



## PLR135-T9

### Photolink-Fiber Optic Receiver

#### Descriptions

The PLR135-T9 is packaged with custom optic data link interface, integrated on a proprietary CMOS PDIC process. The unit functions by converting optical signals into electric ones. The unit is operated at 2.4 ~ 5.5 V and the signal output interface is TTL compatible with high performance at low power consumption.

#### Features

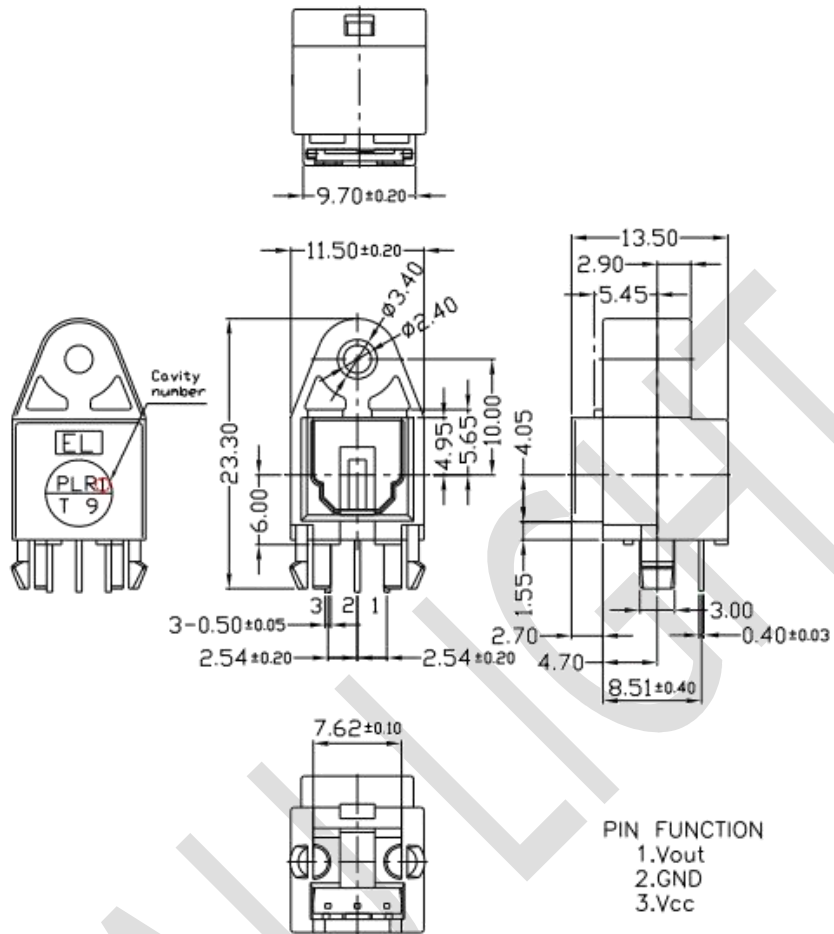
- High PD sensitivity optimized for red light
- Data : NRZ signal
- Low power consumption for extended battery life
- Built-in threshold control for improved noise Margin

#### Applications

- Digital Optical Data-Link
- Dolby AC-3 Digital Audio Interface



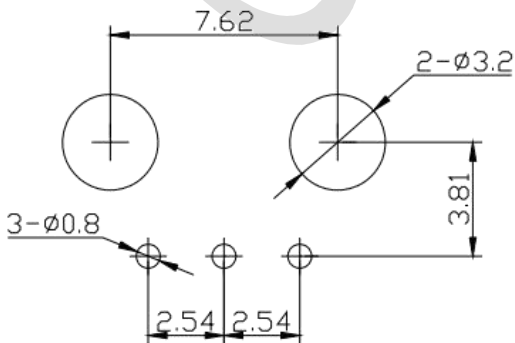
## Package Dimension



### Notes:

1. All dimensions are in millimeters
2. Tolerances unless dimensions  $\pm 0.3$ mm
3. Lead spacing is measured where the lead emerge from the package

## PCB Layout for Electrical Circuit



### Notice:

1. Unit:mm
2. PCB tolerance:1.6mm



## Absolute Maximum Ratings

Parameter (Ta=25°C)	Symbo	Ratings	Unit
Supply Voltage	Vcc	-0.5 ~ +5.5	V
Output Voltage	Vout	Vcc+0.3	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	2000	V
Machine Model ESD	MM	100	V

