

Technical Data Sheet

Photolink- Fiber Optic Receiver

PLR131/T

Features

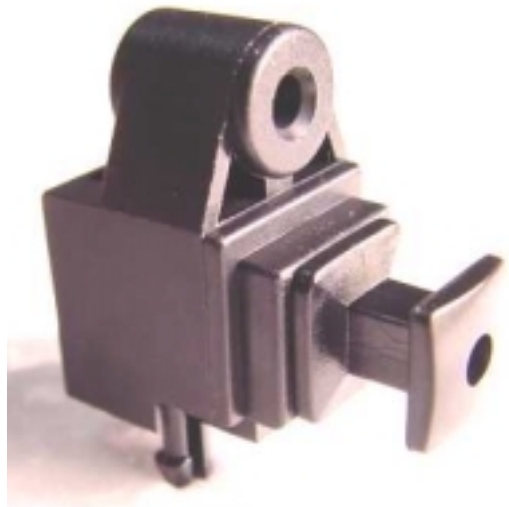
1. High PD sensitivity optimized for red light
2. Data Rate up to 13.2Mbps at least (NRZ signal)
3. Low power consumption for extended battery life
4. Built-in threshold control for improved noise margin

Descriptions

The optical receiver 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 with data rate up to 13.2Mbps at least.

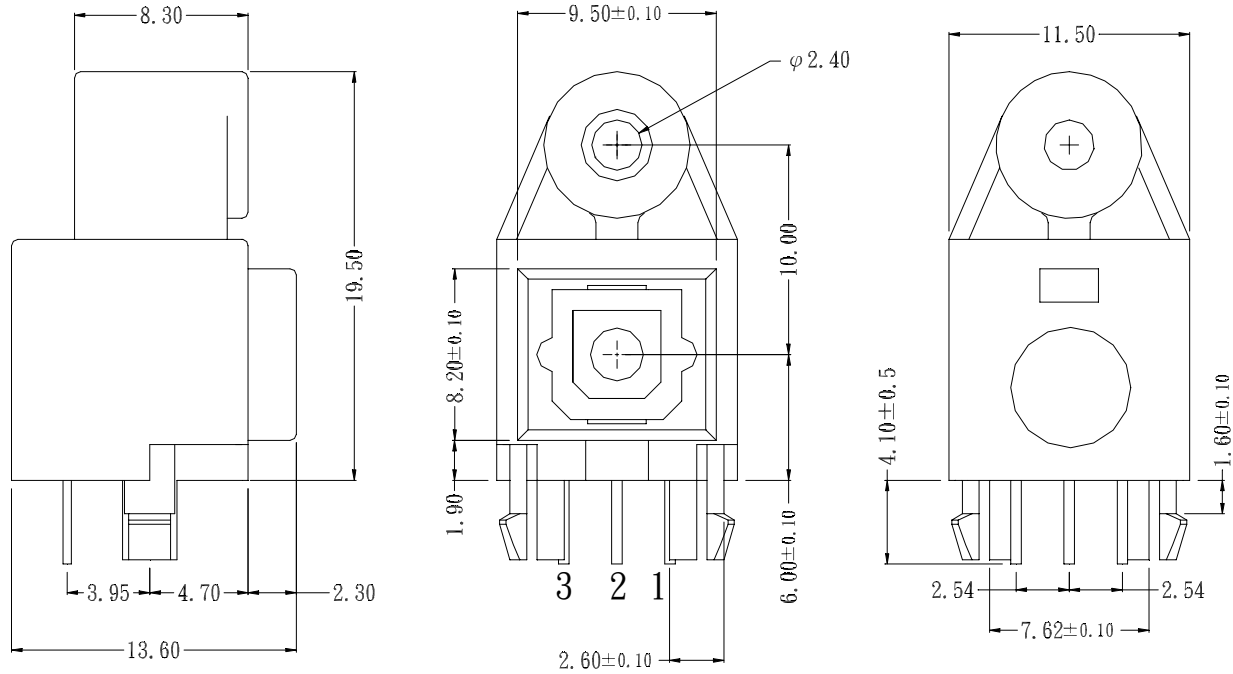
The unit is operated at 5V and the signal output is TTL compatible with high performance at low power consumption.



