

PRODUCT SPECIFICATION

DATE:02/19/2004

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|---|---------------------------------|--------------|------|
| cosmo ELECTRONICS CORPORATION | Photolink : KPLT1320B | NO.60F00003 | REV. |
| | | SHEET 1 OF 5 | 1 |

FIBER OPTIC TRANSMITTING MODULE FOR DIGITAL AUDIO EQUIPMENT

Features

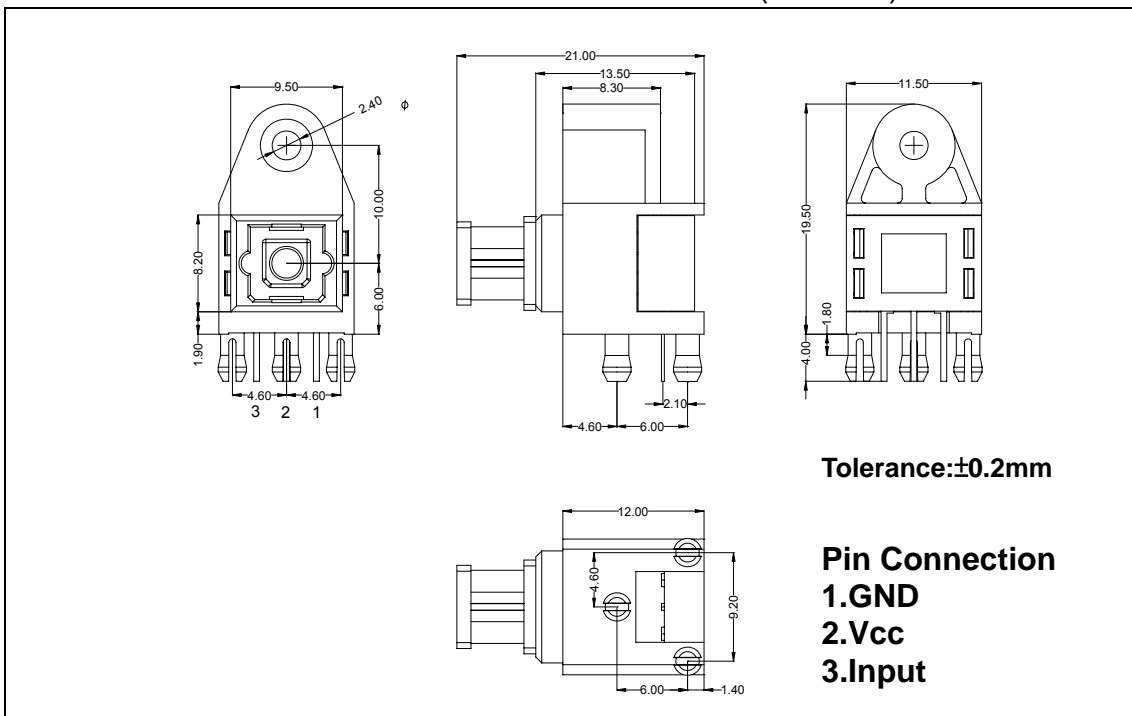
- TTL interface.
- LED is driven by differential circuit.
- A Self-tapping hole for easy attachment to audio Equipment panels.

Applications

- Audio equipment.
- DVD player.
- Automobile.

Outline Dimensions

(Unit:mm)



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1. Maximum Ratings (Ta=25°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.

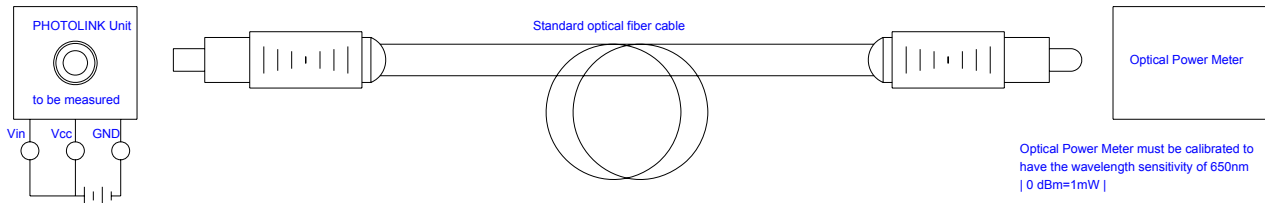
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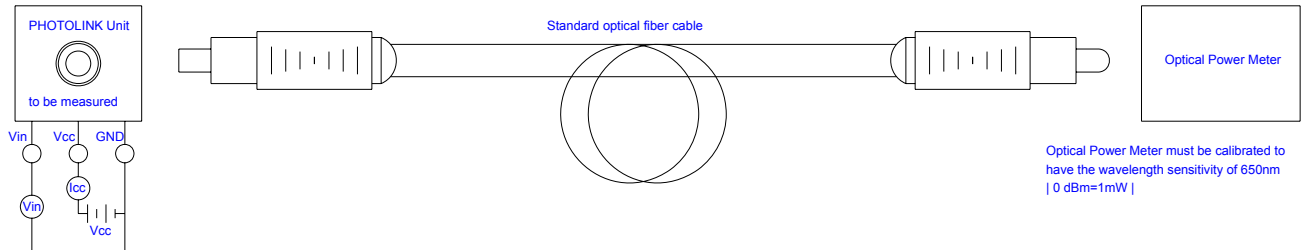
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4. Measuring method

