

PRODUCT SPECIFICATION

DATE:03/03/2005

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|---|----------------------------------|--------------|------|
| cosmo ELECTRONICS CORPORATION | Photolink : KPLR1320AD | NO.60F01006 | REV. |
| | | SHEET 1 OF 5 | 1 |

FIBER OPTIC Receiver Module

Features

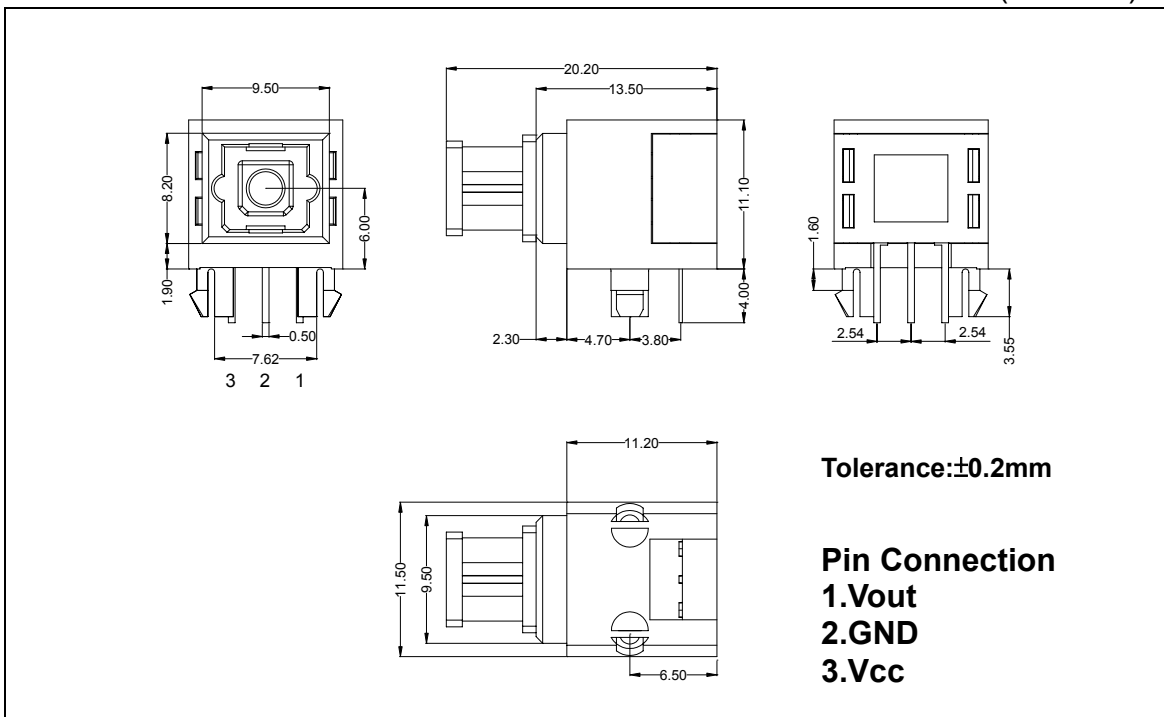
- TTL interface compatible.
- 13.2Mbps data rate(NRZ Signal).
- Directly connectable to demodulation IC.
- Supply voltage 3.3V/ 5V equipment.

Applications

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

Outline Dimensions

(Unit:mm)



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

| Parameter | Symbol | Rating | Unit |
|-----------------------|------------------|---------------------------|------|
| Storage Temperature | T _{stg} | -40~80 | °C |
| Operating Temperature | T _{opr} | -20~70 | °C |
| 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 (Ta=25°C,Vcc=3.3V/5V)

| Parameter | Symbol | Min | Typ. | Max | Unit |
|---------------------------|-----------------|-----|------|-------|------|
| Supply Voltage | V _{CC} | 2.7 | 3.3 | 5.5 | V |
| Operating transfer rate | T | 0.1 | - | 13.2 | Mbps |
| Input optical power level | PI | -24 | - | -14.5 | dBm |

