

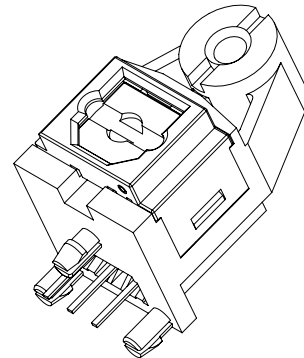
# Technical Data Sheet

## Photolink- Fiber Optic Transmitter

**PLT153/K5H**

### Features

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



### Descriptions

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.

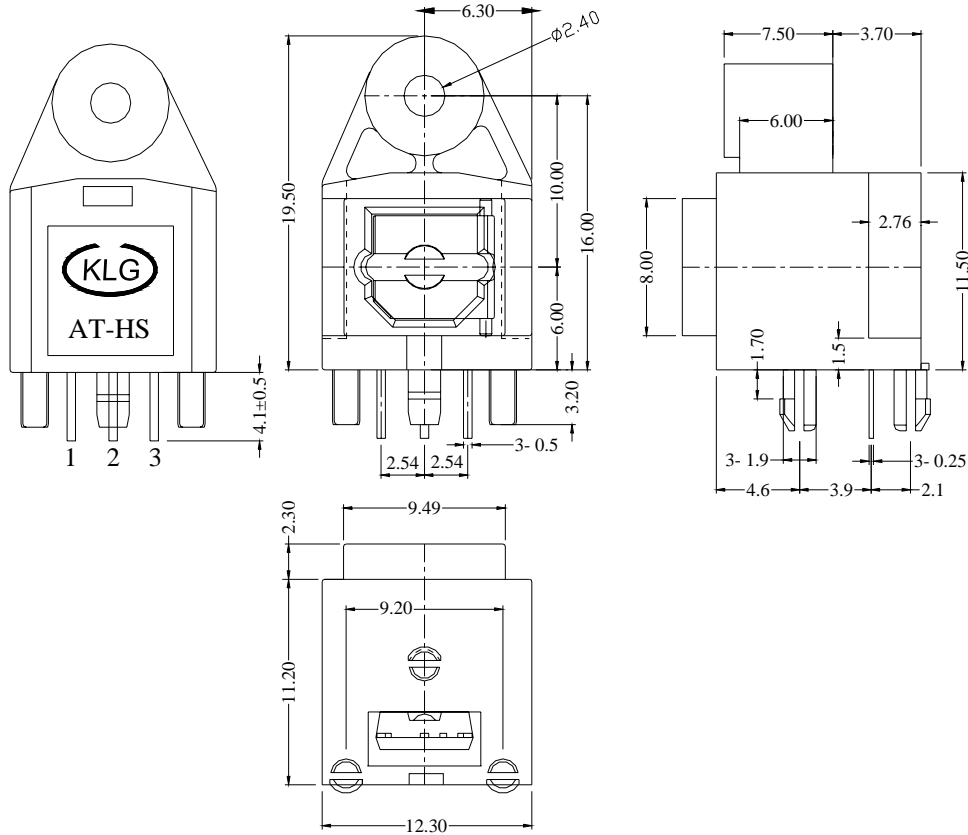
### Applications

- Digital audio equipment
- CD player
- DVD player

### Device Selection Guide

Chip		Operating Voltage (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	--	-16

**Package Dimension:**

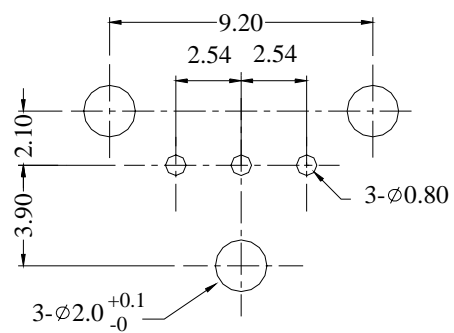
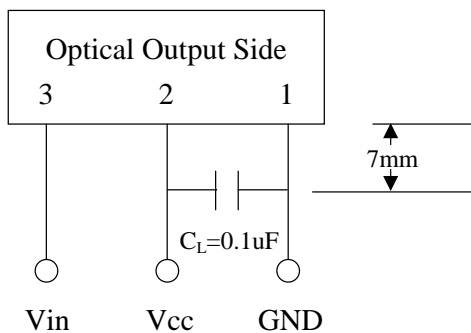