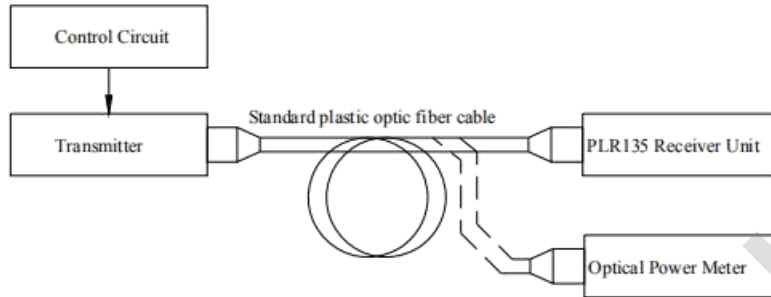
## Electro-Optical Characteristics

Parameter (Ta=25°C)	Symbo	Min.	Typ.	Max.	Unit	Conditions
Peak sensitivity wavelength	$\lambda_p$	-	650	-	nm	-
Transmission Distance	d	0.2	--	5	m	*1
Maximum receiver power	Pc,max	-	-	-14	dBm	-
Minimum receiver power	Pc,min	-27	-	-	dBm	-
Dissipation current	Icc	-	4	12	mA	-
High level output voltage	VOH	2.1	2.5	-	V	-
Low level output voltage	VOL	-	0.2	0.4	V	-
Rise time	tr	-	10	20	ns	-
Fall time	tf	-	10	20	ns	-
Propagation delay Low to High	tPLH	-	-	120	ns	-
Propagation delay High to Low	tPHL	-	-	120	ns	-
Pulse Width Distortion	$\Delta tw$	-25	-	+25	ns	-
Jitter	$\Delta t_j$	-	1	15	ns	Pc=-14dBm
		-	5	20	ns	Pc=-27dBm
Transfer rate	T	0.1	-	16	Mb/s	NRZ signal

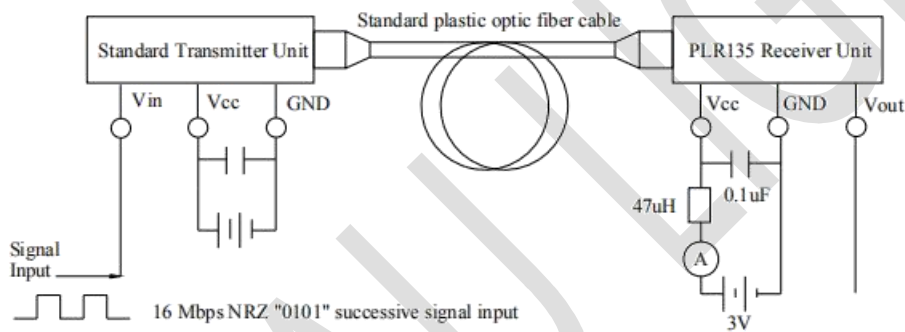


## Measuring Method

\*Fig.1 Measuring Method of Maximum and Minimum Input Power that Receiver Unit Need

