

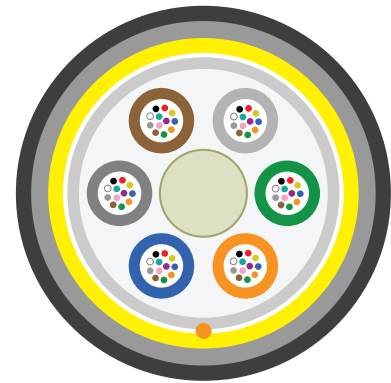


# HL-SERIES FIBER OPTIC CABLE LOOSE TUBE INDOOR/OUTDOOR – PLENUM ARMORED (ILA)

Offering the durability you expect from OCC, these Indoor/Outdoor Armored Plenum Rated cables offer a stranded loose tube construction and are gel-free.

## HL-SERIES FIBER OPTIC CABLE LOOSE TUBE INDOOR/OUTDOOR ARMORED (ILA) PLENUM (OFCP) FIBER OPTIC CABLE

CABLE CHARACTERISTICS	
JACKET COLOR	Yellow (SM) or Aqua (OM3/4)
JACKET MATERIAL	Indoor/Outdoor PVDF
ARMOR	Aluminum Interlocking Armor
BUFFER TUBE	2.5 mm Gel-Free
FIBERS	250 µm



MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS	
MECHANICAL 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)	-30°C to +60°C
FLAME RETARDANCY	ETL Listed Type OFCP (NFPA 262) and FT6 (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	17.9 (0.71)	283 (190)	1335 (300)	400 (90)	35.8 (14.1)	25.0 (9.8)
24	17.9 (0.71)	283 (190)	1335 (300)	400 (90)	35.8 (14.1)	25.0 (9.8)
36	17.9 (0.71)	283 (190)	1335 (300)	400 (90)	35.8 (14.1)	25.0 (9.8)
48	17.9 (0.71)	283 (190)	1335 (300)	400 (90)	35.8 (14.1)	25.0 (9.8)
72	17.9 (0.71)	292 (196)	1335 (300)	400 (90)	35.8 (14.1)	25.0 (9.8)
96	20.4 (0.80)	360 (242)	1335 (300)	400 (90)	40.8 (16.1)	28.6 (11.3)
144	23.0 (0.91)	500 (336)	1335 (300)	400 (90)	45.9 (18.1)	32.1 (12.6)

#### 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](http://OCCFIBER.COM)

## 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)
<b>ALT</b>	Laser Optimized OM3 Bend Insensitive ISO/IEC 11801	50/125	0.20	850/1310	1000/600	300/300 <sup>~2</sup>	3.0/1.0	2000/500	1500/500
<b>ALE</b>	Laser Optimized OM4 Bend Insensitive ISO/IEC 11801	50/125	0.20	850/1310	1040/600	550 <sup>1</sup> /300 <sup>~2</sup>	3.0/1.0	4700/500	3500/500
<b>SLA</b>	Bend Insensitive Low Water Peak Single-Mode ITU-T G.657.A1 & ITU-T G.652.D	9 <sup>5</sup> /125	–	1310/1550	5 km <sup>3</sup>	10 km <sup>4</sup>	0.36/0.22	–	–

## ORDERING INFORMATION

\* Minimum Laser Effective Modal Bandwidth (EMB)

\*\* For backward compatibility to LED based systems, overfilled launch (OFL)  
<sup>1</sup> 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

SERIES		FIBER COUNT				JACKET TYPE	FIBER CODE			245µm FIBER	JACKET COLOR	RATING	REINFORCEMENT		
H	L	1	2	3	4	5	6	7	8	9	10	11	12	13	14
						<b>K</b>					<b>J</b>		<b>P</b>	<b>I</b>	<b>6</b>

- Box No:**
- 1 – 2 Loose Tube Outside Plant (OSP) = **HL**
  - 3 – 5 Fiber Count = **012–144**
  - 6 Jacket Type: Indoor/Outdoor PVDF = **K**
  - 7 – 9 Fiber Code: (See Table Above)
  - 10 Loose Tube with 245µm Fiber = **J**
  - 11 **Standard Jacket Color:**  
 10 Gigabit Multimode (ALT/ALE): Black = **K**  
 Single-Mode (SLA): Black = **K**
  - 12 Rating: Plenum = **P**
  - 13-14 Reinforcement: Aluminum Interlocking Armor (ILA) = **I6**

**Example:** 48-Fiber Indoor/Outdoor Loose Tube Cable, Bend Insensitive, OM4 Fiber, OFCP, Aqua Jacket, with Aluminum Interlocking Armor (ILA)

<b>H</b>	<b>L</b>	<b>0</b>	<b>4</b>	<b>8</b>	<b>K</b>	<b>A</b>	<b>L</b>	<b>E</b>	<b>J</b>	<b>Q</b>	<b>P</b>	<b>I</b>	<b>6</b>
----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------