

# PRODUCT SPECIFICATION

DATE:12/29/2005

<b>cosmo</b> ELECTRONICS CORPORATION	Photolink : <b>KPLT1320BS</b>	NO.60F00010	REV.
		SHEET 1 OF 4	3

## FIBER OPTIC TRANSMITTING MODULE FOR DIGITAL AUDIO EQUIPMENT

### Features

TTL interface.

LED is driven by differential circuit.

A Self-tapping hole for easy attachment to audio Equipment panels.

### Applications

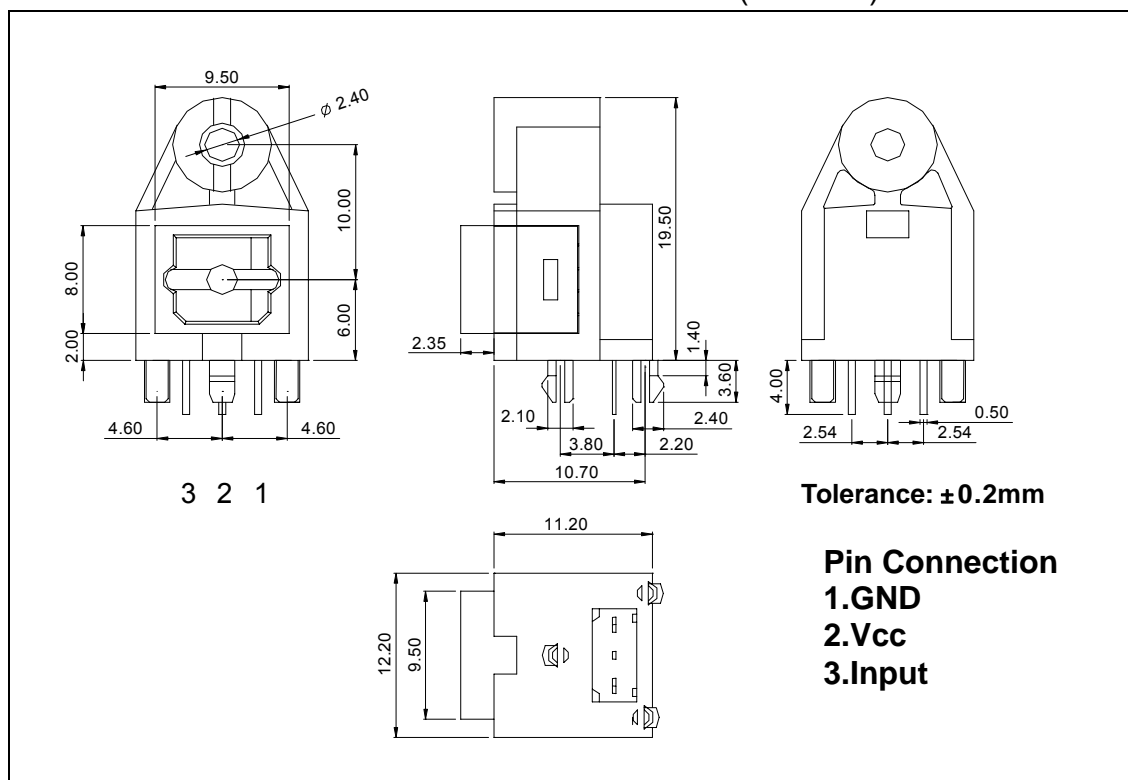
Audio equipment.

DVD player.

Automobile.

### Outline Dimensions

(Unit:mm)



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## 1. Maximum Ratings ( Ta=25 )

Parameter	Symbol	Rating	Unit
Storage Temperature	T <sub>stg</sub>	-40~80	
Operating Temperature	T <sub>opr</sub>	-20~70	
Power Dissipation	P <sub>max</sub>	120	mW
Supply Voltage	V <sub>CC</sub>	-0.5~7	V
Input Voltage	V <sub>IN</sub>	-0.5~V <sub>CC</sub> +0.5	V
Soldering Temperature	T <sub>sol</sub>	260 <sup>(Note 1)</sup>	

Note 1 : Soldering time 10 seconds ( At a distance of 1 mm from the package ) .

