

OxLinx™ LHM-Pxxx

I. Preview

Group	HDMI Active Optical Cable	Connector type	HDMI A-D
Model	LHM-Pxxx		
<p><Spec.> # 4K 30Hz, 3D, Deep color x.v. Color™, Dolby True HD, DTS-HD Master Audio, HDMI-CEC and HDCP (HEAC is not supported)</p> <p># CMP-OF (UL) & LSZH Cable Jacket</p> <p># Built-in Powering</p> <p># Pluggable AOC Design</p> <p># Easy to install with Plug & Play Operation</p>			

II. Contents

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No.	Date	Item	Changed recording	Ver.	Rev	Customer
1	Mar. 20. 2014	All	<i>The first edition</i>	1	0	General-purpose
2						
3						



Best Partner
in Display Device

Classification :
Technical Specification

Spec. No	AD150320-K01-001
Final Revision	2015.06.19
Ver.	Preliminary
Rev.	0.0
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Product	OxLinx™ HDMI Active Optical Cable
Model	LHM-Pxxx

1. Overview

LUSEM's LHM-P is Plug & Play HDMI Active Optical Cable(AOC) well suited for critical and versatile AV installations that demand flawless HDMI Signal integrity and it provides unmatched signal fidelity and transparency over a wide range of input resolution up to 100m long run which is much beyond the normal reach of conventional copper cables in distributing HDMI.

LUSEM OxLinx HDMI AOC holds firmly distinctive performance advantages . It is thinner, lighter and more flexible than copper or even standard optical cables while providing transparent and widely compatible HDMI essential control features like HPD, EDID, HDCP and CEC link operations. And the cable jackets comply with international frame retardant requirements and provide customers with options on CMP-OF UL Plenum and Low Smoke Zero Halogen cable jacket.

With LUSEM OxLinx AOC, user experiences are extremely maximized with its integrator-oriented features along with existing latest advances in HDMI technology including 3D, 4K UHD resolution and deep colors from an HDMI-D or DVI-D interfaces. OxLinx's removable HDMI-A end solutions enable system integrators to pull the cables very effectively through small size of conduits in a number of onsite professional AV installation environments.

2. Features

- Up to 4K 30Hz, 3D, Deep Color
- Multi-channel Audio, Dolby TrueHD, DTS-HD Master Audio
- HDMI 1.4 Compliant : EDID, CEC, HDCP
- EMI & RFI Immunity
- Plug & Play Operation
- Integrator-oriented removable HDMI-A ends for easy advanced wiring
- Interoperable field flexibility : HDMI-D with HDMI-A & HDMI-D with DVI-D single link
- Built-in Powering (No external 5V USB power port)
- High Pulling Strength & Compression Load
- Low Power Consumption
- Compliant with International Frame Retardant Standards : UL CMP-OF (Plenum), IEC LSZH (Low Smoke Zero Halogen)

3. Applications

- Professional AV System Interconnection
- In & Outdoor Digital Signage Panels & Kiosks
- Home Theater Systems
- Facility Automation Systems

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4. Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max	Unit
Supply Voltage	VCC	-0.5		6	V
Storage Temperature	Tstg	-30		70	°C
Relative Humidity	RH	5		85	%
Electrostatic Discharge Immunity (Air: 8kV, Contact: 6kV)		B			Class

5. Recommended Characteristics

Parameter	Symbol	Min.	Typ.	Max	Unit
Supply Voltage ¹	VCC	4.8	5	5.3	V
Operating Temperature	T _{OP}	0		50	°C

¹ All power supplied from HDMI port.

6. Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max	Unit
Operating Current	I _{OP}	38	50	56	mA
Power Consumption	P _O	0.19	0.25	0.28	W
TMDS Differential Input Voltage	V _{ID}	400		1600	mV
TMDS Differential Output Voltage	V _{OD}	200	300	400	mV
TMDS data bit rate		250		3400	Mbps

7. Physical Characteristics

Parameter	Value	Unit
Cable Dimensions (WXH)	3.4mm (±0.2mm)	mm
Cable Color	Gray	-
Optical Fiber	Multi-mode fiber	-
Copper Wire	28 AWG TA (7/0.127mm)	-
Cable Jacket Material	CMP-OF (UL) & LSZH	-
Connector Pull Strength	10	Kg
Compression Load Resistance	50	Kg
Minimum Bending Radius	6	mm
Case Material	ABS(Acrylonitrile-Butadiene-Styrene)	-

