution
Industrial BUS Cables

What is The OPTILAN Solution?

The ***OPTILAN*** Solution is Teldor's complete line of Local Area Network (LAN) fiberoptic cables for today's and tomorrow's high transmission rates for voice, data and video. The product range of Simplex, Duplex Zip, Flat Duplex, Multitight, Breakout and Loose Tube constructions covers all applications from inter and intra-building needs, to backbone (riser), horizontal and jumper cables. Our cables are available in a wide variety of optical fibers, jacketing materials and strength members. In addition, Teldor offers a broad range of **hybrid fiberoptic-copper cables** in standard and custom made constructions.

Teldor ***OPTILAN*** Solution cables are produced and rigorously tested to conform to most international standards including EIA/TIA-455, IEC 60793, IEC 60794, IEC 60332-3, IEC 60754 and comply with Telcordia (Bellcore) GR-409-CORE and GR-20-CORE. Teldor Wires & Cables is an ISO 9001-2000 Certified Company. Our exclusive advanced production methods are implemented in technological cooperation with some of the world's leading manufacturers of fiberoptic cables.

UL OFNR Rated

Teldor OPTILAN Riser Cables

Teldor fiberoptic products meet the UL 1666 and UL 1651 standards for Optical Fiber Non-conductive Riser cables, including simplex and duplex patch cables as well as robust high fiber count Breakout and MTD (Multi-Tight Distribution) cables.

Fully certified after rigorous testing in ETL's independent testing facilities, these Teldor OFNR tight buffered fiberoptic cables meet the following additional safety standards:

* IEC 60332-3C * ANSI/NFPA 70 * NEC 770-53 * CSA C22.2

TELDOR Wires & Cables Ltd.,

TELDOR Wires & Cables Ltd. Is a leading ISO-9001:2000 certified manufacturer of Hi-Tech, sophisticated cables.
Our product range includes:
Audio frequency & microphone cables, High frequency coaxial, triaxial and twinaxial cables, Instrument & thermocouple extension cables, BUS cables, Power cables, Telecom and switchboard cables for both digital and analog applications, TelSec cables for perimeter intrusion detection and security applications, Digicom cables for ISDN and Digital Telecommunication Systems and Fiber Optic cables.

TELDOR'S LAN & data transmission cable range includes:

The BASIC-Solution: 100 MHz Category 5 & 5E Cables
The GIGA-STAR Solution: 250 MHz Category 6 Cables
The GIGA-DORSolution: 600 MHz Category 7 Cables
The HI-GIGA Solution: 900 MHz Cables
The TERA-DOR Solution: 1200 MHz Cables
The FLEX-Solution: Patch, Jumpers and Work-area Cables.
The OPTILAN-Solution: Fiber Optic Cables for the Local Area Network

In this brochure we present Premises Wiring FiberOptic cables as per ANSI/EIA/TIA-568B and ISO 11801.

For more information on other products from our wide range of wires & cables please call us or visit our website at www.teldor.com

TELDOR... The Best Connection™

TELDOR Wires & Cables Ltd.

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Don't forget to visit our homepage . . . . . .

Teldor Wires & Cables Ltd.
Ein-Dor 19335 Israel
Central Phone: +972-4-6770555
Central Fax: +972-4-6770650
Export Phone: +972-4-6770664
Export Fax: +972-4-6769489
FiberOptic Email: teldorfo@teldor.com
URL: http://www.teldor.com