

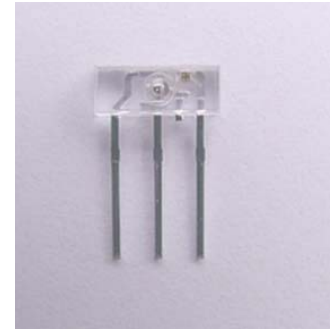
Technical Data Sheet

Photo-link Light Transmitter Unit

PLT232/L5 SERIES

Features

- High speed signal transmission (25Mbps NRZ Signal)
- TTL interface compatible
- +3~+5V single power source
- The product itself will remain within RoHS compliant version.



Descriptions 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

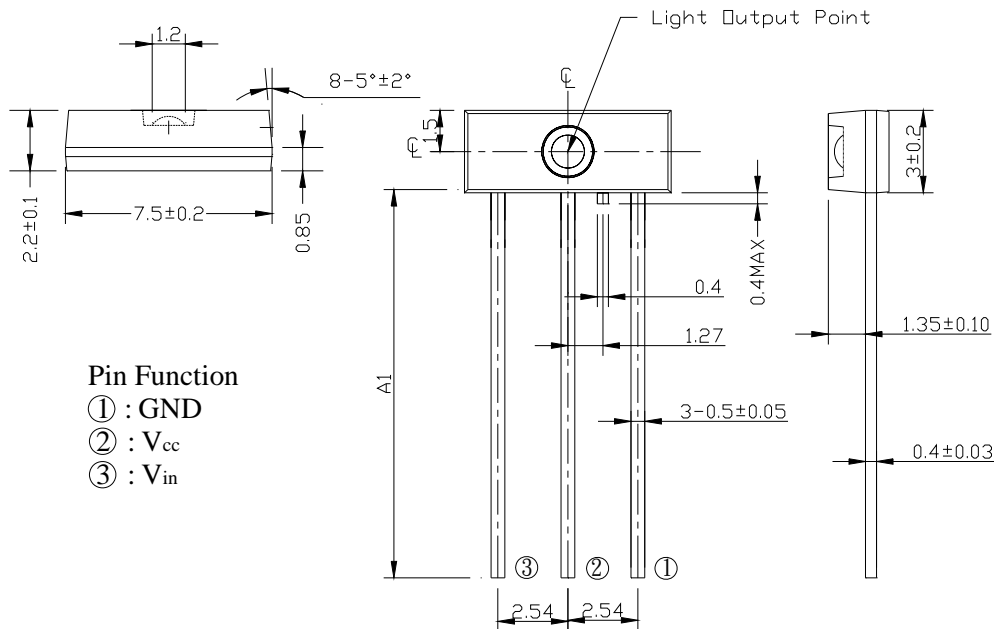
- Digital audio equipment
- CD player
- DVD player

Device Selection Guide

Chip		Operating Voltage (Vcc)	Dissipation Current (mA)		Fiber Coupling Light Output (dBm)		
Material	λ p(nm)		Typ.	Max.	Min.	Typ.	Max.
AlGaInP	660	+3.0~5.0	5.5	10	-21	---	-15

PLT232/L5 SERIES

Package Dimension:



- Notes:**
1. All dimensions are in mm.
 2. General Tolerance: Pin length tolerance <10mm is ±0.25 mm
Pin length tolerance ≥10mm is ±0.5 mm
others are ±0.10 mm

3. Device Selection Table:

Device Name	Pin Length A1 (mm)	Device Name	Pin Length A1 (mm)
PLT232/L5	Min 28.00	PLT232/L5/S10	10.00±0.5
PLT232/L5/S	8.60±0.25	PLT232/L5/S11	7.80±0.25
PLT232/L5/S1	2.80±0.25	PLT232/L5/S12	8.30±0.25
PLT232/L5/S2	3.30±0.25	PLT232/L5/S13	7.50±0.25
PLT232/L5/S3	3.60±0.25	PLT232/L5/S16	15.00±0.5
PLT232/L5/S4	4.10±0.25	PLT232/L5/S17	15.00+1/-0
PLT232/L5/S5	5.95±0.25	PLT232/L5/S18	6.50±0.25
PLT232/L5/S6	24.15±0.5	PLT232/L5/S19	16.00±0.2
PLT232/L5/S7	27.80±0.5	PLT232/L5/S20	23.50±0.2
PLT232/L5/S8	6.70±0.25	PLT232/L5/S21	22.00±0.5
PLT232/L5/S9	8.00±0.25		