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

| Parameter | Symbol | Condition | Min | Typ. | Max | Unit |
|---|-------------------------|--------------------------------|-----|------|-------|------|
| Operating transfer rate | T | NRZ Signal ^(Note 2) | 0.1 | - | 13.2 | Mb/s |
| Operating voltage | V _{CC} | | 2.7 | 3.3 | 5.5 | V |
| Optical Input Sensitivity ^(Note 3) | PI | | -24 | - | -14.5 | dBm |
| Peak Emission Wavelength | λ_p | | - | 700 | - | nm |
| Dissipation Current | I _{CC} | Refer to Fig.(1) | - | 8 | 15 | mA |
| High Level Output Voltage | V _{OH} | Refer to Fig.(2) | 2.4 | - | - | V |
| Low Level Output Voltage | V _{OL} | Refer to Fig.(2) | - | - | 0.4 | V |
| Rise time | t _r | Refer to Fig.(2) | - | 10 | 15 | ns |
| Fall time | t _f | Refer to Fig.(2) | - | 10 | 15 | 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 | Δ t _w | Refer to Fig.(2) | -20 | - | 20 | ns |
| Jitter Time | Δ t _j | 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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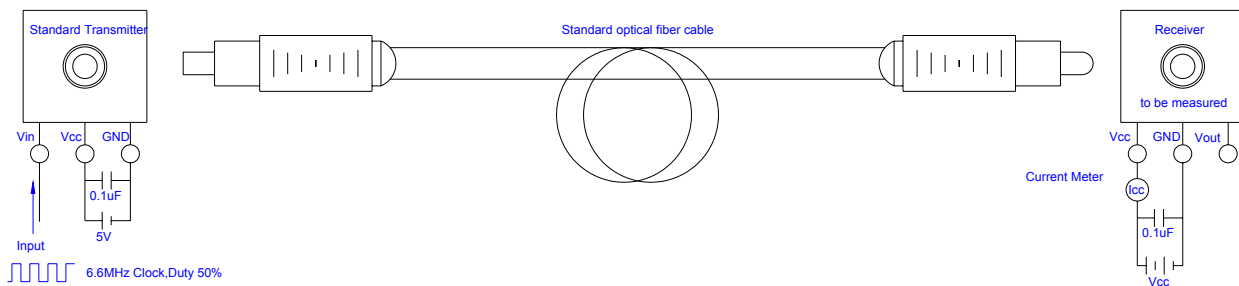
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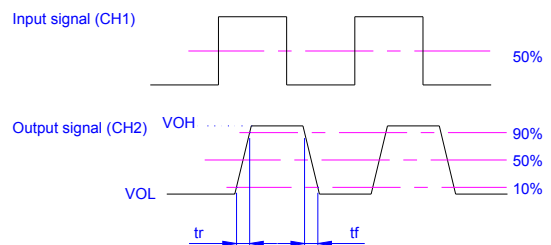
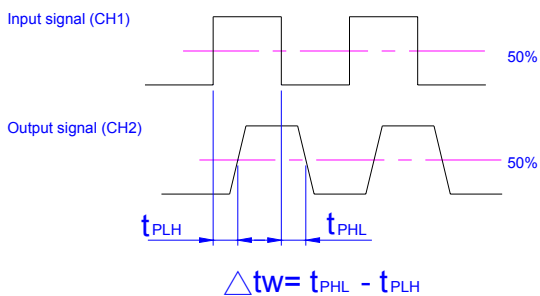
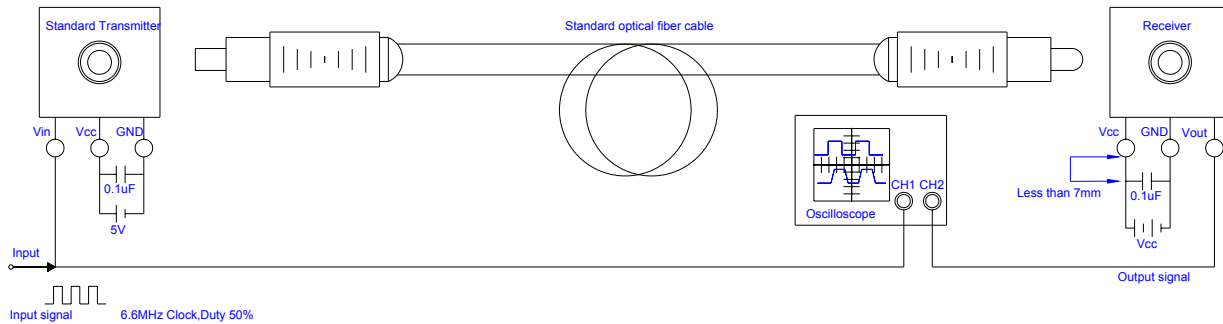
4. Measuring method