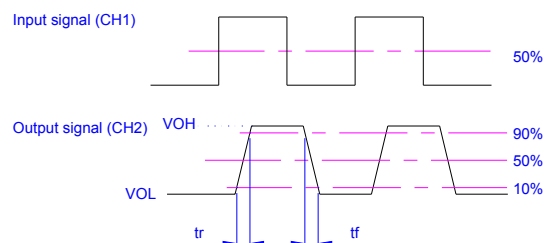
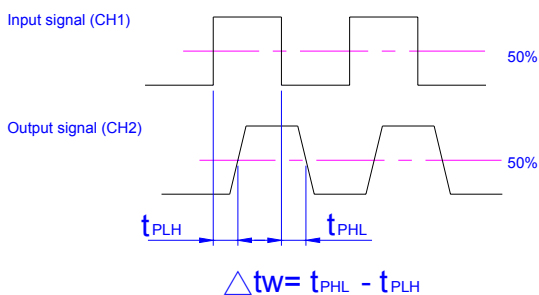
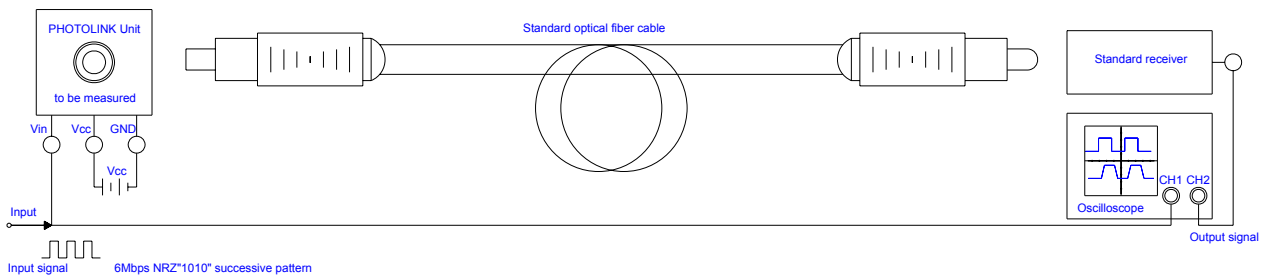
(1).Measuring method of optical output coupling fiber



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



(3).Measuring method of Pulse response

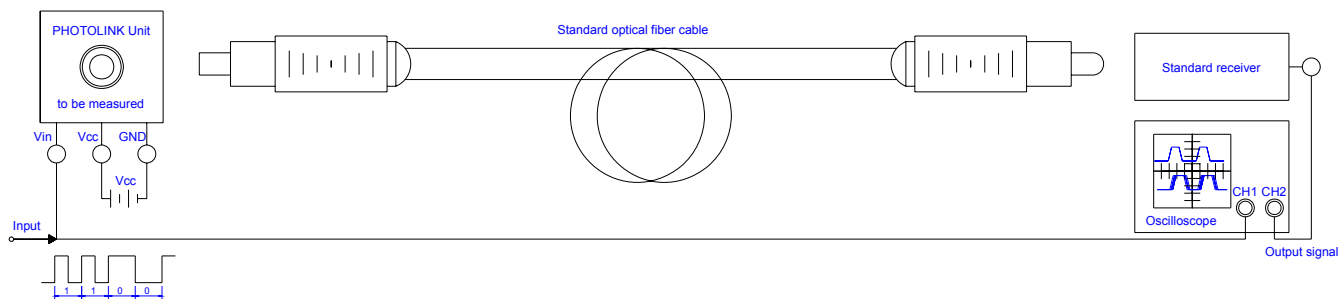


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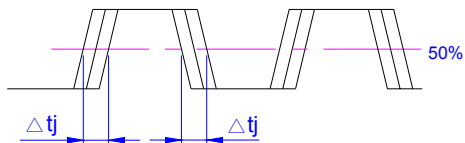
(4).Measuring method of Jitter