PLT232/L5 SERIES

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	-20 to 70	°C
Soldering Temperature	Tsol	260*	°C
Human Body Model ESD	HBM	3K	V
Machine Model ESD	MM	300	V

* Soldering time ≤ 20 s.

Electro-Optical Characteristics (Ta=25°C,Vcc=3.0V/5V,25Mbps)

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	λ_p		640	660	680	nm
Transmission Rate		NRZ Code	DC	-	25	Mbps
Fiber Coupling Output Power	Pf	*1	-21	-18	-15	dBm
Dissipation Current	Icc	*1	3	-	10	mA
High Level Input Voltage	V _{IH}		2	-	-	V
Low Level Input Voltage	V _{IL}		-	-	0.8	V
Rise Time	Tr	[1] ; *2 NRZ Code V _{FLED} = 2.0V	-	15	20	ns
Fall Time	Tf		-	15	20	ns
Low to High Delay Time	t _{pLH}	*2	-	-	100	ns
High to Low Delay Time	t _{pHL}	*2	-	-	100	ns
Pulse Width Distortion	Δtw	*2	-15	-	15	ns
Jitter	Δtj	*2	-	-	15	ns

*All Plastic Optical Fiber (980/1000um)

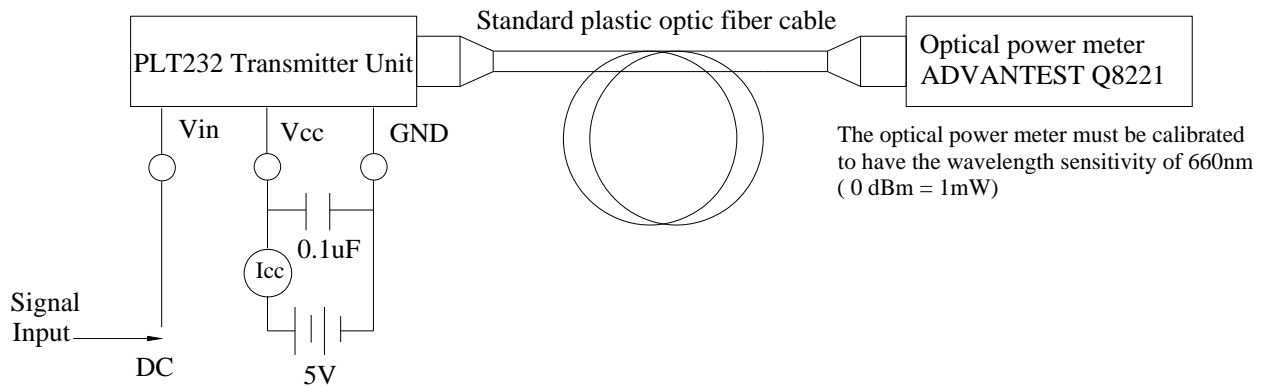
***Circuit Layout Notice:**

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.

