

# PRODUCT SPECIFICATION

DATE:02/23/2004

<b>cosmo</b> ELECTRONICS CORPORATION	Photolink :	NO.60F00003	REV.
	<b>KPLT1320AD</b>	SHEET 1 OF 4	1

## FIBER OPTIC TRANSMITTING MODULE FOR DIGITAL AUDIO EQUIPMENT

### Features

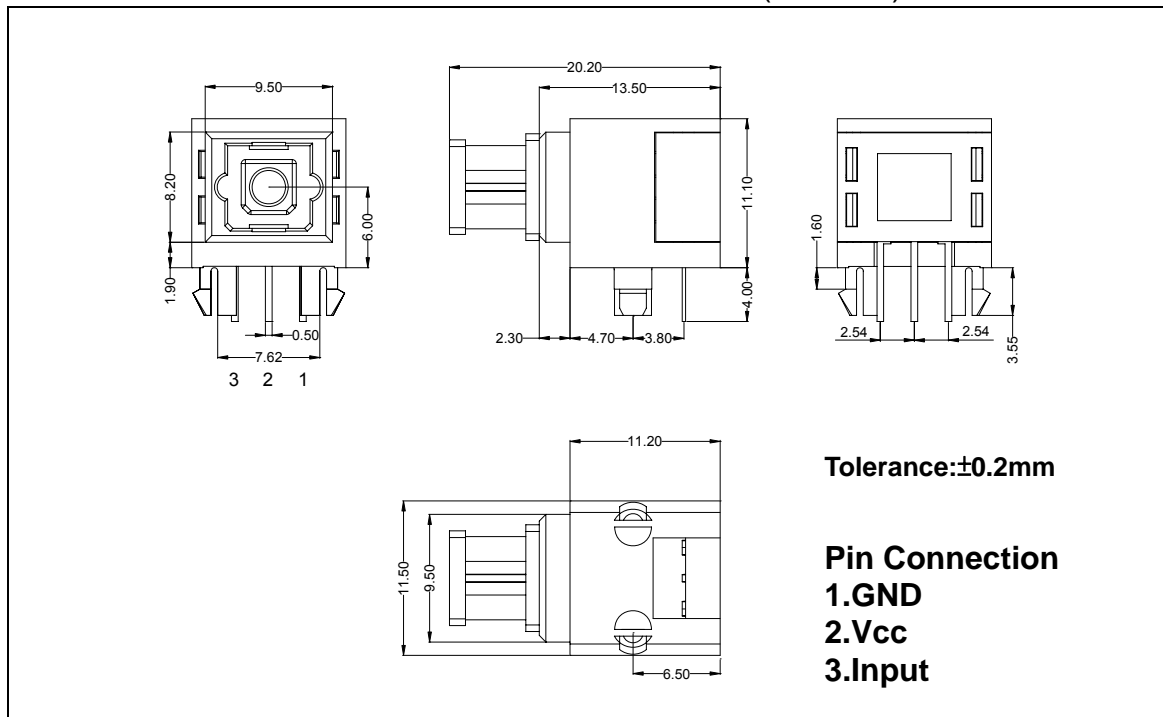
- TTL interface.
- LED is driven by differential circuit.

### Applications

- Audio equipment.
- DVD player.
- Automobile.

### Outline Dimensions

(Unit:mm)



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## 1. Maximum Ratings ( Ta=25°C )

Parameter	Symbol	Rating	Unit
Storage Temperature	T <sub>stg</sub>	-40~80	°C
Operating Temperature	T <sub>opr</sub>	-20~70	°C
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>	°C

Note 1 : Soldering time  $\leq$  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°C , 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	$\lambda_p$		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	$\Delta tw$	6Mbps NRZ Signal	-25	-	25	ns
Jitter Time	$\Delta tj$				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.

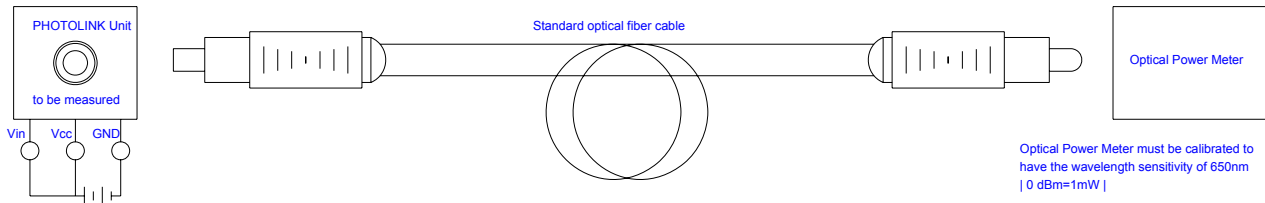
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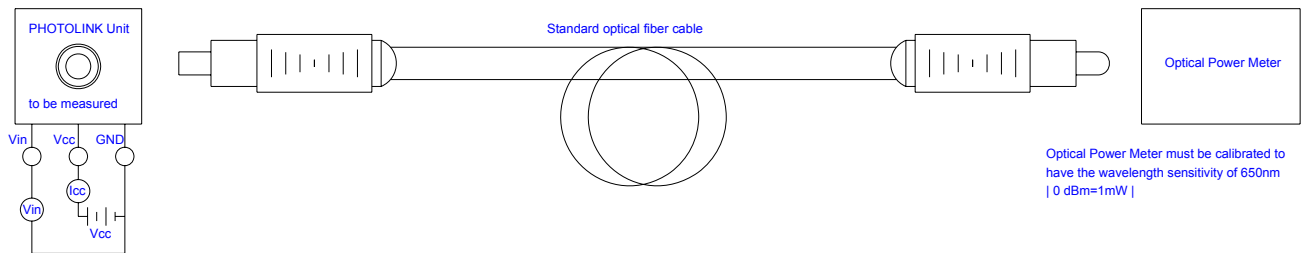
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## 4. Measuring method