- Notes:** 1.All dimensions are in millimeters.  
 2.General Tolerance : $\pm 0.2\text{mm}$   
 3. Cover: Black

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

**Using Method**

**PCB Layout for Electrical Circuit**



- Notes:**  
 1. Unit:mm  
 2.Substrate Thickness:1.6mm

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

Parameter	Symbol	Rating	Unit
Supply Voltage	V <sub>cc</sub>	-0.5 to 7	V
DC Input Voltage	V <sub>in</sub>	-0.5 to V <sub>cc</sub> +0.5	V
Storage Temperature	T <sub>stg</sub>	-40 to 85	°C
Operating Temperature	T <sub>opr</sub>	-20 to 70	°C
Soldering Temperature	T <sub>sol</sub>	260*	°C

\* Soldering time ≤ 10 s.

**Electro-Optical Characteristics**

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Operating Voltage	V <sub>cc</sub>	Low Voltage	2.75	3.00	3.25	V
		High Voltage	4.75	5.00	5.25	V
Peak Emission Wavelength	λ <sub>p</sub>		640	660	680	nm
Transmission Rate		NRZ Code	DC	-	16	Mbps
Fiber Coupling Output Power	P <sub>f</sub>	*1	-21	-18	-16	dBm
Dissipation Current	I <sub>cc</sub>	*1	3	-	10	mA
High Level Input Voltage	V <sub>IH</sub>		2	-	-	V
Low Level Input Voltage	V <sub>IL</sub>		-	-	0.8	V
Low to High Delay Time	t <sub>pLH</sub>	*2	-	-	120	ns
High to Low Delay Time	t <sub>pHL</sub>	*2	-	-	120	ns
Pulse Width Distortion	Δtw	*2	-25	-	25	ns
Jitter	Δt <sub>j</sub>	*2	-	-	20	ns

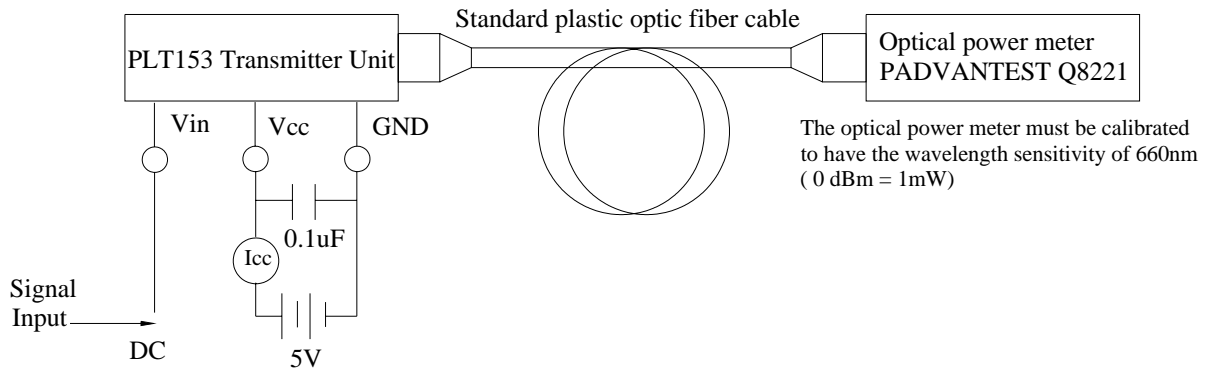
\*All Plastic Optical Fiber ( 980/1000um )