## 2. Recommended Operating Conditions

Parameter	Symbol	Min	Typ.	Max	Unit
Supply Voltage	V <sub>CC</sub>	4.75	5.0	5.25	V
High-Level Input Voltage	V <sub>IH</sub>	2.0	-	V <sub>CC</sub>	V
Low-Level Input Voltage	V <sub>IL</sub>	0	-	0.8	V

## 3. Electrical and Optical Characteristics ( Ta=25 , V<sub>CC</sub>=5V )

Parameter	Symbol	Condition	Min	Typ.	Max	Unit
Data Rate		NRZ Signal <sup>(Note 2)</sup>	DC	-	13.2	Mb/s
Transmission Distance		Using APF <sup>(Note 3)</sup>	0.2	-	5	m
Fiber Output Power <sup>(Note 4)</sup>	P <sub>f</sub>		-21	-	-15	dBm
Peak Emission Wavelength	λ <sub>p</sub>		630	650	690	nm
Current Consumption	I <sub>CC</sub>		-	-	13	mA
High Level Input Voltage	V <sub>IH</sub>		2.0	-	-	V
Low Level Input Voltage	V <sub>IL</sub>		-	-	0.8	V
Low->High Propagation delay time	t <sub>PLH</sub>				150	ns
High -> Low Propagation delay time	t <sub>PHL</sub>				150	ns
Pulse Width Distortion	t <sub>w</sub>	6Mbps NRZ Signal	-25	-	25	ns
Jitter Time	t <sub>j</sub>				25	ns

Note 2 : LED is on when input signal is high, and off when it is low.

The duty factor must be maintained between 25 to 75%.

Note 3 : All Plastic Fiber ( 970 / 1000nm ) .

Note 4 : Measure with a standard optical fiber, peak value.

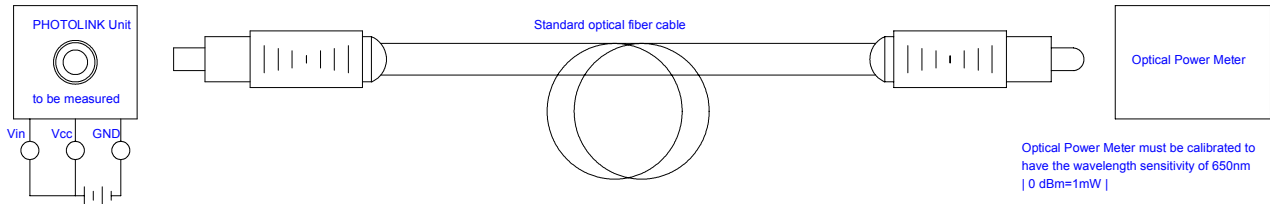
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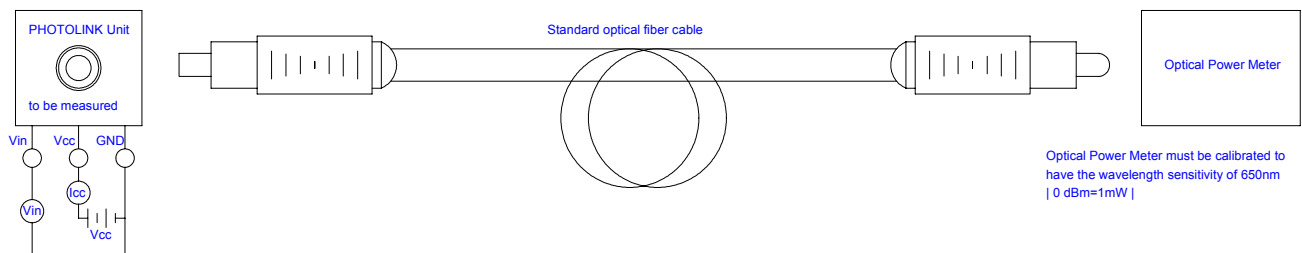
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## 4. Measuring method

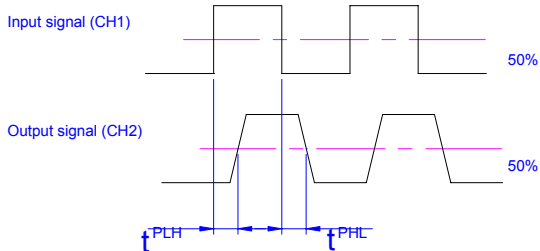
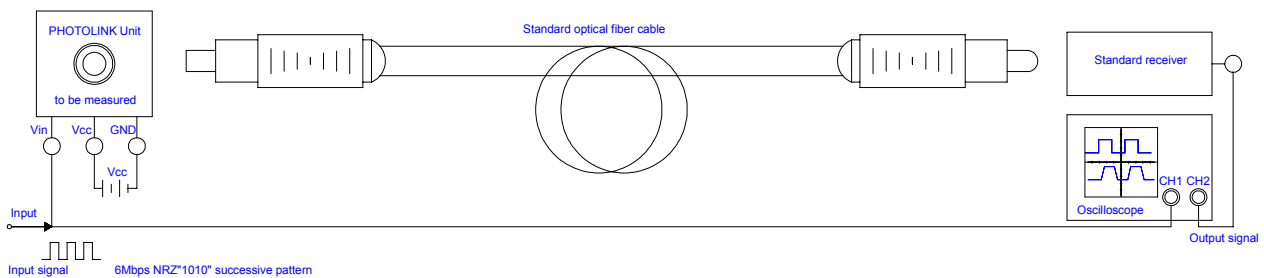
### (1). Measuring method of optical output coupling fiber