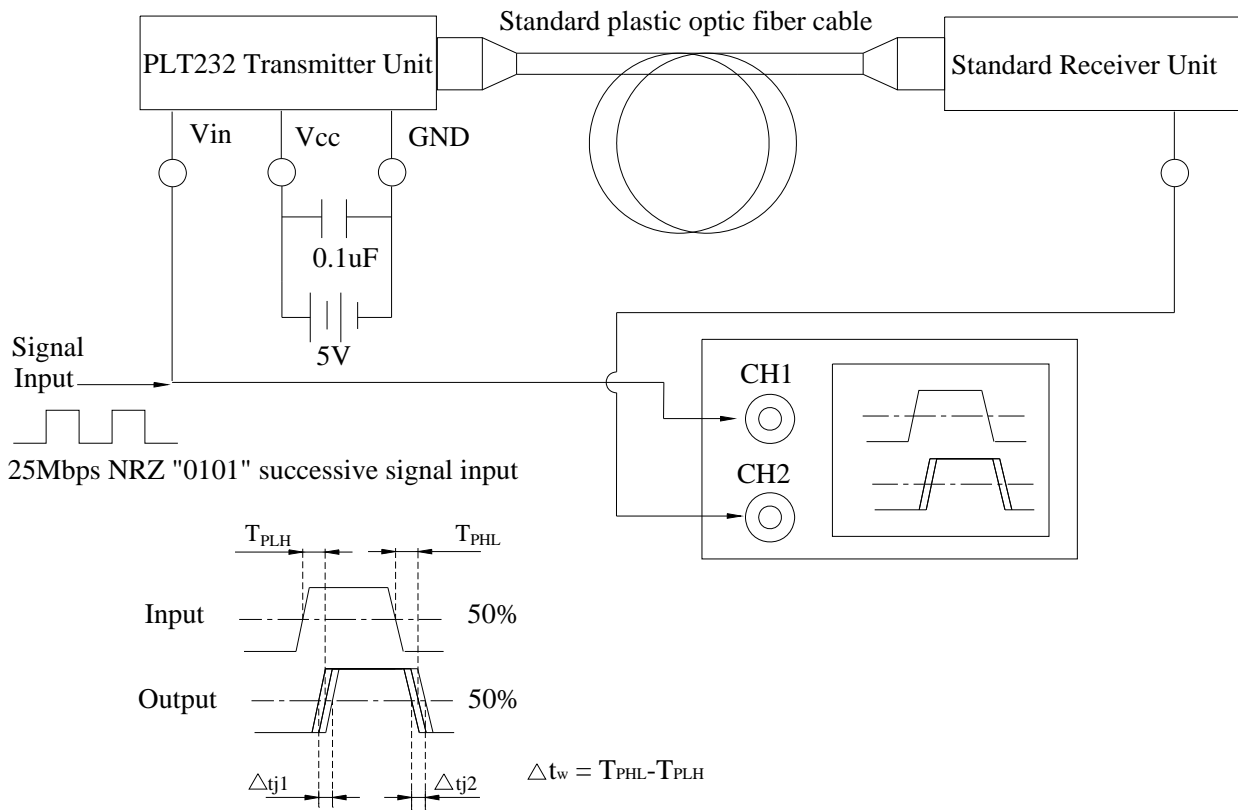
Vcc	Vin	LED Condition
2.7~5.5V	High	ON
2.7~5.5V	Low	OFF
2.7~5.5V	FLOATING	OFF
FLOATING	0~Vcc	OFF

Measuring Method

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



*2 Pulse response measuring method



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

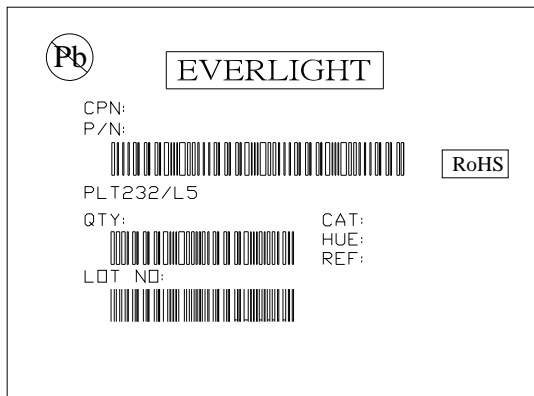
*Icc(mA) : Dissipation Current Attenuate Difference < ±20%

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

Packing Quantity Specification

1. 500 or 2000 pcs/bag
2. 4 bag/box

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

Notes

1. 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.
2. 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.
3. For any specification change, EVERLIGHT will inform customer by PCN form.

EVERLIGHT ELECTRONICS CO., LTD.
Office: No 25, Lane 76, Sec 3, Chung Yang Rd,
Tucheng, Taipei 236, Taiwan, R.O.C

Tel: 886-2-2267-2000, 2267-9936
Fax: 886-2267-6244, 2267-6189, 2267-6306
<http://www.everlight.com>