

General Description

HCMX-0014K6 Series product is a HDMI Active Optical Cable(AOC) with high performance, low power consumption.

Using optical fiber to replace copper wire as the high-speed signal transmission medium, It can perfectly transmit 4k@60Hz 4:4:4(bandwidth : up to 18Gbps) image up to 100 meters.

Applications

- Home Theater
- High Definition Video Meeting system
- Medical Video System
- Control room
- Digital Signage and TV Wall
- Blue Ray Player & Game Console & PC

Image



Feature

- **HDMI Specification 2.0 Compliant**
- Supports Resolution up to **4K (3840 x 2160) at 60Hz**
- **RGB/YCbCr 4:4:4**
- **Up to 100m (330ft) HDMI Extender**
- 850nm VCSEL Optical Transmission Technology.
- Supports HDCP Compliant Device
- Low Power Consumption
- Plup (Type A, 19pin) and Play
- Gold Plated Connector

Absolute Maximum Ratings

Parameter	Rating
Supply Voltage	4.75 ~ 5.25 V
Operating Temperature	0 to 50 °C
Storage Temperature	-20 to 70 °C
Relative Humidity	0 to 85 RH

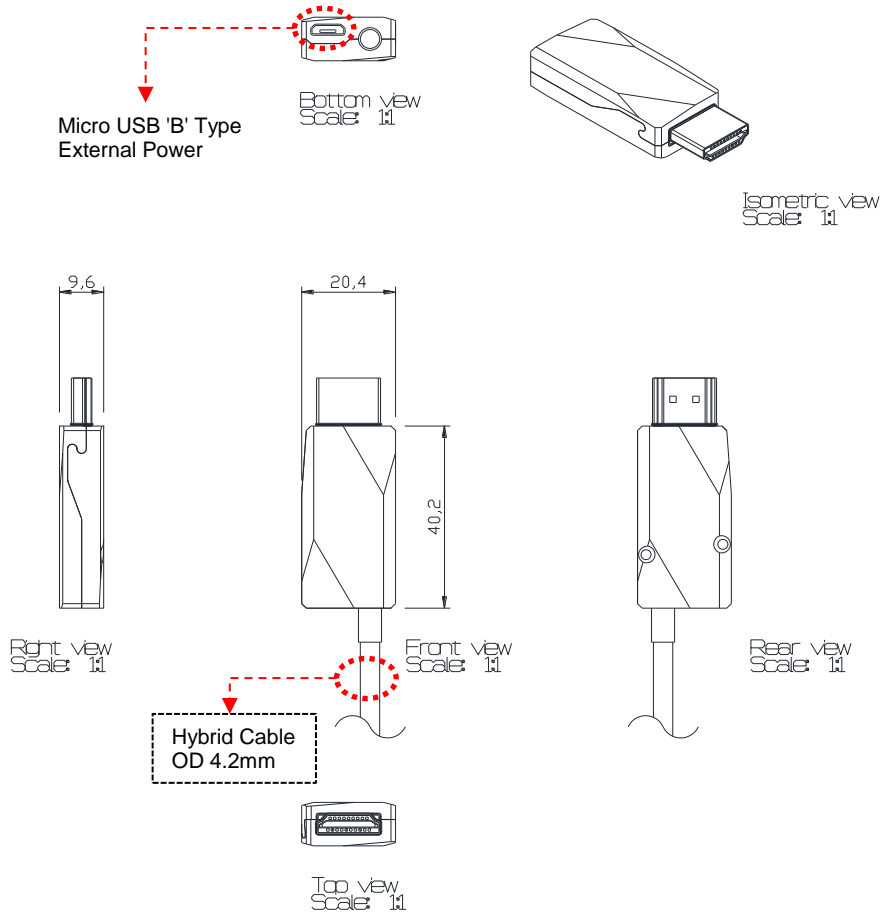
General Specifications

Parameter	Symbol	
	Transmitter(Source)	Receiver(Sink)
Optical Converter	850nm VCSEL Array	850nm PD Array
Input and Output Signal	TMDS Signal (HDMI 2.0 Standard)	TMDS Signal (HDMI 2.0 Standard)
Video Bandwidth	6 Gbps / Channel	
Module Dimension	52.75mm x 20.40mm x 104mm	
Used electrical Connector	HDMI Type A (Male)	
Maximum Supported Resolution	4K (3840 × 2160)@60Hz (RGB/YCbCr 4:4:4)	