(1). Measuring Supply Current

| | Input test Conditions | Measuring method |
|-----------------------------------|-----------------------|--------------------|
| Supply Voltage | Vcc=5.0V | DC Average current |
| Fiber coupling light output | Pc=-14.5dBm | |
| Standard transmitter input signal | 13.2Mbps NRZ | |



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

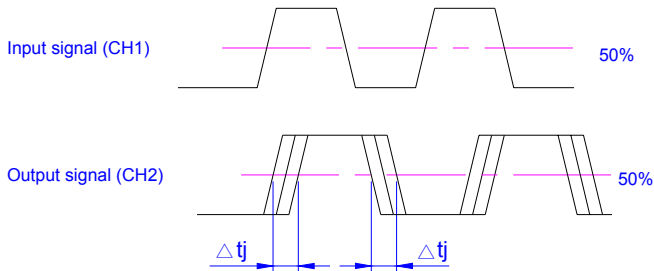
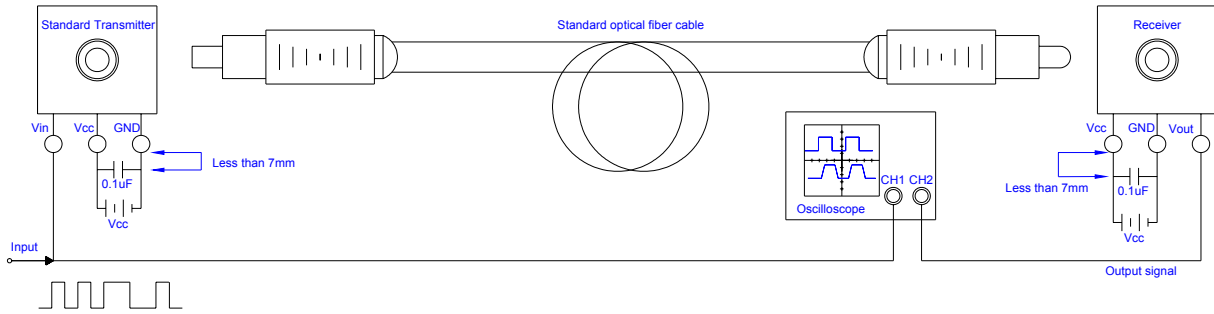


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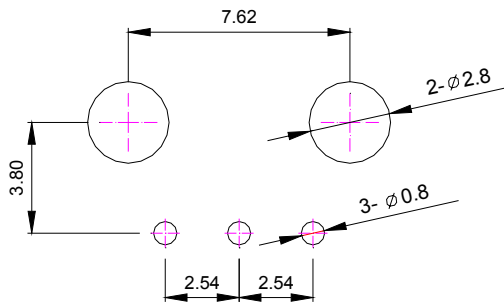
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(3).Measuring method of Jitter



