

HDMI Optic And Electric Composite Cable(HDMI)

1、 Cable Drawing



2、 Description

HDMI optic and electric composite cable, Signals are transmitted over fiber-optic and copper hybrid cables, where the fiber transmits high-definition digital video/audio data signals, and copper wires transmit DDC/HDCP protocol signals. The fiber optic cable includes a cable core and a jacket. The cable has a circular cross section, the cable core is bundled by fiber bundles, an outer layer that is closely packed on the outer circumference of the fiber bundle, a plurality of electron wires and a plurality of electron wires. Concentric unidirectional stranding consists of a shielded wire on the periphery of the bundle.

3、 Features

- Optoelectronic integration saves pipeline resources, reduces procurement costs, and saves construction costs
- Improve the manageability of power supply and reduce power supply coordination and maintenance
- Optoelectronic integration, solve the problem of equipment power and signal transmission, improve centralized monitoring and maintenance of equipment power supply

4、 Application

- Data communication
- Indoor video, voice and data transmission
- HDMI Cable

5、 Specification

1) Fiber Allocation Scheme

Fiber number	Tube number	Fiber per tube	Fiber type
4	1	4	Multi mode

2) Cable construction details

Items		Description
Fiber Counts		4 cores
Outer Jacket	Material	PVC (LSZH or Customer required)
	Color	Black
HDMI / 5.5		
Strength Member	Material	Aramid yarn
	Color	Yellow
Tight Buffer	Dia (mm)	(0.9±0.05) x4
	Material	PVC (LSZH, Hytrel, PA or Customer required)
	Color	Blue, Orange, Green, Brown
Electric wire core	Material	Copper
Electric wire	AWG24 X 7	
HDMI / 4.8		
Strength Member	Material	Aramid yarn
	Color	Yellow
Tube	Dia (mm)	1.05
	Material	PVC (LSZH, Hytrel, PA or Customer required)
Coating Fiber	Dia (mm)	0.25 x4
	Color	Blue, Orange, Green, Brown
Electric wire core	Material	Copper
Electric wire	AWG24 X 5+ AWG28 X 5	

3) Cable Mechanical characteristic

Items	Cable Dia (mm)	Weight (kg/km)	Allowable Tensile Strength(N)		Crush Load (N/100mm)	
			Long term	Short term	Long term	Short term
HDMI / 5.5	5.5±0.3	*	200	400	300	600
HDMI / 4.8	4.8±0.15	*	200	400	300	600
Min Bending Radius(mm)	Long term	10 D				
	Short term	20 D				
Temperature characteristic	Base on the working temperature range: Dwell time 8H / 2cycles. The variation on attenuation: SM≤0.5 dB/km; MM≤0.3 dB/km					
Hight temperature and humidity ability	≥500h, 85°C/85%RH, No damage to the sheath.					
Installation Temperature range	-5 ~ +50°C					
Operation and transport temperature	-10 ~ +60°C					

NOTE : Xn indicates the selected fiber models

4) Requirement for Order

- (1) Multi mode: OM3,OM4.
- (2) Fiber brand: YOFC, Corning, Fiberhome,Fujikura,OFS etc.
- (3) Jacket material: PVC、LSZH (can be required).
- (4) The fiber and tube color: according to stranded color, can be required.

5) Fiber optical Characteristic (after cable)

Fiber type	Attenuation				OFL bandwidth	Effective modal bandwidth	10 Gb/s Link Length
	1310/1550nm		850/1300nm				
Conditions	Typical	Maximum	Typical	Maximum	850/1300nm	850nm	850nm
Unit	dB/km	dB/km	dB/km	dB/km	MHz.km	MHz.km	m
OM3-150	/	/	3.0/1.0	3.5/1.5	≥700/500	≥950	150
OM3-300	/	/	2.5/0.8	3.0/1.0	≥1500/500	≥2000	300
OM4-550	/	/	2.5/0.8	3.0/1.0	≥3500/500	≥4700	550

Note: The above optical characteristics are after cable