\*Circuit Layout Notice:

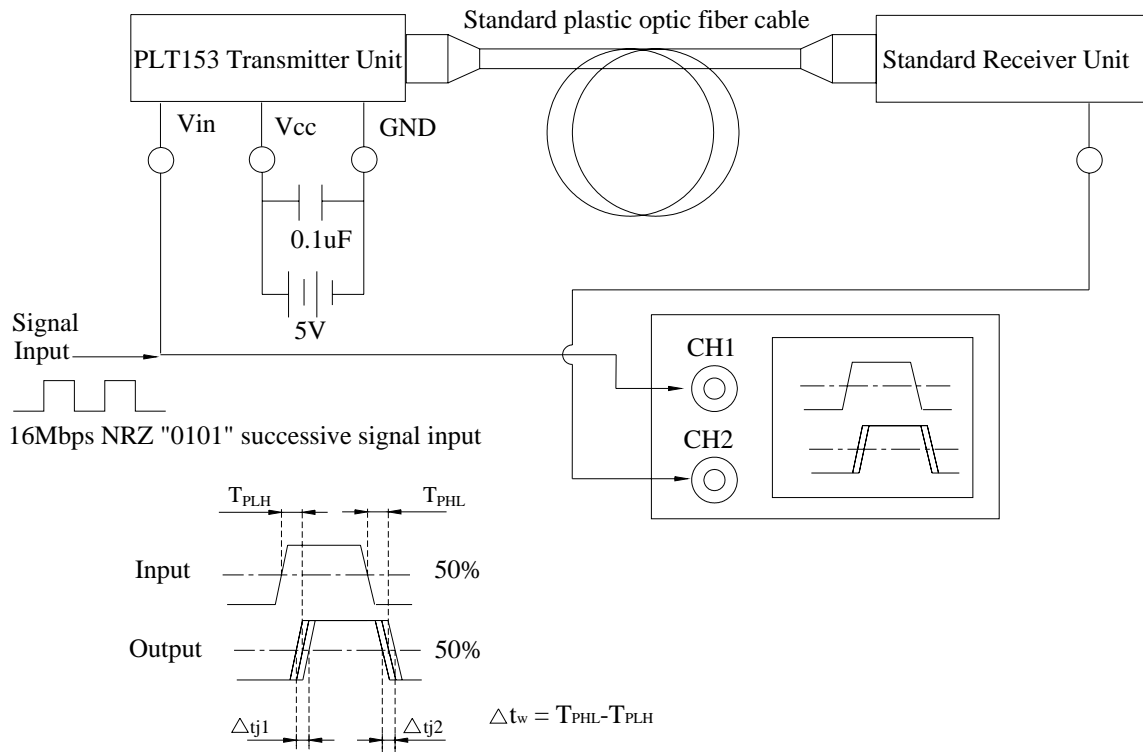
When power is off, it must be cut off together in V<sub>in</sub> and V<sub>cc</sub> pin. If it only has V<sub>cc</sub> power-off, LED will be sparkling because LED is just threshold condition.

**Measuring Method**

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



\*2 Pulse response measuring method



**RELIABILITY TEST ITEMS**

No.	Item	Test Condition	Test Hour/Cycle	Sample Size (Piece)	Number (n) Failure (c)
1	Soldering Heat	260°C±5°C	10 seconds	22	n=22, c=0
2	High Temp. Storage	Ta=100°C	1000hrs	22	n=22, c=0
3	Low Temp. Storage	Ta=-55°C	1000hrs	22	n=22, c=0
4	High Temp. & Humid. Test	Ta=85°C, RH=85%	1000hrs	22	n=22, c=0
5	Temperature Cycle	-40°C ~~~~ 85°C (30min) (5min) (30min)	300cycle	22	n=22, c=0
6	Thermal Shock	-10°C ~~~~ 100°C (5min) (10sec) (5min)	300cycle	22	n=22, c=0
7	DC Operating Life	Vcc=5V, Ta=25°C Vin: DC (5V)	1000hrs	22	n=22, c=0

