

PRODUCT SPECIFICATION

DATE:02/23/2004

cosmo ELECTRONICS CORPORATION	Photolink :	NO.60F00003	REV.
	KPLT1320AD	SHEET 1 OF 4	1

FIBER OPTIC TRANSMITTING MODULE FOR DIGITAL AUDIO EQUIPMENT

Features

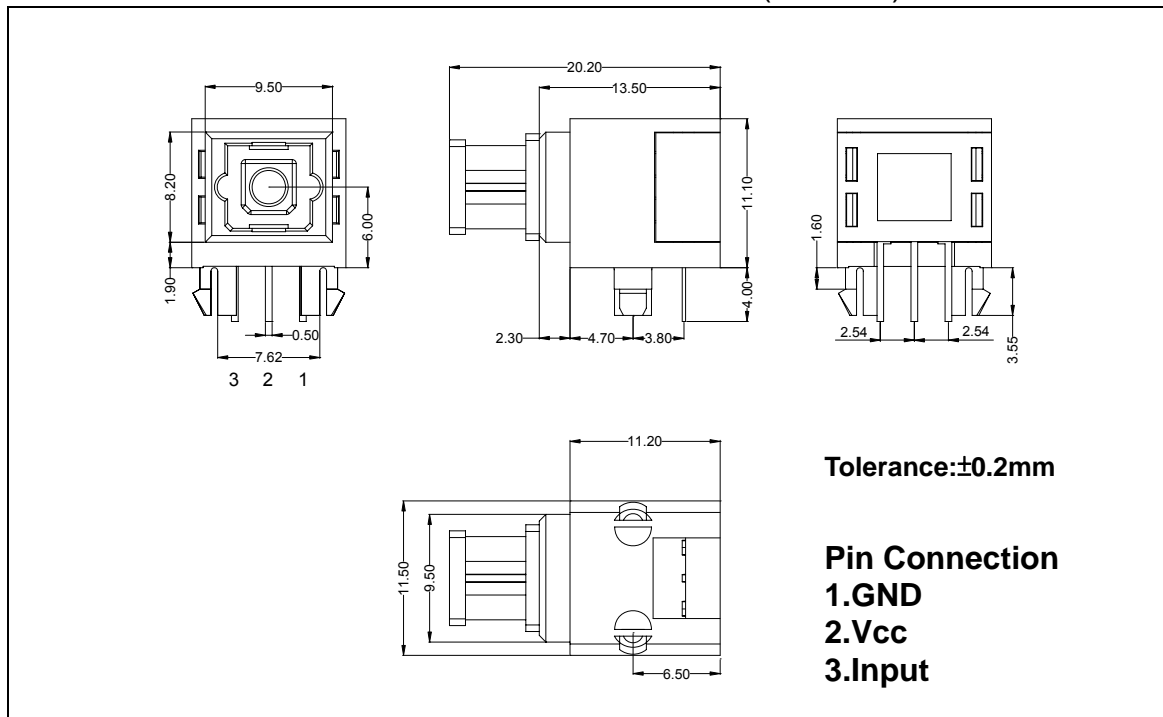
- TTL interface.
- LED is driven by differential circuit.

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 _{stg}	-40~80	°C
Operating Temperature	T _{opr}	-20~70	°C
Power Dissipation	P _{max}	120	mW
Supply Voltage	V _{CC}	-0.5~7	V
Input Voltage	V _{IN}	-0.5~V _{CC} +0.5	V
Soldering Temperature	T _{sol}	260 ^(Note 1)	°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 _{CC}	4.75	5.0	5.25	V
High-Level Input Voltage	V _{IH}	2.0	-	V _{CC}	V
Low-Level Input Voltage	V _{IL}	0	-	0.8	V

3. Electrical and Optical Characteristics (Ta=25°C , V_{CC}=5V)

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

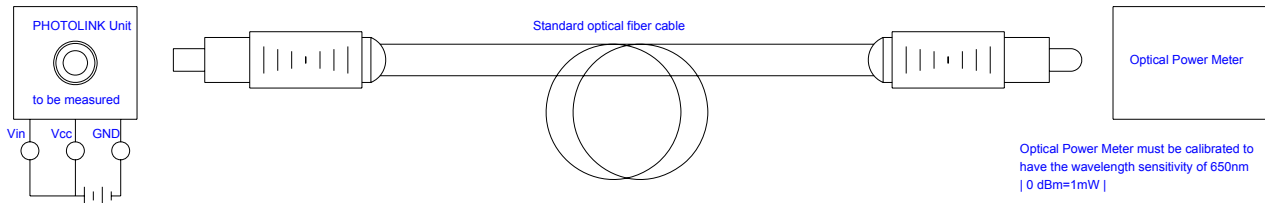
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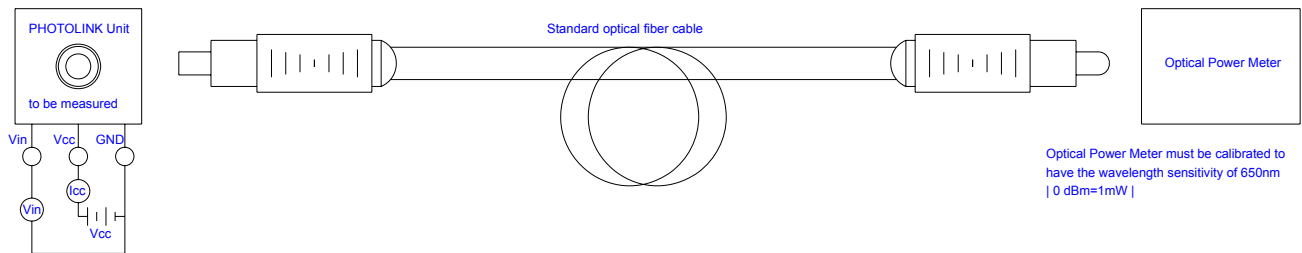
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4. Measuring method

