

### Photo-link Light Transmitter Unit EAPLTAA6



#### Features

- High speed signal transmission(16Mbps NRZ Signal)
- TTL interface compatible
- +3~+5V single power source
- The product itself will remain within RoHS compliant version.

#### Description

The opto-electrical component is assembled with a 660nm AlGaInP LED and a driver 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 good 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. |
| AlGaInP  | 660              | +3.0~5.0                   | 5.5                      | 10   | -21                               | ---  | -15  |

## 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 85       | °C   |
| Operating Temperature | Topr   | -40 to 85       | °C   |
| Soldering Temperature | Tsol   | 260*            | °C   |
| Human Body Model ESD  | HBM    | 3K              | V    |
| Machine Model ESD     | MM     | 300             | V    |

Notes: Soldering time ≤ 10 seconds.

## Recommended Operating Conditions

| Parameter      | Symbol | Conditions | MIN. | TYP. | MAX. | Unit |
|----------------|--------|------------|------|------|------|------|
| Supply Voltage | Vcc    | -          | 2.7  | 3.0  | 5.50 | V    |

## Electro-Optical Characteristics (Ta=25°C)

| Parameter                   | Symbol      | Conditions                        | MIN. | TYP. | MAX. | Unit |
|-----------------------------|-------------|-----------------------------------|------|------|------|------|
| Peak Emission Wavelength    | $\lambda_p$ |                                   | 640  | 660  | 680  | nm   |
| Transmission Rate           |             | NRZ Signal                        | DC   | -    | 16   | Mbps |
| Fiber Coupling Output Power | Pf          | * Measuring Method 1              | -21  | -    | -15  | dBm  |
| Dissipation Current         | Icc         | * Measuring Method 1              | 3    | -    | 10   | mA   |
| High Level Input Voltage    | Vih         |                                   | 2    | -    | -    | V    |
| Low Level Input Voltage     | Vil         |                                   | -    | -    | 0.8  | V    |
| Rise Time                   | Tr          | [1] ; *2 NRZ Code<br>VFLED = 2.0V | -    | 15   | 20   | ns   |
| Fall Time                   | Tf          |                                   | -    | 15   | 20   | ns   |
| Low to High Delay Time      | tpLH        | * Measuring Method 2              | -    | -    | 100  | ns   |
| High to Low Delay Time      | tpHL        | * Measuring Method 2              | -    | -    | 100  | ns   |
| Pulse Width Distortion      | $\Delta tw$ | * Measuring Method 2              | -15  | -    | 15   | ns   |
| Jitter                      | $\Delta tj$ | * Measuring Method 2              | -    | 1.5  | 15   | ns   |

\*Note 1 : All Plastic Optical Fiber ( 980/1000um )

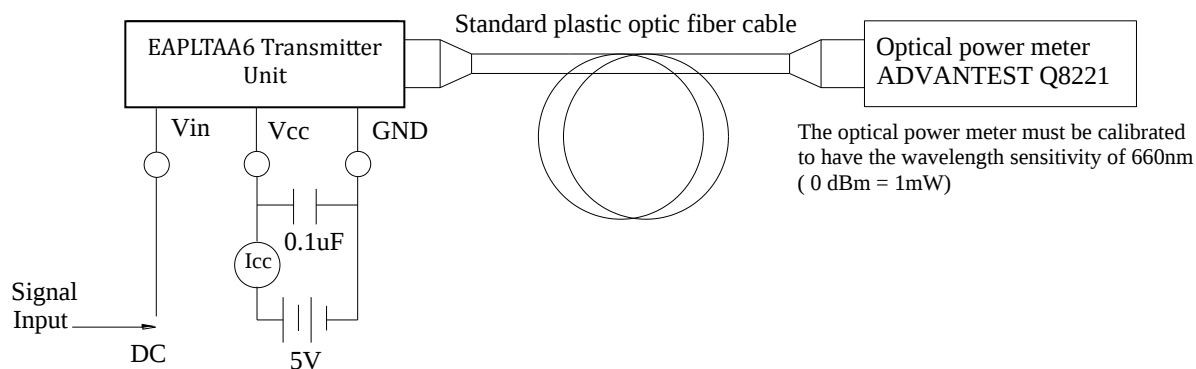
**\*Circuit Layout Notice:**

When power is off, it must be cut off together in Vin and Vcc pin.  
If it only has Vcc power-off, LED will sure to be no output power

