

INTERLOCKING ARMORED SERIES FIBER OPTIC CABLES TYPE OFCR RISER PRODUCT SPECIFICATIONS

Available from:
CablesPlus
U * S * A
Cables Plus, LLC
8504 Glazebrook Ave Richmond, VA 23228 – Toll Free (866) 678-5852
www.CablesPlusUSA.com

INDOOR/OUTDOOR CABLES | I/O 19

ILA Riser

Applications

- Ideal for industrial and other installations requiring a metallic conduit
- May eliminate the need for innerduct or conduit

Features

- UL Listed in accordance with NEC section 770.179(b) for use in vertical runs in building risers or from floor to floor
- Aluminum interlocking armor with PVC overjacket
- Interlocking armor can be easily removed leaving an intact inner cable
- Greater flexibility than standard corrugated steel armored (CST) cables
- Ideal for locations that require conduit for cable protection
- Preloaded armor may eliminate the need for conduit, reducing installation costs
- Wide operating temperature of -40°C to +85°C
- Optical Cable Corporation D, B, and G-Series Riser cables can be armored with interlocking armor. Standard fiber counts are:
 - D-Series riser: 2 to 72 fibers
 - G-Series riser: 12 to 48 fibers
 - B-Series riser: 2 to 24 fibers
 - Other fiber counts available



Mechanical and Environmental Performance

	Indoor/Outdoor
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Installation Temperature (cable temp.)	0°C to +60°C
Flame Retardancy	UL Listed OFCR (UL 1666) and FT4 (CSA C22.2 No. 232)
Impact Resistance:	20 Impacts
Crush Resistance:	650 N/cm

Optical Cable Corporation reserves the right to change this specification without prior notification.

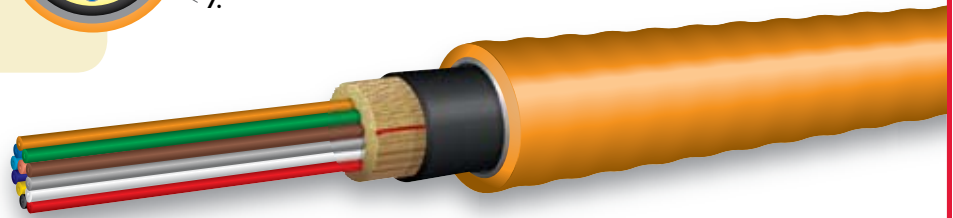
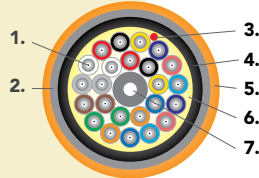
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I/O 20 | INDOOR/OUTDOOR CABLES

1. Tight-Buffered Optical Fiber
2. Aluminum Interlocking Armor
3. Ripcord
4. Inner Jacket
5. Outer Jacket
6. Aramid Strength Member
7. Central Strength Member/Filler



Cable Characteristics: Interlocking Armored Cables (using Distribution Series Riser Inner-cable)

Fiber Count †	Diameter mm (in)	Weight (jacketed/armored) kg/km (lbs/1,000')	Installation Tensile Load (armored) N (lbs)	Operational Tensile Load (armored) N (lbs)	Minimum Bend Radius Installation (cm)	Minimum Bend Radius Long-Term (cm)
4	13.7 (0.54)	174 (117)	1,350 (304)	396 (89)	27.4 (10.8)	20.6 (8.1)
6	13.7 (0.54)	174 (117)	1,350 (304)	396 (89)	27.4 (10.8)	20.6 (8.1)
12	15.2 (0.60)	195 (131)	1,350 (304)	396 (89)	30.4 (12.0)	22.8 (9.0)
24	16.2 (0.64)	217 (146)	1,350 (304)	396 (89)	32.4 (12.8)	24.3 (9.6)
36	17.5 (0.69)	241 (162)	1,350 (304)	396 (89)	35.0 (13.8)	26.3 (10.4)
48	18.8 (0.74)	384 (258)	1,350 (304)	396 (89)	37.6 (14.8)	28.2 (11.1)

† D-Series Riser inner-cable. Other inner-cable configurations available upon request. Please contact Optical Cable Corporation for specifications and ordering details.

See application engineering note:
 Interlocking Armor Cable Pulling Grip Installation Procedure available online at www.occfiber.com.