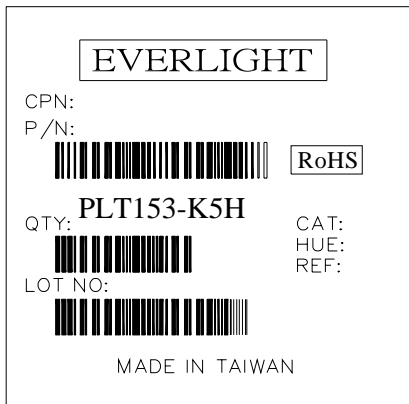
\*Icc(mA) : Difference < 20%

\*Pf (Fiber Coupling Output Power) : Brightness Attenuate Difference < 20%

**Packing Quantity Specification**

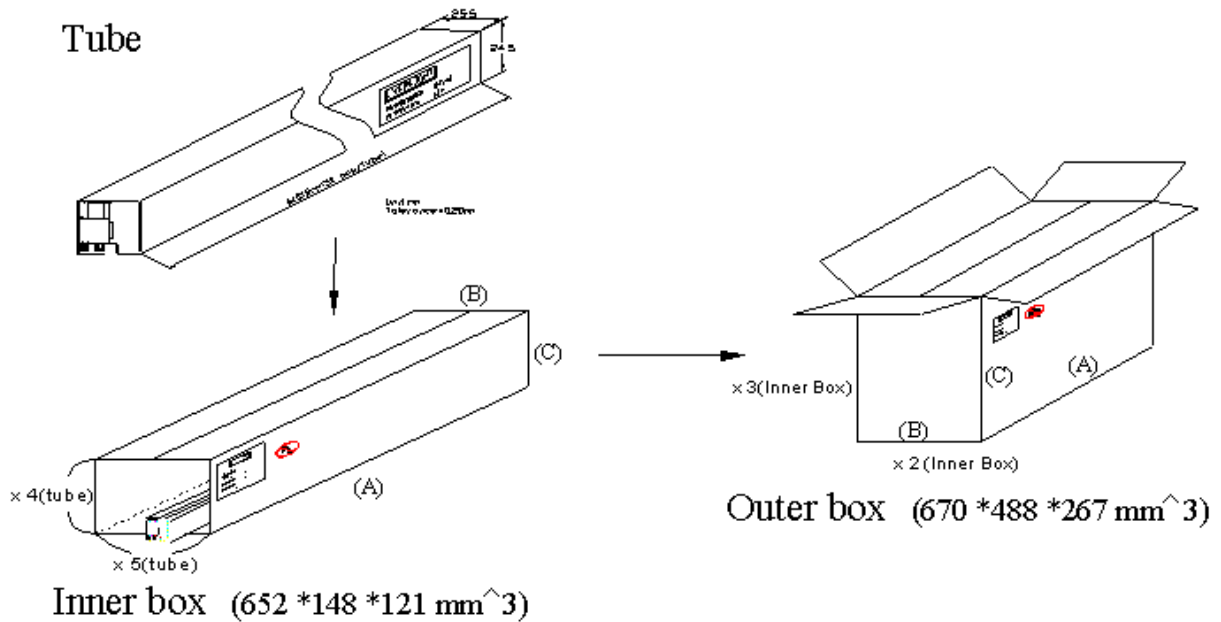
- 1. Tube : 49 pcs/tube
- 2. Inner box : 20 tube/innerbox (980 pcs)
- 3. Outer box : 6 inner/outer (5880 pcs)

**Label Form Specification**



CPN: Customer's Production Number  
 P/N: Production Number  
 QTY: Packing Quantity  
 CAT: De-flash  
 HUE: IC  
 REF: Reference  
 LOT No: Lot Number  
 MADE IN TAIWAN: Production Place

**Package Form**



**Notes**

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

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