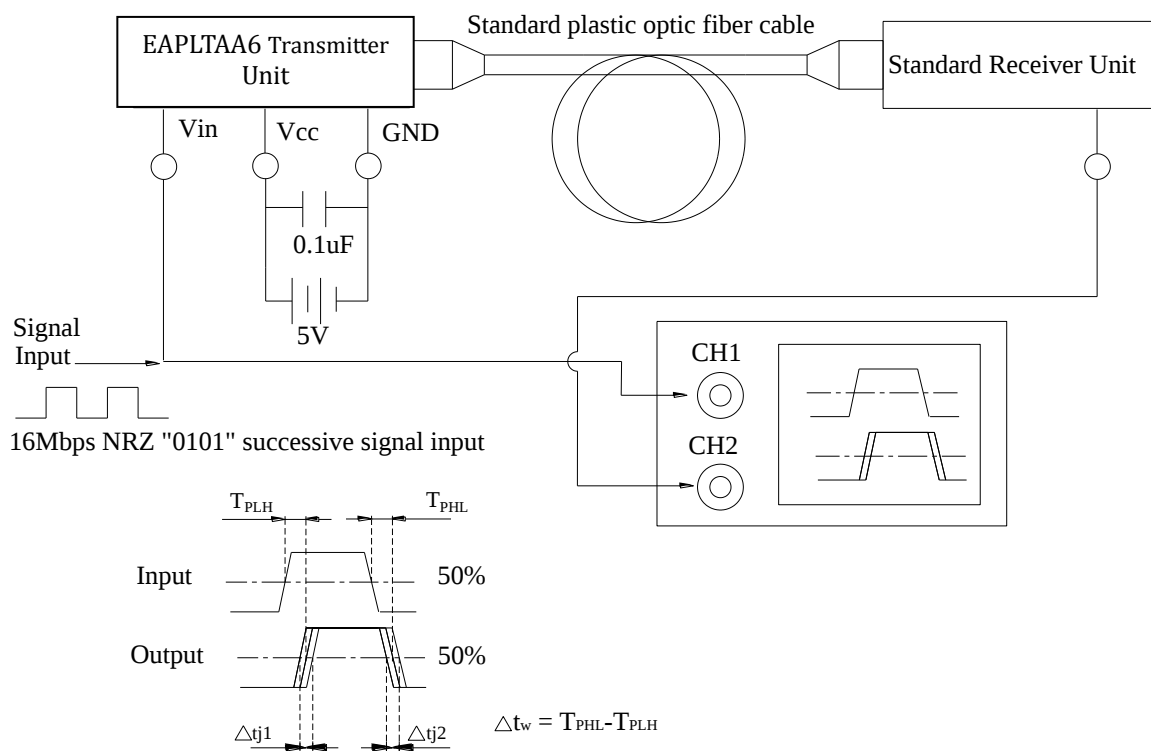
| Vcc      | Vin      | LED Condition |
|----------|----------|---------------|
| 2.7~5.5V | High     | ON            |
| 2.7~5.5V | Low      | OFF           |
| 2.7~5.5V | FLOATING | OFF           |
| FLOATING | 0~Vcc    | OFF           |