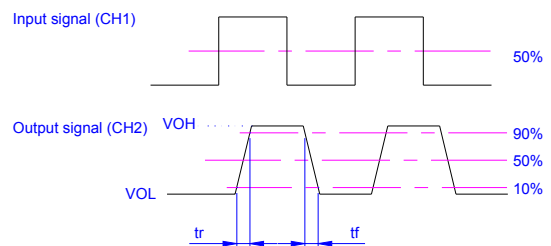
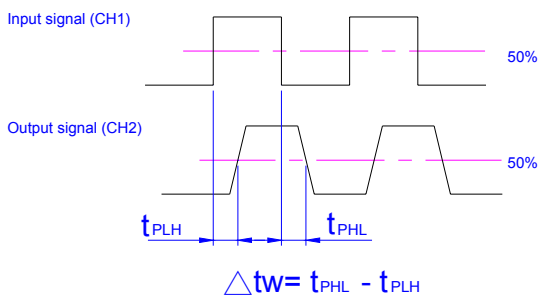
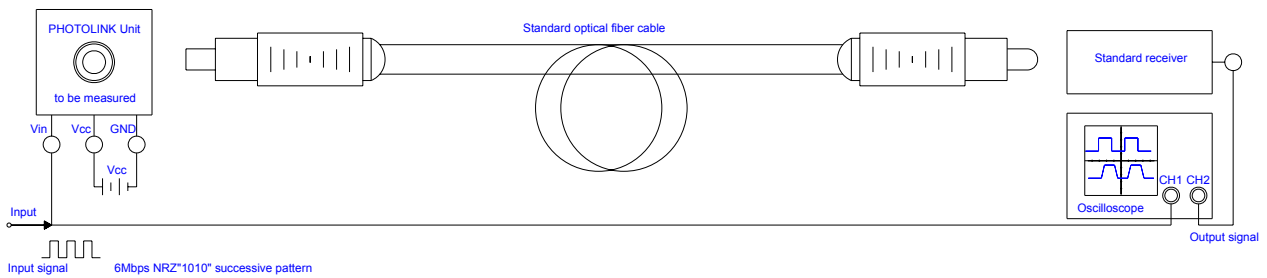
(1). Measuring method of optical output coupling fiber



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



(3). Measuring method of Pulse response

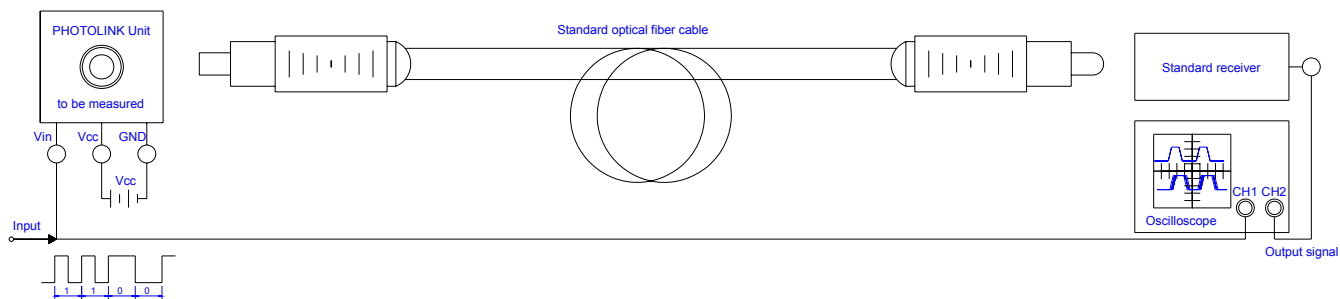


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(4).Measuring method of Jitter

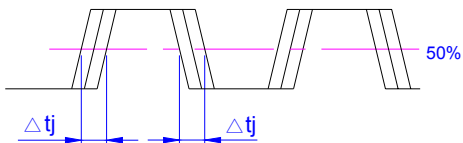


Input signal (CH1)



50%

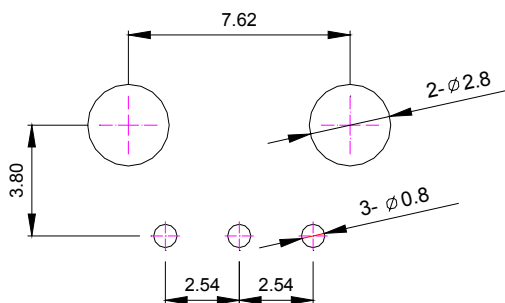
Output signal (CH2)



50%

Δt_j Δt_j

5.Recommended PCB Layout



Notes:

1.Unit:mm

2.tolerance:±0.3mm

