APPROVAL SHEET

DATE: 11/12/2009

cosmo ELECTRONICS CORPORATION	Photolink : KPLR1320M10/20	NO.60F01013	REV.
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FIBER OPTIC Receiver Module

Features

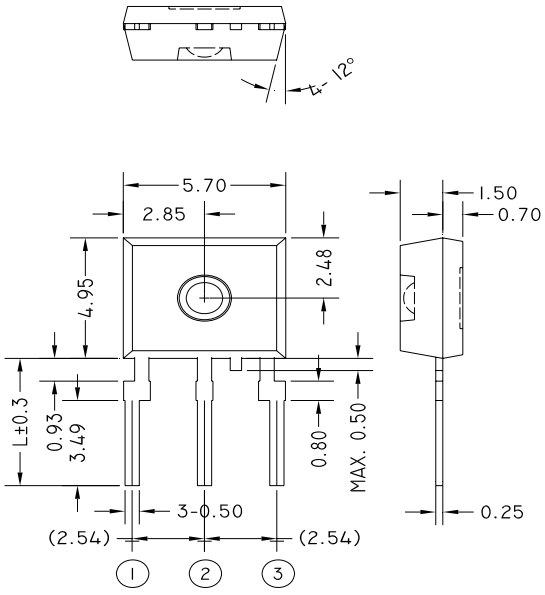
- TTL interface compatible.
- 16Mbps data rate(NRZ Signal).
- Directly connectable to demodulation IC.
- Supply voltage 3.3V/ 5V equipment.

Applications

- Audio equipment .
- DVD,CD,MD player .
- Automobile.
- Sound card.
- Set top box.
- PC,Notebook.

Outline Dimensions

(Unit:mm)



注1. 無指定尺寸公差部分: ±0.2㎜

Note1. General dimensions tolerance: ±0.2㎜

注2. 無指定角度公差部分: ±3°

Note2. General angle tolerance: ±3°

注3. 無指定Corner R: Max 0.4mm

Note3. General corner: Max 0.4mm

Device Selection Table

Device Name	Pin Length L(mm)
KPLR1320M10	7.5±0.3
KPLR1320M20	5.22±0.3

Pin Connection
1. Vcc
2.GND
3. Vout

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1. Maximum Ratings (Ta=25℃,Vcc=3.3V/5V)

Parameter	Symbol	Rating	Unit
Storage Temperature	T_{stg}	-40~85	℃
Operating Temperature	T_{opr}	-20~70	℃
Supply Voltage	Vcc	-0.5~7	V
Input Voltage	V_{IN}	-0.5~Vcc+0.5	V
Soldering Temperature	T_{sol}	260 (Note 1)	℃

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

2. Recommended Operating Conditions (Ta=25℃,Vcc=3.3V/5V)

Parameter	Symbol	Min	Typ.	Max	Unit
Supply Voltage	V_{CC}	2.7	-	5.25	V
Operating transfer rate	T	0.1	-	16	Mbps
Input optical power level	PI	-27	-	-14.5	dBm

3. Electrical and Optical Characteristics :Receiver (Ta=25℃,Vcc=3.3V/5V)

Parameter	Symbol	Condition	Min	Typ.	Max	Unit
Operating transfer rate	T	NRZ Signal (Note 2)	0.1	-	16	Mb/s
Operating voltage	Vcc		2.7	3.0	5.25	V
Optical Input Sensitivity (Note 3)	PI		-27	-	-14.5	dBm
Peak Emission Wavelength	λp		-	650	-	nm
Dissipation Current	Icc	Refer to Fig.(1)	-	4	13	mA
High Level Output Voltage	V_{OH}	Refer to Fig.(2)	2.1	-	-	V
Low Level Output Voltage	V_{OL}	Refer to Fig.(2)	-	-	0.4	V
Rise time	tr	Refer to Fig.(2)	-	-	20	ns
Fall time	tf	Refer to Fig.(2)	-	-	20	ns
Low->High Propagation delay time	t_{PLH}	Refer to Fig.(2)	-	-	180	ns
High -> Low Propagation delay time	t_{PHL}	Refer to Fig.(2)	-	-	180	ns
Pulse Width Distortion	△tw	Refer to Fig.(2)	-20	-	20	ns
Jitter Time	△tj	Refer to Fig.(3)	-	-	15	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：Measure with a standard optical fiber, peak value.