Applications

1. Digital Optical Data-Link
2. Dolby AC-3 Digital Audio Interface

Device NO.:DPL-832-002

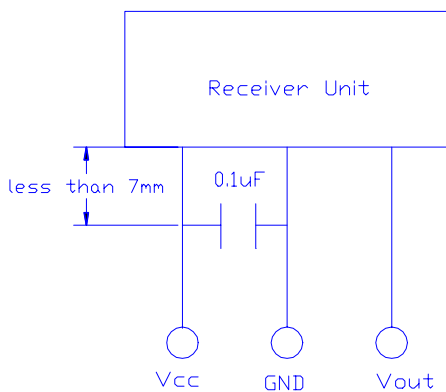


Package Dimensions

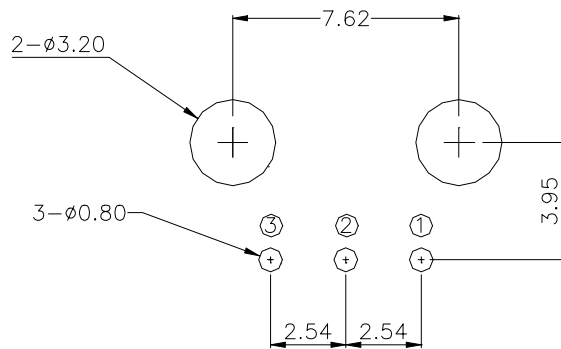
Notes: 1. All dimensions are in millimeters.
2. General Tolerance :± 0.1mm

Pin Function: 1.Vout
2.GND
3.Vcc

Using Method



PCB Layout for Electrical Circuit



Notes:

- 1. Unit: mm
- 2. Dimension Tolerance:± 0.1mm
- 3. Substrate Thickness: 1.6mm

Device NO.:DPL-832-002

Absolute Maximum Ratings(Ta = 25°C)

Parameter	Symbol	Rating	Unit
Supply Voltage	Vcc	6	V
Output Voltage	Vout	Vcc+0.3	V
Storage Temperature	Tstg	-30 to 80	°C
Operating Temperature	Topr	-20 to 70	°C
Soldering Temperature	Tsol	260*	°C

* Soldering time ≤ 10 s.

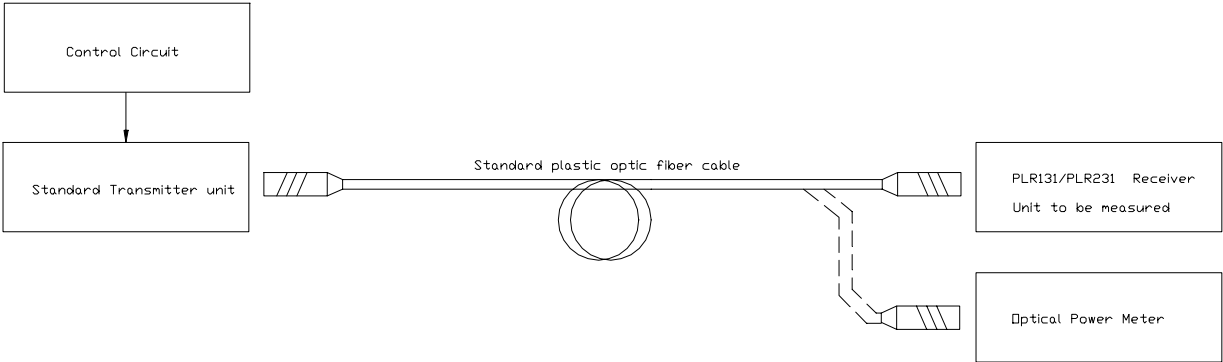
Electro-Optical Characteristics

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Peak sensitivity wavelength	λ_p	-	-	660	-	nm
Maximum receiver power	Pc,max	Refer to Fig.1	-	-	-14	dBm
Minimum receiver power	Pc,min	Refer to Fig.1	-24	-	-	dBm
Dissipation current	Icc	Refer to Fig.2	-	4	12	mA
High level output voltage	VOH	Refer to Fig.3	2.4	4.8	-	V
Low level output voltage	VOL	Refer to Fig.3	-	0.2	0.4	V
Rise time	tr	Refer to Fig.3		10	30	ns
Fall time	tf	Refer to Fig.3		15	30	ns
Propagation delay Low to High	t _{pLH}	Refer to Fig.3	-	-	120	ns
Propagation delay High to Low	t _{pHL}	Refer to Fig.3	-	-	120	ns
Pulse Width Distortion	Δtw	Refer to Fig.3	-30	-	+30	ns
Jitter	Δtj	Refer to Fig.4 , Pc=-15dBm	-	1	30	ns
		Refer to Fig.4 , Pc=-22dBm	-	-	30	ns
Transfer rate	T	NRZ signal	0.1	-	13.2	Mbps