5.Recommended PCB Layout



Notes:
 1.Unit:mm
 2.tolerance:±0.3mm

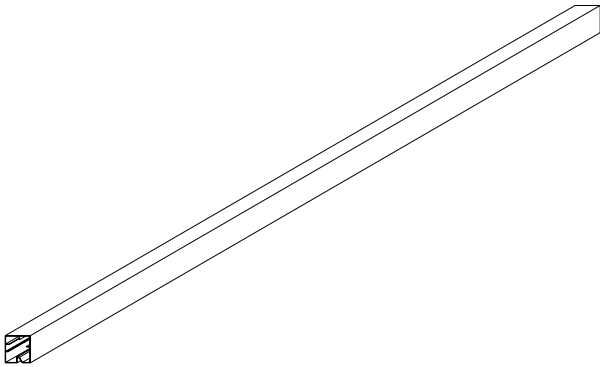
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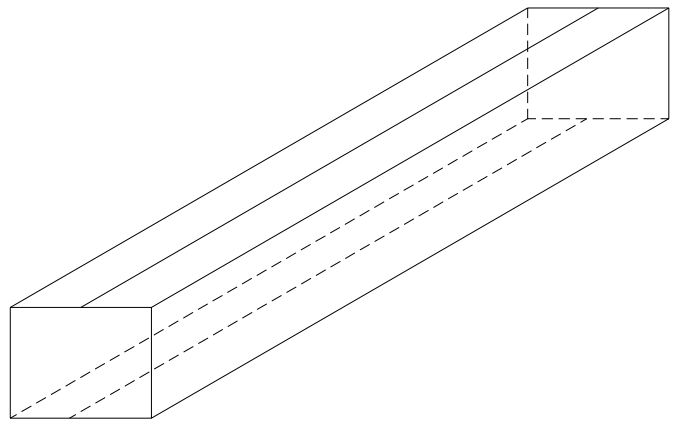
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6.Package Information

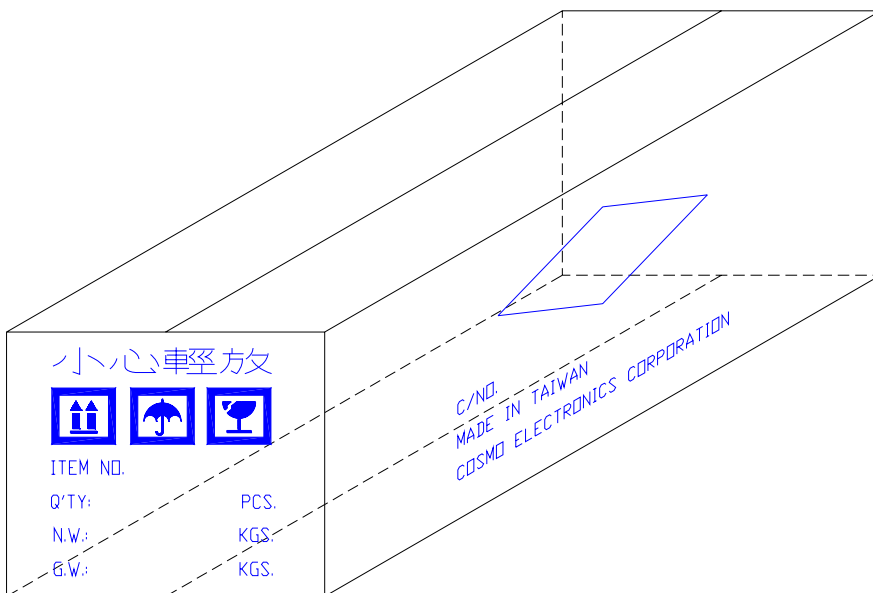
| Item | Quantity | Total | Size(Long*Width*High) |
|-----------|-----------------------|----------|-----------------------|
| Tube | 50 | 50 pcs | 640*24.4*26.4 mm |
| Inner Box | 20 Tube/Box | 1000 pcs | 660*156*122 mm |
| Outer Box | 4 Inner Box/Outer Box | 4000 pcs | 690*342*284 mm |



50pcs/Tube



1000pcs/Inner Box



4000pcs/Outer Box