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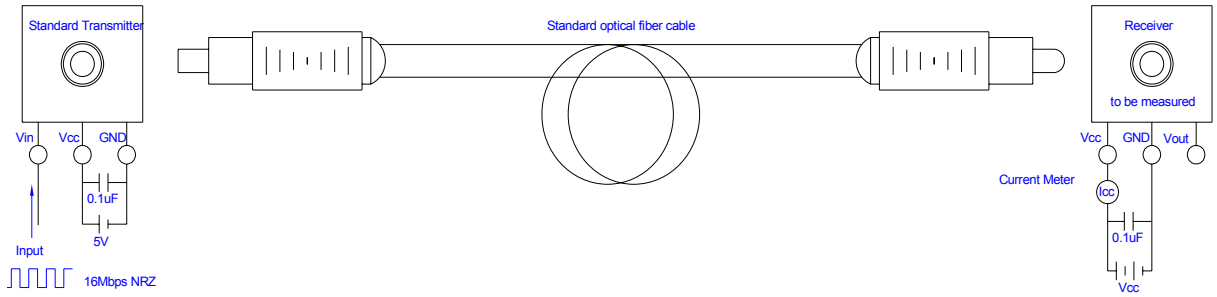
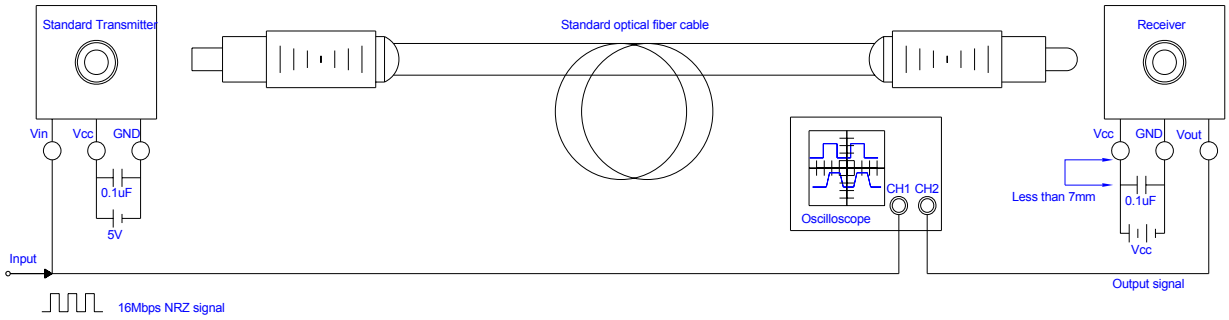
4. Measuring method

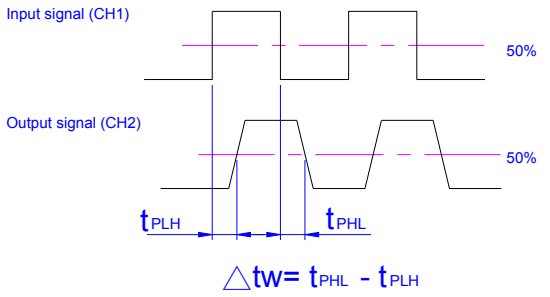
(1).Measuring Supply Current

	Input test Conditions	Measuring method
Supply Voltage	Vcc=3.0V	DC Average current
Fiber coupling light output	Pc=-14.5dBm	
Standard transmitter input signal	16Mbps NRZ	

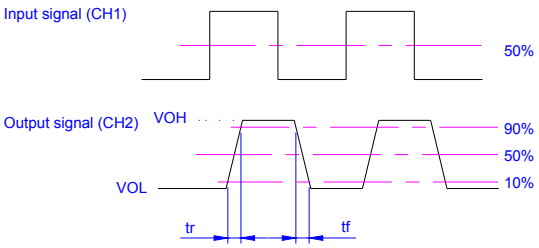


(2).Measuring method of Output Voltage and Pulse response





$\triangle tw = t_{PHL} - t_{PLH}$



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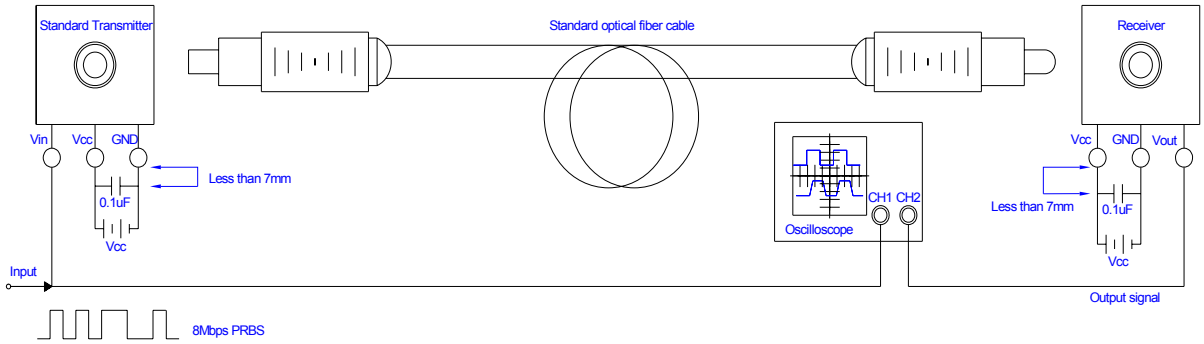
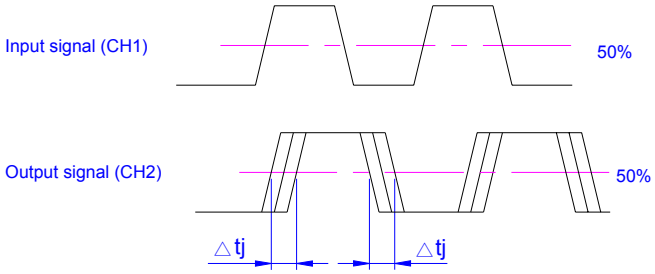
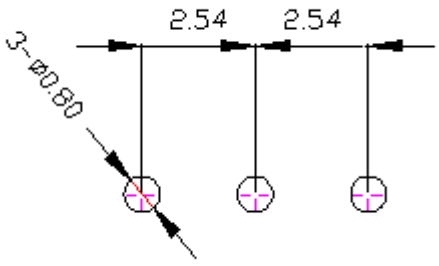
(3).Measuring method of Jitter





5.Recommended PCB Layout



Notes:
1.Unit:mm
2.tolerance:±0.3mm