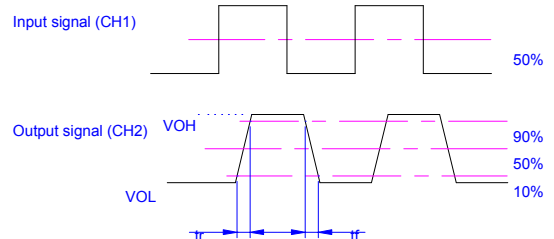
### (2). Measuring method of power dissipation current and input voltage



### (3). Measuring method of Pulse response



$$tw = t^{PHL} - t^{PLH}$$

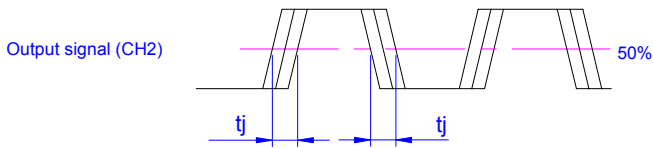
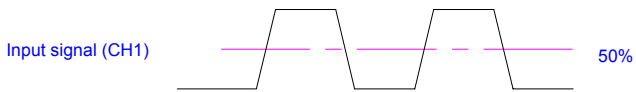
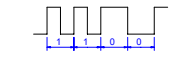
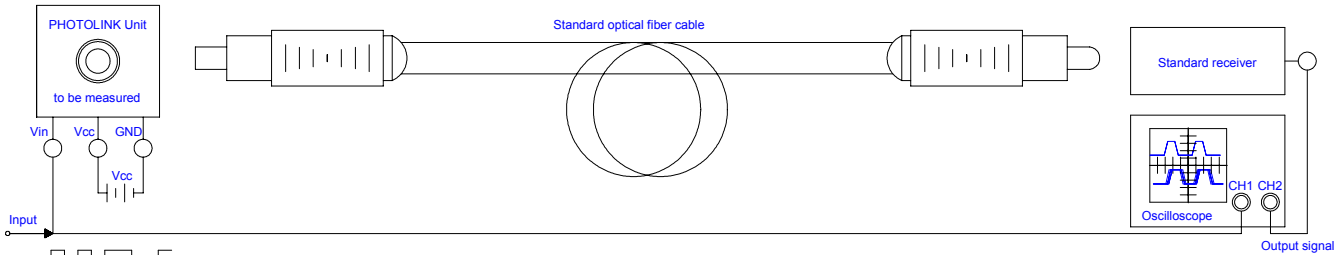


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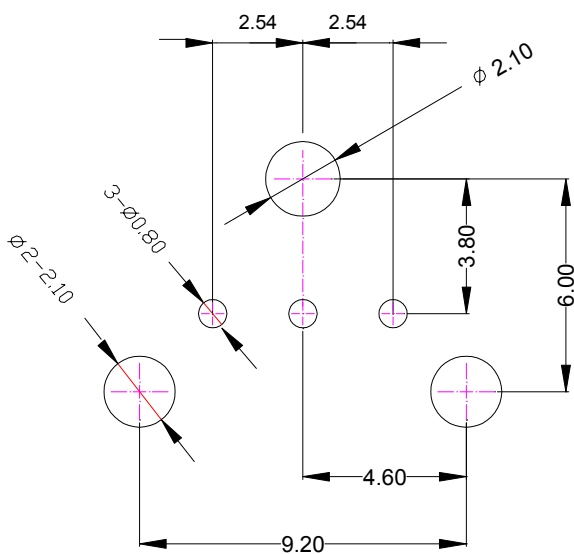
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## (4).Measuring method of Jitter



## 5.Recommended PCB Layout



Notes:  
 1.Unit:mm  
 2.tolerance:  $\pm 0.3$ mm