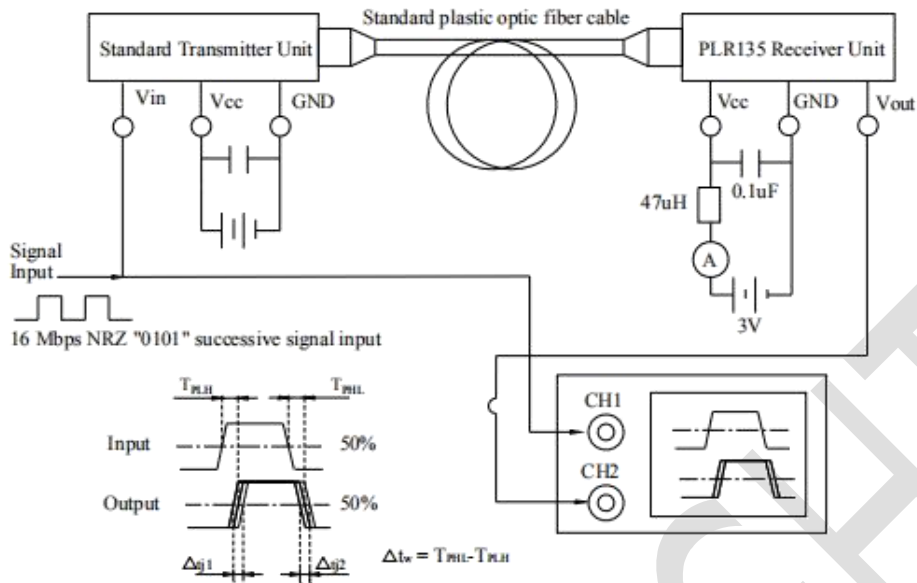


\*Fig.2 Measuring Method of Dissipation Current



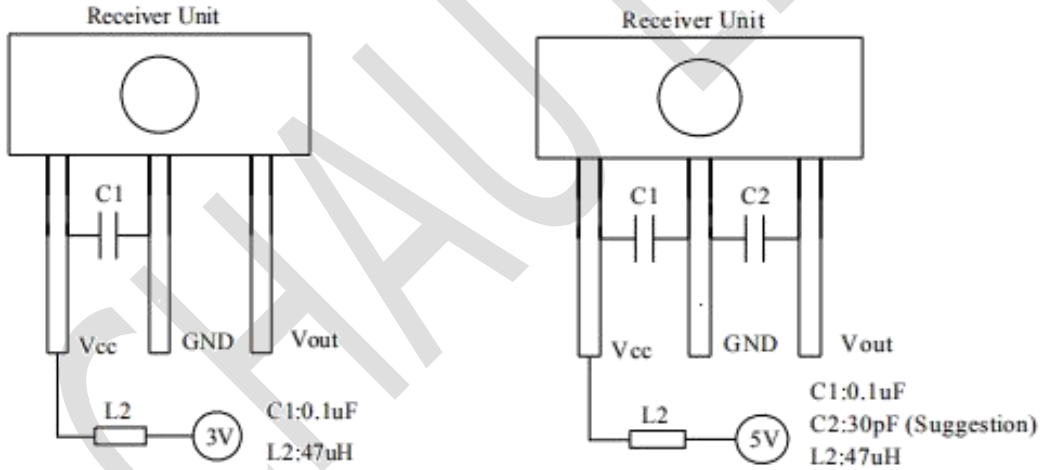


\*Fig.3 Measuring Method of Output Voltage, Pulse and Jitter



## Application Circuit

- (1) General application circuit for  $V_{cc}=3V$       (2) General application circuit for  $V_{cc}=5V$

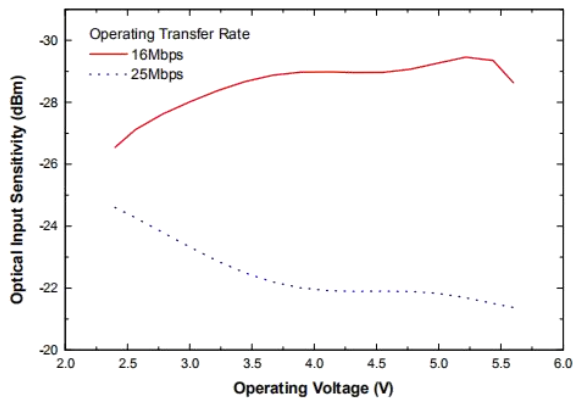


Note: For having good coupling, the C1,C2 capacitor must be placed within 7mm

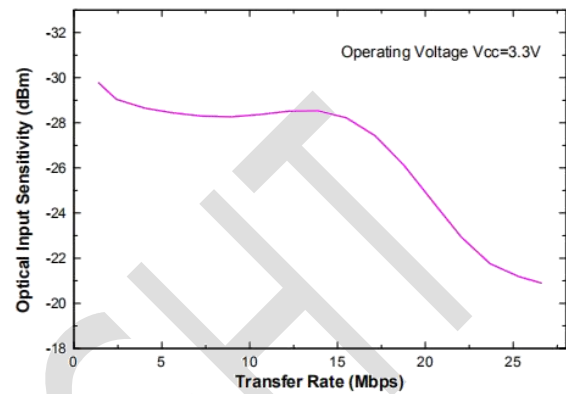


## Typical Electrical/Optical/Characteristics Curves

Power supply voltage vs. Minimum receiver power



Transfer rate vs. Minimum receiver power



**Note:** Before using the PLR135 device, please confirm the minimum sensitivity at different operating voltage and transmission rate.



## Packing Quantity Specification

- 1.50PCS/tube, 20Tubes/1Box
2. 4Boxes/Carton

## Notes

1. Above specification may be changed without notice. CHAU LIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instruction for using outlined in these specification sheets. CHAU LIGHT 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.
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