



# Technical Data Sheet

## Photolink- Fiber Optic Transmitter

**PLT131/T8**

### Features

- High speed signal transmission ( 8Mbps NRZ Signal )
- TTL interface compatible
- +3~+5V single power source

### Descriptions

Photolink is assembled with plastic housing and opto-electric component packaged with a 660nm AlGaAs LED and drive IC. It transforms the electrical signal to optical signal and be transmitted by 1mm diameter plastic optical fiber.

The component is operated at +3~+5V and has high performance at low dissipation current, steady light output and efficient light coupling.

### Applications

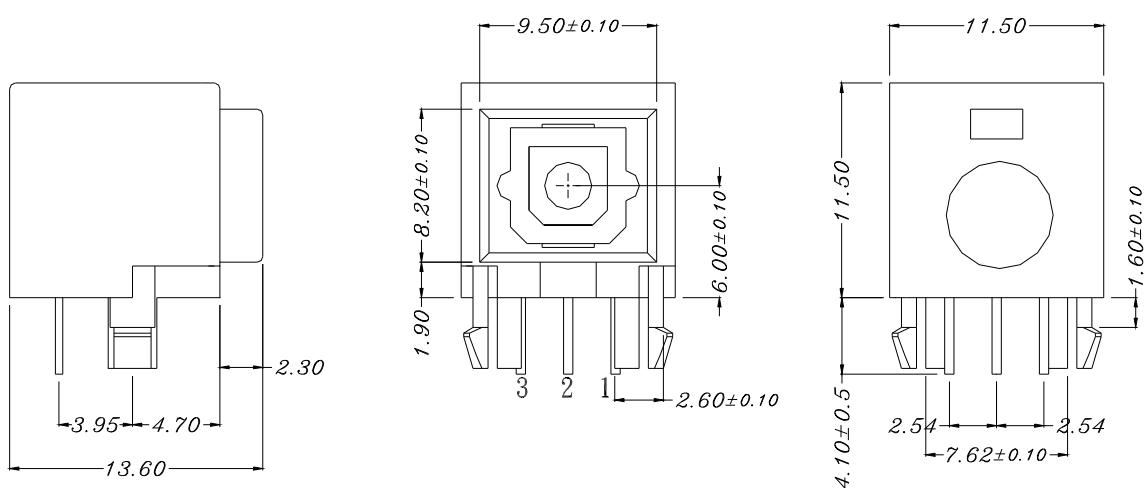
- Digital audio equipment
- CD player
- DVD player

### Device Selection Guide

| Chip     |                 | Operating Voltage<br>(Vcc) | Dissipation Current(mA) |      | Fiber Coupling Light Output (dBm) |      |      |
|----------|-----------------|----------------------------|-------------------------|------|-----------------------------------|------|------|
| Material | $\lambda$ p(nm) |                            | Typ.                    | Max. | Min.                              | Typ. | Max. |
| AlGaAs   | 660             |                            | 5.5                     | 10   | -21                               | --   | -15  |

Device NO.:DPL-131-013

## PLT131/T8

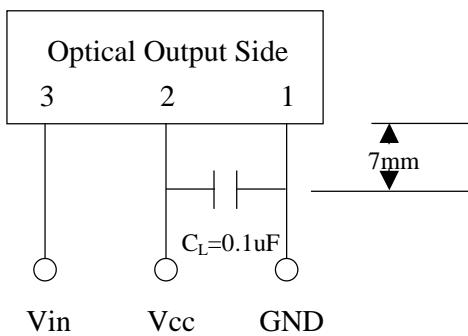


### Package Dimensions

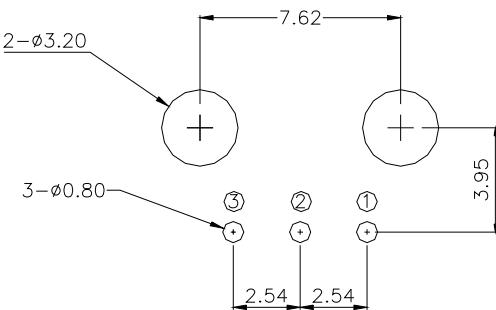
**Notes:** 1. All dimensions are in millimeters.  
2. General Tolerance  $\pm 0.1\text{mm}$

**Pin Function:** 1.GND  
2.Vcc  
3.Vin

### Using Method



### PCB Layout for Electrical Circuit



### Notes:

1. unit:mm
2. Dimension Tolerance: $\pm 0.1\text{mm}$
3. Substrate Thickness:1.6mm

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## PLT131/T8

### Absolute Maximum Ratings( Ta = 25°C )

| Parameter             | Symbol | Rating          | Unit |
|-----------------------|--------|-----------------|------|
| Supply Voltage        | Vcc    | -0.5 to 7       | V    |
| DC Input Voltage      | Vin    | -0.5 to Vcc+0.5 | V    |
| Storage Temperature   | Tstg   | -40 to 70       | °C   |
| Operating Temperature | Topr   | -20 to 70       | °C   |
| Soldering Temperature | Tsol   | 260*            | °C   |

\* Soldering time ≤ 10 s.