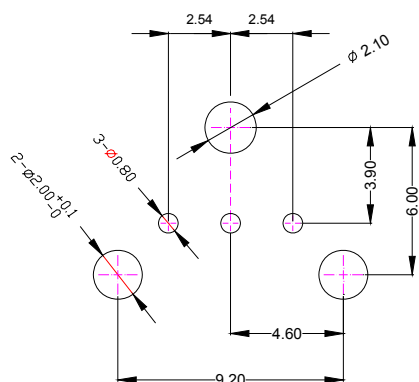
Input signal (CH1)



Output signal (CH2)



5.Recommended PCB Layout



Notes:

1.Unit:mm

2.tolerance:±0.3mm

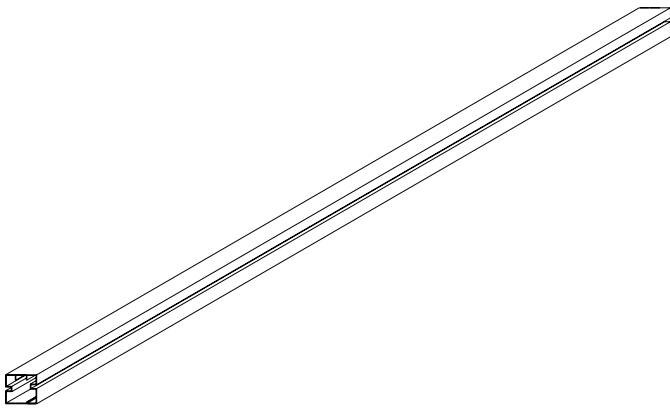
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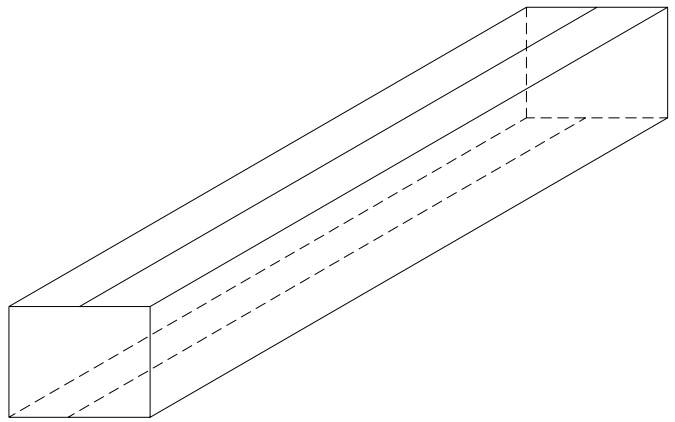
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6.Package Information

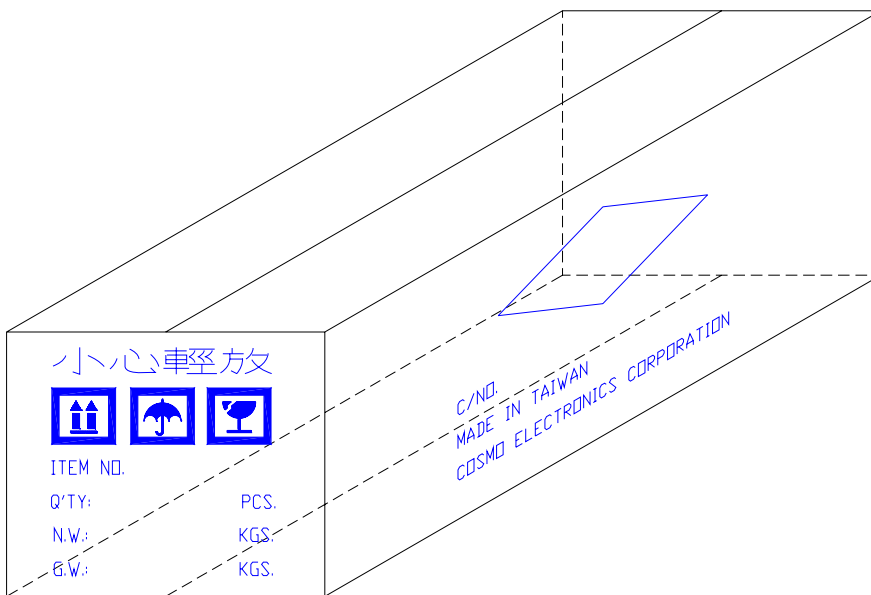
| Item | Quantity | Total | Size(Long*Width*High) |
|-----------|-----------------------|----------|-----------------------|
| Tube | 50 | 50 pcs | 640*27.2*25.2 mm |
| Inner Box | 20 Tube/Box | 1000 pcs | 660*156*122 mm |
| Outer Box | 4 Inner Box/Outer Box | 4000 pcs | 690*342*284 mm |



50pcs/Tube



1000pcs/Inner Box



4000pcs/Outer Box