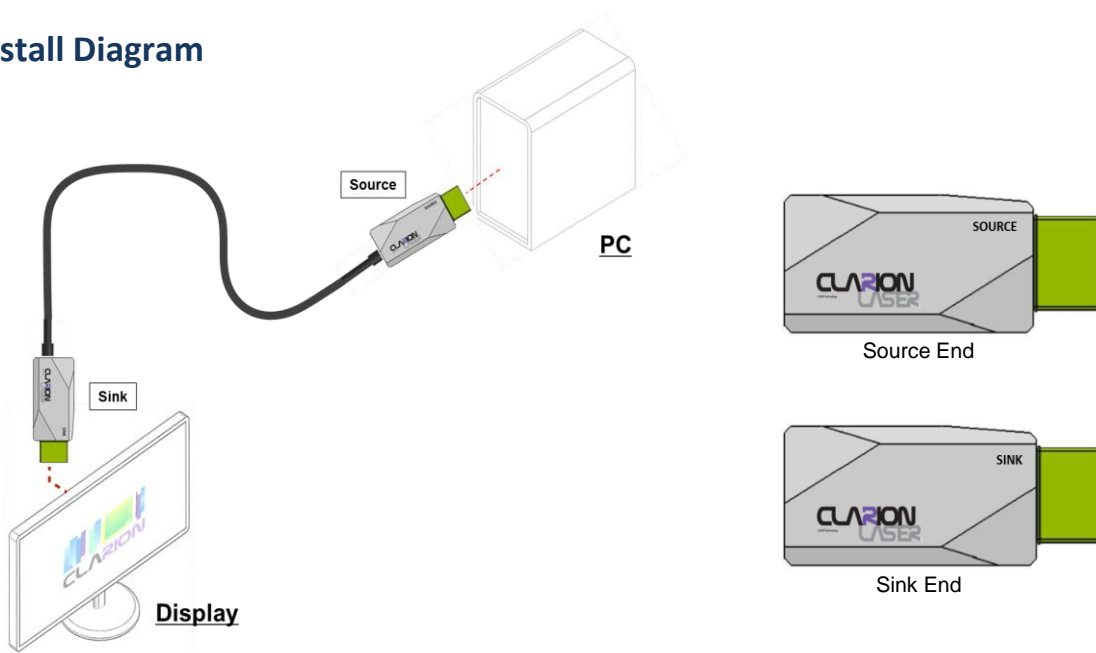
Dimensions

Unit :mm

Dimension



Install Diagram



Electrical Specifications
- Transmitter Module

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Supply Voltage	Vcc	4.8	5.0	5.3	V	
Supply Current	Icc			280.0	mA	
Inter-pair Skew				0.2	ns	
Intra-pair Skew				30	ps	
Differential input/output Impedance		80		120	ohm	

Hybrid Cable Specifications

Parameter	Value
Cable Jacket Material	PVC
Optical Fiber	50/125um Multimode Fiber OM3
Cable Diameter	4.2 ±0.2mm
Minimum Bending Radius	75mm
Maximum Tensile Load	70N
Cable Length Tolerance	+30/-0 cm

PIN Description

No	Pin Assignment	Functional Description
1	TMDS2+	TMDS Data Signal Channel 2 Positive
2	TMDS2 Shield	TMDS Data Signal Channel 2 Shield
3	TMDS2-	TMDS Data Signal Channel 2 Negative
4	TMDS1+	TMDS Data Signal Channel 1 Positive
5	TMDS1 Shield	TMDS Data Signal Channel 1 Shield
6	TMDS1-	TMDS Data Signal Channel 1 Negative
7	TMDS0+	TMDS Data Signal Channel 0 Positive
8	TMDS0 Shield	TMDS Data Signal Channel 0 Shield
9	TMDS0-	TMDS Data Signal Channel 0 Negative
10	TMDS Clock+	TMDS Clock Channel Positive
11	TMDS Clock Shield	TMDS Clock Channel Shield
12	TMDS1Clock-	TMDS Clock Channel Negative
13	CEC	Consumer Electronics Control
14	Reserved Not used	
15	SCL	HDCP/DDC communication clock
16	SDA	HDCP/DDC communication data
17	DDC/CEC Ground	DDC/CEC shield
18	+5V Power	5 V Input for Transmitter for Host, 5 V Output for Monitor from Receiver
19	Hot Plug Detect	Signal is driven by monitor to enable the system to identify the presence of a monitor

Environmental Test

No	Index
High Temperature Storage	Non-Powered, 70 °C, 96 hours
Damp Heat	Non-Powered, 85 °C, 85% RH 96 hours
High Temperature Operation	Powered, 60 °C, 96 hours

Notes

* The inherent design of this component causes it to be sensitive to electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product

* TheFP-LD is a class I laser and should be treated as a potential eye hazard. Due to the size of the component, the applicable warning logotype, aperture label, and certification / identification label cannot be placed on the component itself.