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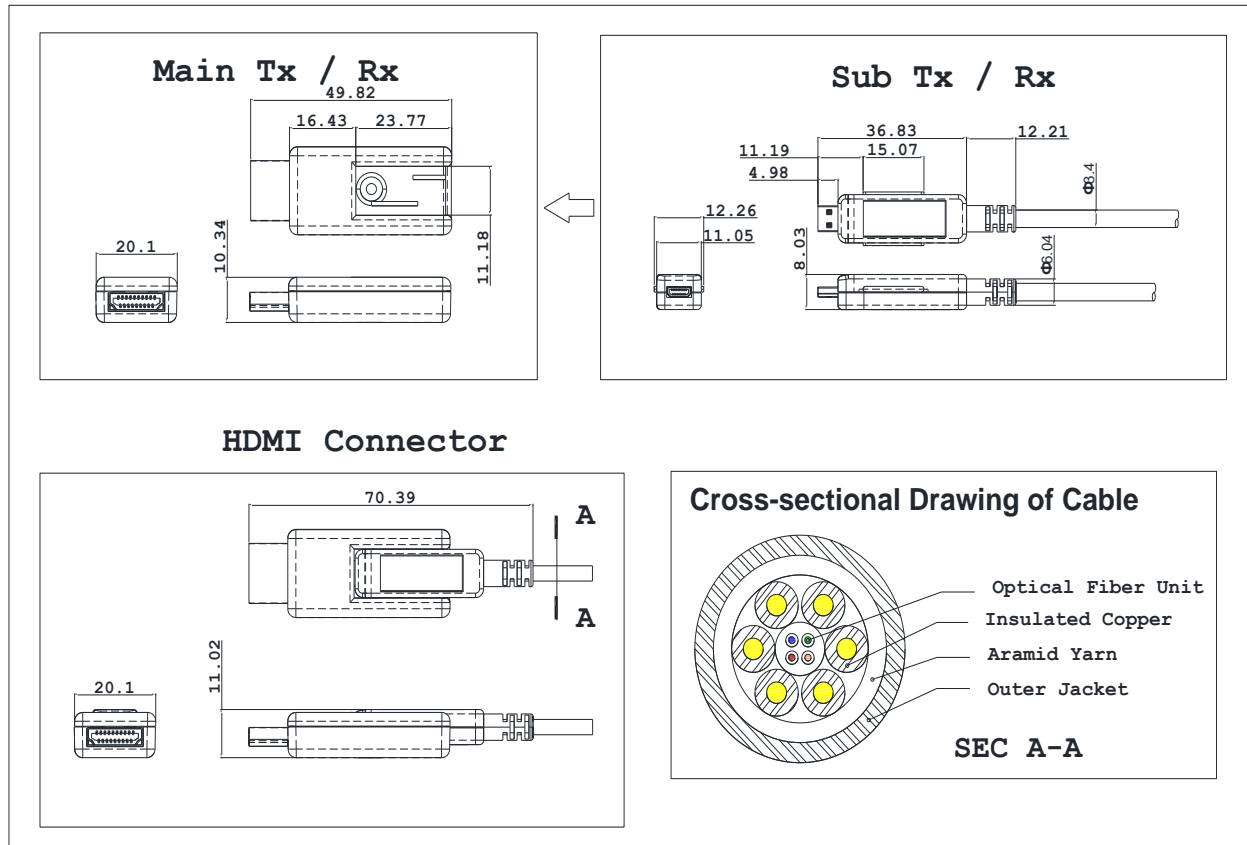
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8. Product Dimensions

Unit of Measure [mm]

- HDMI Connector



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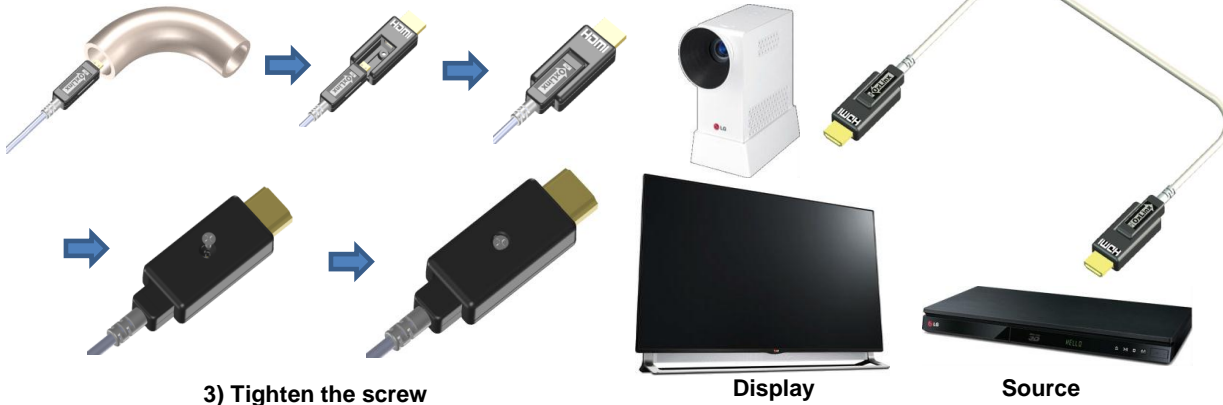
9. HDMI Pin Description

PIN	Symbol	
1	CH2+	TMDS data signal channel 2 positive
2	GND	TMDS data signal channel 2 shield
3	CH2-	TMDS data signal channel 2 shield
4	CH1+	TMDS data signal channel 1 positive
5	GND	TMDS data signal channel 1 shield
6	CH1-	TMDS data signal channel 1 negative
7	CH0+	TMDS data signal channel 0 positive
8	GND	TMDS data signal channel 0 shield
9	CH0-	TMDS data signal channel 0 negative
10	CLK+	TMDS clock signal channel positive