**Measuring Method**

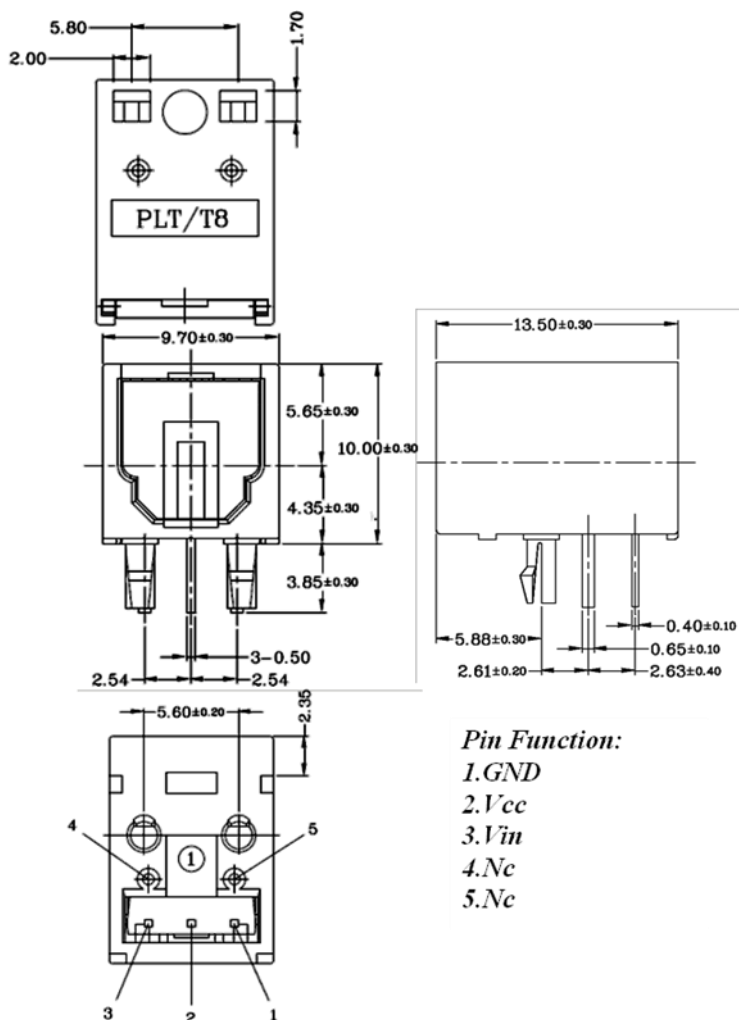
**\*1 Measuring method of optical output coupling fiber and dissipation current**



**\*2 Pulse response measuring method**

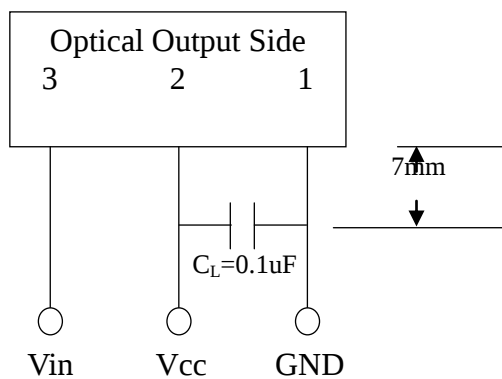


## Package Dimension

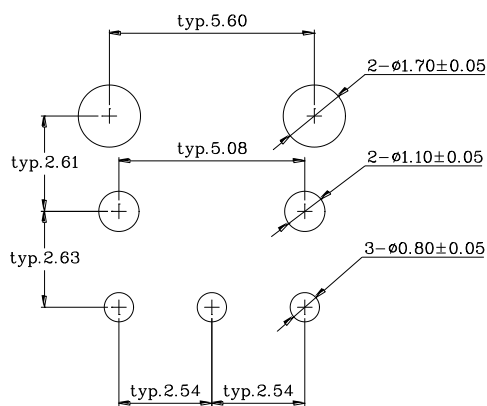


Note: 1. All dimensions are in millimeters. 2. General Tolerance : ±0.3mm

## Using Method



## PCB Layout for Electrical Circuit



## Moisture Resistant Packing Materials

### Label Explanation



- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- X: Month
- Reference: Identify Label Number

### Packing Quantity Specification

1. 60 pcs/tube
2. 36 tube/inner box
3. 4 inner box/outside box

### Notes

1. Above specification may be changed without notice. Everlight Americas will reserve authority on material change for above specification.
2. .When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. Everlight Americas assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
3. These specification sheets include materials protected under copyright of Everlight Americas Inc. Please don't reproduce or cause anyone to reproduce them without Everlight Americas's consent.