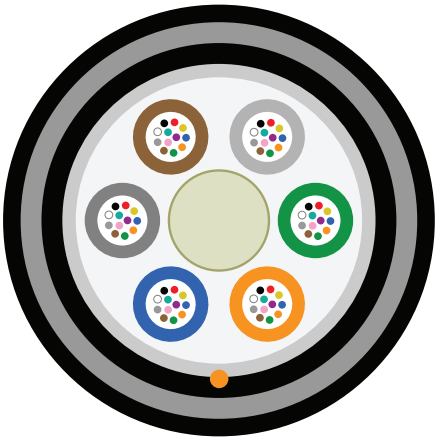
HL-SERIES FIBER OPTIC CABLE
LOOSE TUBE INDOOR/OUTDOOR – RISER ARMORED (ILA)

Offering the durability you expect from OCC, these Indoor/Outdoor Armored Riser Rated cables offer a stranded loose tube construction and are gel-free. These OCC cables are **Build America, Buy America Act (BABA) compliant.**

HL-SERIES LOOSE TUBE INDOOR/OUTDOOR ARMORED (ILA) RISER (OFCR) FIBER OPTIC CABLE



CABLE CHARACTERISTICS	
JACKET COLOR	Black
JACKET MATERIAL	Indoor/Outdoor PVC
ARMOR	Aluminum Interlocking Armor
BUFFER TUBE	2.5 mm Gel-Free
FIBERS	250 µm
COMPLIANCE	Build America, Buy America Act

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS	
MECHANICAL PERFORMANCE PERFORMANCE	ICEA S-104-696
OPERATING TEMPERATURE	-40°C to +70°C
STORAGE TEMPERATURE	-40°C to +75°C
INSTALLATION TEMPERATURE (ACTUAL TEMPERATURE OF CABLE)	-10°C to +60°C
FLAME RETARDANCY	ETL Listed Type OFCR (UL 1666) and FT4 (CSA C22.2 No. 232)

CABLE CHARACTERISTICS

FIBER COUNT	DIAMETER MM (IN)	WEIGHT KG/KM (LBS/1,000FT)	TENSILE LOAD		MINIMUM BEND RADIUS	
			INSTALLATION N (LBS)	OPERATIONAL N (LBS)	INSTALLATION CM (IN)	LONG-TERM CM (IN)
12	20.5 (0.81)	320 (215)	1335 (300)	400 (90)	40.9 (16.1)	28.6 (11.3)
24	20.5 (0.81)	320 (215)	1335 (300)	400 (90)	40.9 (16.1)	28.6 (11.3)
36	20.5 (0.81)	320 (215)	1335 (300)	400 (90)	40.9 (16.1)	28.6 (11.3)
48	20.5 (0.81)	320 (215)	1335 (300)	400 (90)	40.9 (16.1)	28.6 (11.3)
72	20.5 (0.81)	328 (220)	1335 (300)	400 (90)	40.9 (16.1)	28.6 (11.3)
96	21.7 (0.85)	378 (254)	1335 (300)	400 (90)	43.5 (17.1)	30.4 (12.0)
144	25.5 (1.00)	489 (329)	1335 (300)	400 (90)	50.1 (20.1)	35.7 (14.1)
288	28.1 (1.11)	563 (378)	1335 (300)	400 (90)	56.2 (22.1)	39.3 (15.5)

OCC ROANOKE, VA
Corporate Headquarters and Fiber Optic Cable Manufacturing Facility
5290 Concourse Drive
Roanoke, VA 24019 USA
540.265.0690 or **800.622.7711**

OCC DALLAS, TX
Harsh Environment and Specialty Connectivity Manufacturing Facility
1700 Capital Avenue, Suite 150
Plano, TX 75074 USA
972.509.1500 or **877.509.1500**

OCC ASHEVILLE, NC
Enterprise Connectivity Manufacturing Facility
33 Superior Way
Swannanoa, NC 28778 USA
828.298.2260 or **800.880.7674**

VISIT US AT OCCFIBER.COM

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LASER GRADE FIBER PERFORMANCE

Fiber Code	Industry Standard Designation	Core/ Cladding Diameter (µm)	Numeric Aperture	Wavelength (nm)	Gigabit Ethernet Distance (m)	10-Gigabit Ethernet Distance (m)	Max. Cabled Attenuation (dB/km)	Minimum Laser EMB Bandwidth* (MHz-km)	Minimum OFL LED Bandwidth** (MHz-km)
ALT	Laser Optimized OM3 Bend Insensitive ISO/IEC 11801	50/125	0.20	850/1310	1000/600	300/300[^2]	3.0/1.0	2000/500	1500/500
ALE	Laser Optimized OM4 Bend Insensitive ISO/IEC 11801	50/125	0.20	850/1310	1040/600	550[1]/300[^2]	3.0/1.0	4700/500	3500/500
SLA	Bend Insensitive Low Water Peak Single-mode ITU-T G.657.A1 & ITU-T G.652.D	9[5]/125	–	1310/1550	5 km[3]	10 km[4]	0.36/0.22	–	–

* Minimum Laser Effective Modal Bandwidth (EMB)
** 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. 10 km for 1310 nm 1000BASE-LH, and 5 km for 1310 nm 1000BASE-LX
4. 10 km for 1310 nm 10GBASE-LR, and 40 km for 1550 nm 10GBASE-ER
5. Typical Mode Field Diameter at 1310 nm

ORDERING INFORMATION

SERIES		FIBER COUNT			JACKET TYPE	FIBER CODE			245µm FIBER	JACKET COLOR	RATING	REINFORCEMENT	
H	**L**				**D**				**J**	**K**	**R**	**I**	**2**
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Box No:

1 – 2	Loose Tube Outside Plant (OSP) = **HL**
3 – 5	Fiber Count = **012–288**
6	Jacket Type: Indoor/Outdoor PVC = **D**
7 – 9	Fiber Code: (See Table Above)
10	Loose Tube with 245µm Fiber = **J**
11	Standard Jacket Color: Black = **K**
12	Rating: Riser = **R**
13-14	Reinforcement: Aluminum Interlocking Armor (ILA) = **I2**

Example: 288-Fiber Indoor/Outdoor Loose Tube Cable, Bend Insensitive, OM3 Fiber, OFNR, Black Jacket, with Aluminum Interlocking Armor (ILA)

H	**L**	**2**	**8**	**8**	**D**	**A**	**L**	**T**	**J**	**K**	**R**	**I**	**2**