### Electro-Optical Characteristics

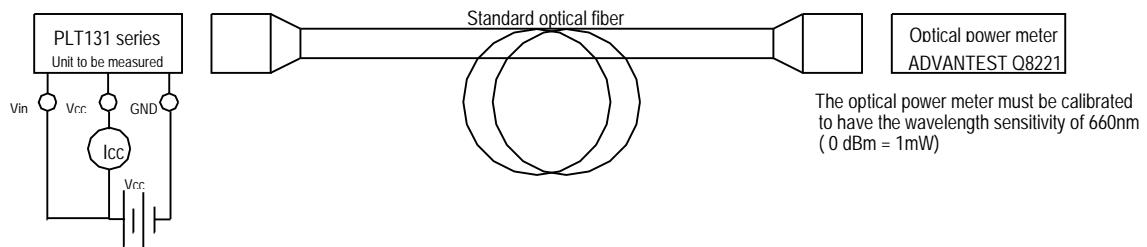
| Parameter                   | Symbol           | Conditions   | MIN. | TYP. | MAX. | Unit |
|-----------------------------|------------------|--------------|------|------|------|------|
| Operating Voltage           | Vcc              | Low Voltage  | 2.75 | 3.00 | 3.25 | V    |
|                             |                  | High Voltage | 4.75 | 5.00 | 5.25 | V    |
| Peak Emission Wavelength    | λp               |              | 640  | 660  | 680  | nm   |
| Transmission Rate           |                  | NRZ Code     | DC   | -    | 8    | Mbps |
| Transmission Distance       |                  | Using APF*   | 0.2  | -    | 20   | m    |
| Fiber Coupling Output Power | Pf               | *1           | -21  | -18  | -15  | dBm  |
| Dissipation Current         | Icc              | *2           | 3    | -    | 10   | mA   |
| High Level Input Voltage    | VIH              |              | 2    | -    | -    | V    |
| Low Level Input Voltage     | VIL              |              | -    | -    | 0.8  | V    |
| Low to High Delay Time      | t <sub>PLH</sub> | *3           | -    | -    | 180  | ns   |
| High to Low Delay Time      | t <sub>PHL</sub> | *3           | -    | -    | 180  | ns   |
| Pulse Width Distortion      | Δtw              | *3           | -30  | -    | 30   | ns   |

\*All Plastic Optical Fiber ( 970/1000um )

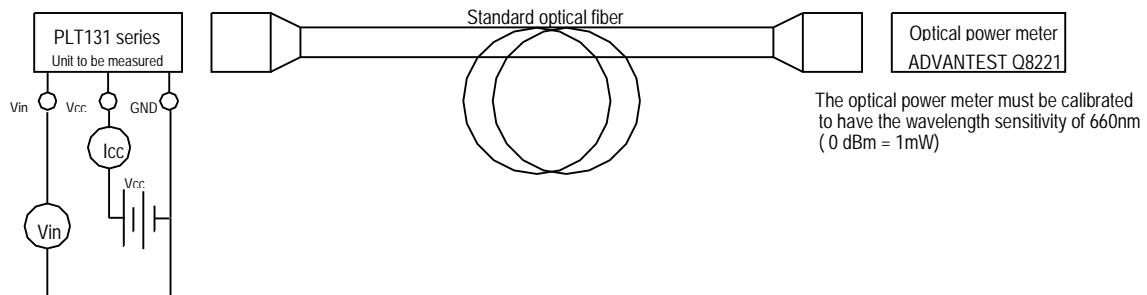
Device NO.:DPL-131-013

## Measuring Method

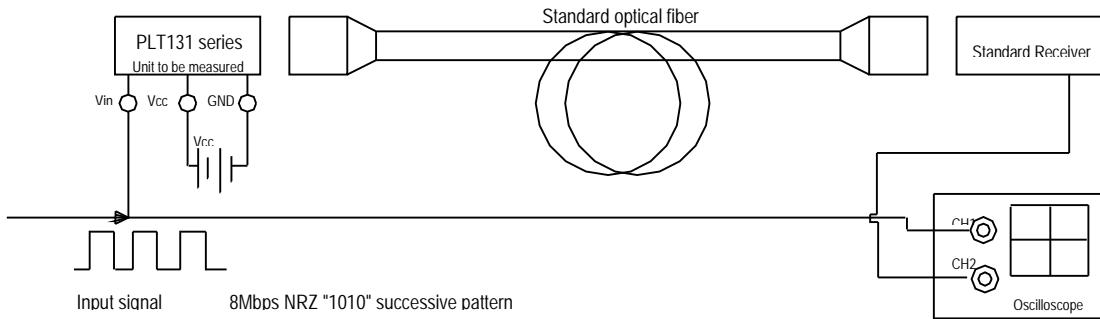
\*1 Measuring method of optical output coupling fiber



\*2 Input voltage/power dissipation measuring method



\*3 Pulse response measuring method



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