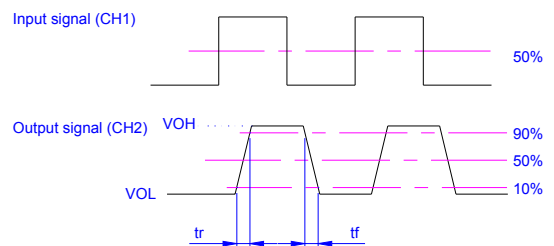
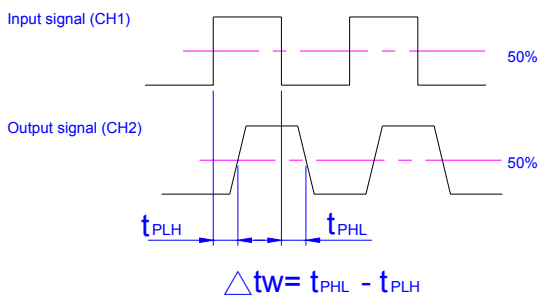
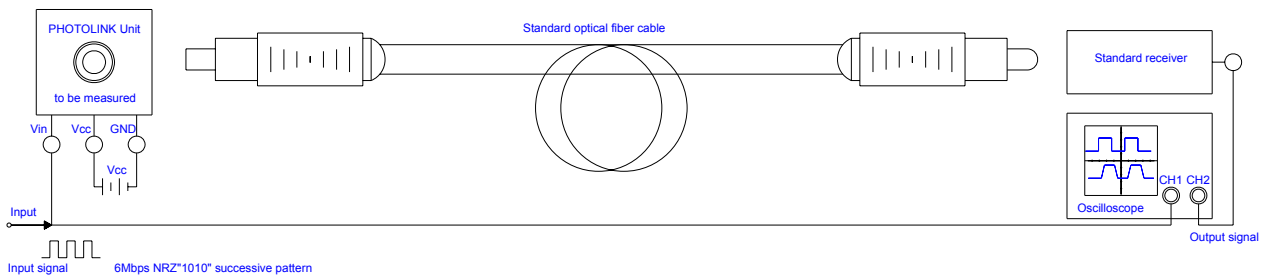
### (1).Measuring method of optical output coupling fiber



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



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

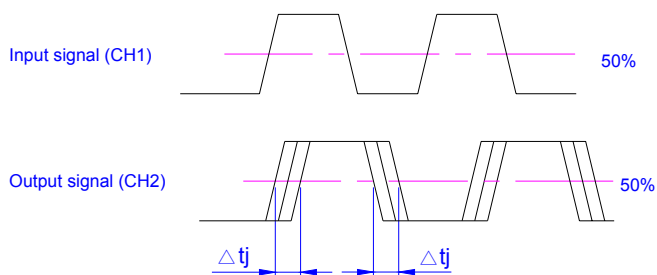
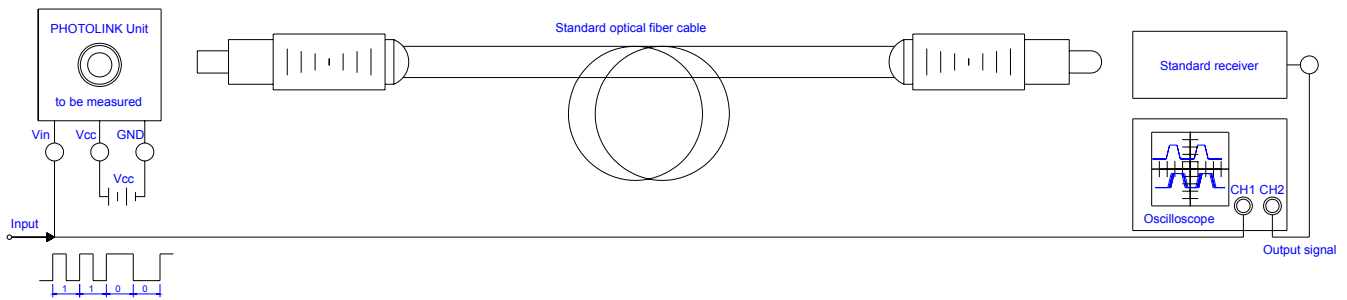


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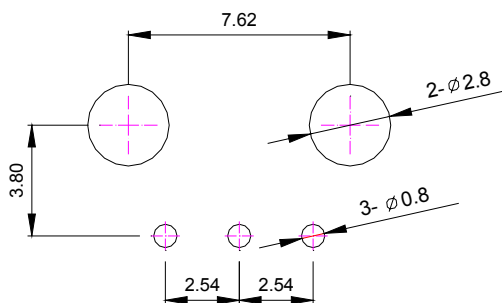
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## (4).Measuring method of Jitter



## 5.Recommended PCB Layout



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