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Laser Ultra-Fox™ Fiber Performance

Fiber Code	Core/Cladding Diameter (µm)	Wavelength (nm)	Industry Standard Designation	Gigabit Ethernet Distance (m)	10-Gigabit Ethernet Distance (m)	Maximum Cabled Attenuation (dB/km)	Minimum Laser Bandwidth (MHz-km)	Minimum LED Bandwidth* (MHz-km)
WLS	62.5/125 Standard	(850/1310)	OM1 ISO/IEC 11801	300/600	33/300 [^]	3.5/1.5	220/500	200/500
WLX	62.5/125 XL	(850/1310)	OM1 ISO/IEC 11801	500/1000	33/300 [^]	3.0/1.0	385/500	200/500
ALS	50/125 Standard	(850/1310)	OM2 ISO/IEC 11801	600/600	82/300 [^]	3.5/1.5	510/500	500/500
ALX	50/125 XL	(850/1310)	OM2 ISO/IEC 11801	750/600	150/300 ^{^2}	3.0/1.0 ³	950/500	700/500
ALT	50/125 (300 meter 10-GbE)	(850/1310)	OM3 ISO/IEC 11801	1000/600	300/300 ^{^2}	3.0/1.0 ³	2000/500	1500/500
ALE	50/125 (550 meter 10-GbE)	(850/1310)	OM3 ISO/IEC 11801	1040/600	550 ¹ /300 ^{^2}	3.0/1.0 ³	4700/500	3500/500
SLX	9 ^µ /125 Low Water Peak Single-mode	(1310/1550)	ITU-T G.652.D	5 km ⁴	10 km ⁵	0.5/0.5	—	—
SLA	9 ^µ /125 Bend-Insensitive Single-mode	(1310/1550)	ITU-T G.657.A ITU-T G.652.D	5 km ⁴	10 km ⁵	0.5/0.5	—	—
SLB	9 ^µ /125 Bend-Insensitive Single-mode	(1310/1550)	ITU-T G.657.A & B ITU-T G.652.D	5 km ⁴	10 km ⁵	0.5/0.5	—	—

Ordering Information

Digit No:	D	X				D				9		R	I	2
	1	2	3	4	5	6	7	8	9	10	11	12	13	14

- 1 – 2 DX-Series Distribution Ultra-Fox™ = **DX**
- 3 – 5 Fiber count: (See Cable Characteristics Chart) = **004 – 048**
- 6 Jacket type: PVC = **D**
- 7 – 9 Fiber type: (See Laser Ultra-Fox™ Fiber Performance Table)
- 10 250 µm fiber with 900 µm tight buffer = **9**
- 11 Standard Jacket Color: (outer armor)
 - 62.5 µm multimode (WLS, WLX): Orange = **O**
 - 50 µm multimode (ALS, ALX): Orange = **O**
 - 50 µm Ten-Gigabit multimode (ALT, ALE): Aqua = **Q**
 - Single-mode: Yellow = **Y**
- 12 Rating: Riser = **R**
- 13 – 14 Armor Code: Interlocking Armor = **I2**

Example: 12 fiber interlocking armored distribution cable using 62.5 µm standard laser optimized fiber, orange armor jacket, Riser rated –

D	X	0	1	2	D	W	L	S	9	O	R	I	2
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* For backward compatibility to LED based systems, overfilled launch (OFL)

[^] 1310 nm CWDM lasers (10GBASE-LX4)

¹ Reach assuming 3.0 dB maximum cabled attenuation at 850 nm and 1.3 dB total connection and splice loss

² Supports 220 meter 10GBASE-LRM distance, or 300 meter 10GBASE-LRM distance with 300 meter capable equipment

³ 3.5/1.5 dB/km maximum attenuation applies for DX-Series cables greater than 36 fibers, and for all DX-Series cables with armor (corrugated steel tape or interlocked armor) or any other secondary outer jacketing

⁴ 10 km for 1310 nm 1000BASE-LH, and 5 km for 1310 nm 1000BASE-LX

⁵ 10 km for 1310 nm 10GBASE-LR, and 40 km for 1550 nm 10GBASE-ER

⁶ Nominal Mode Field Diameter at 1310 nm

Note: many other fiber types, fiber bandwidth, and attenuation performances are available.

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