PIN	Symbol	
11	GND	TMDS clock signal channel shield
12	CLK-	TMDS clock signal channel negative
13	CEC	Consumer Electronic Control
14	N.C	N.C
15	SCL	DDC clock
16	SDA	DDC data
17	GND	DDC/CEC shield
18	5V	DC +5V
19	HPD	Monitor detector signal

10. Product Installation Diagram

1) Pulling through conduit 2) Connect HDMI-D with HDMI-A Adaptor



- 1. Insert HDMI-D cable assembly into the conduit.
- 2. Connect HDMI-D with HDMI-A adaptor.
- 3. Screw the HDMI-D as shown on 3).
- 4. Plug in Tx Connector labeled "SOURCE" to HDMI port of source device like PC or Blu-ray Player.
- 5. Plug in Rx Connector labeled "DISPLAY" to HDMI port of display device like a monitor or TV.
- 6. Follow the same process to connect other SOURCE and DISPLAY devices.

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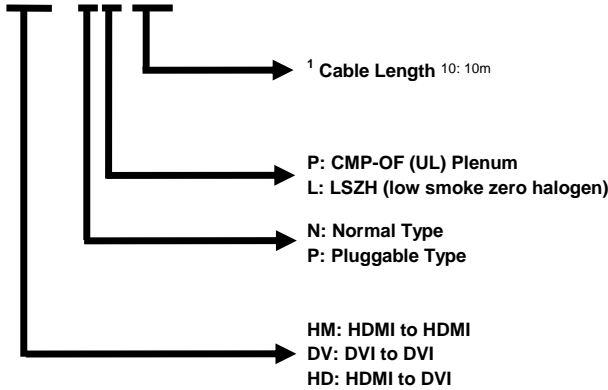
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11. Ordering Information

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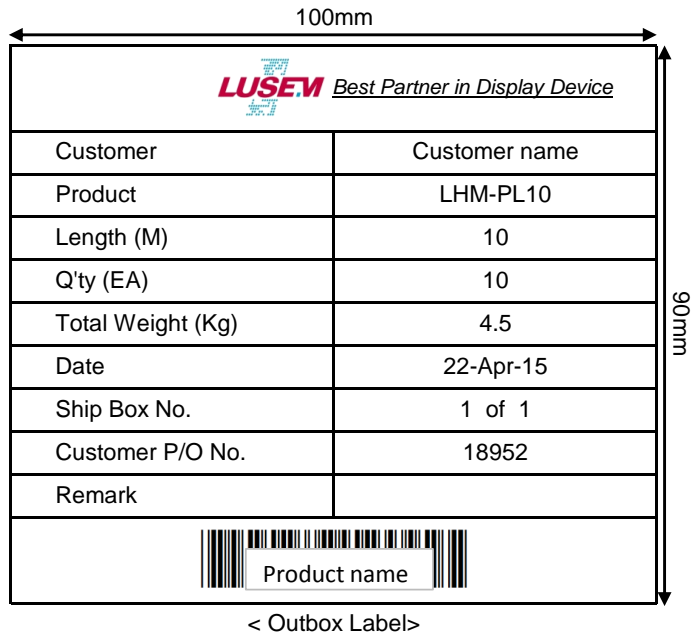
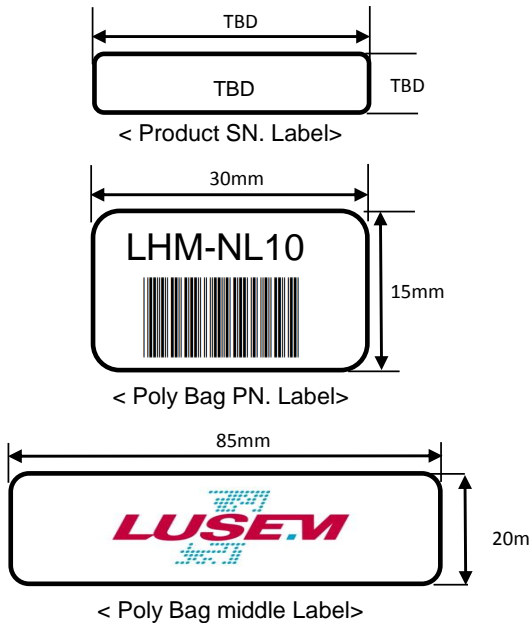


¹ Cable Length Index

Length	Code	Length	Code
10m	10	60m	60
15m	15	70m	70
20m	20	80m	80
30m	30	90m	90
40m	40	100m	A0
50m	50		

-Factory will stock "standard" length of 10m, 15m, 20m, 30m, 40m, 50m. ~100m

12. Product Labeling



13. Safety Labels



Caution Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

-Please do not disassemble, Modify the product or cut off the cable

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