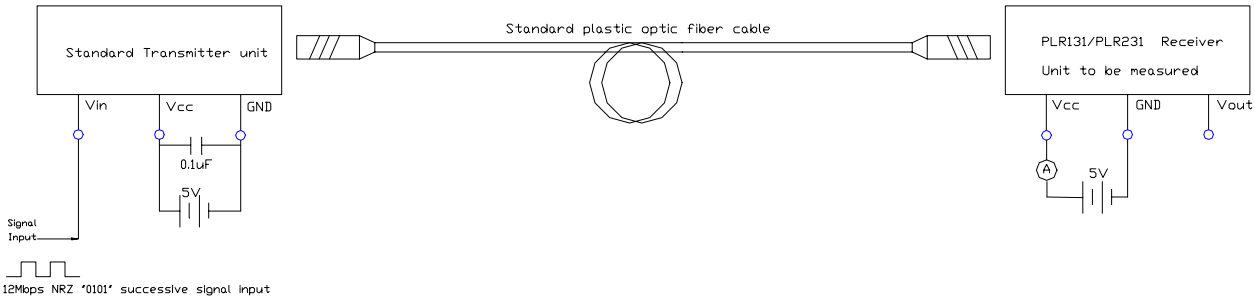
*All Plastic Optical Fiber (970/1000um)

Measuring Method

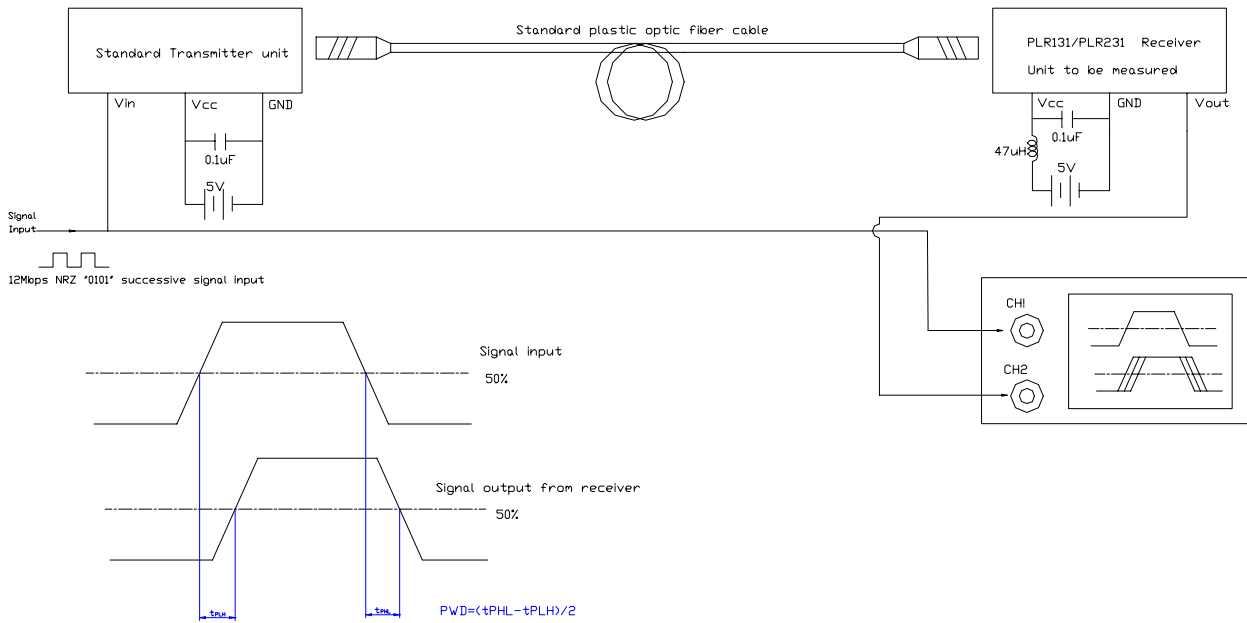
*Fig.1 Measuring Method of Maximum and Minimum Input Power that Receiver Unit Need



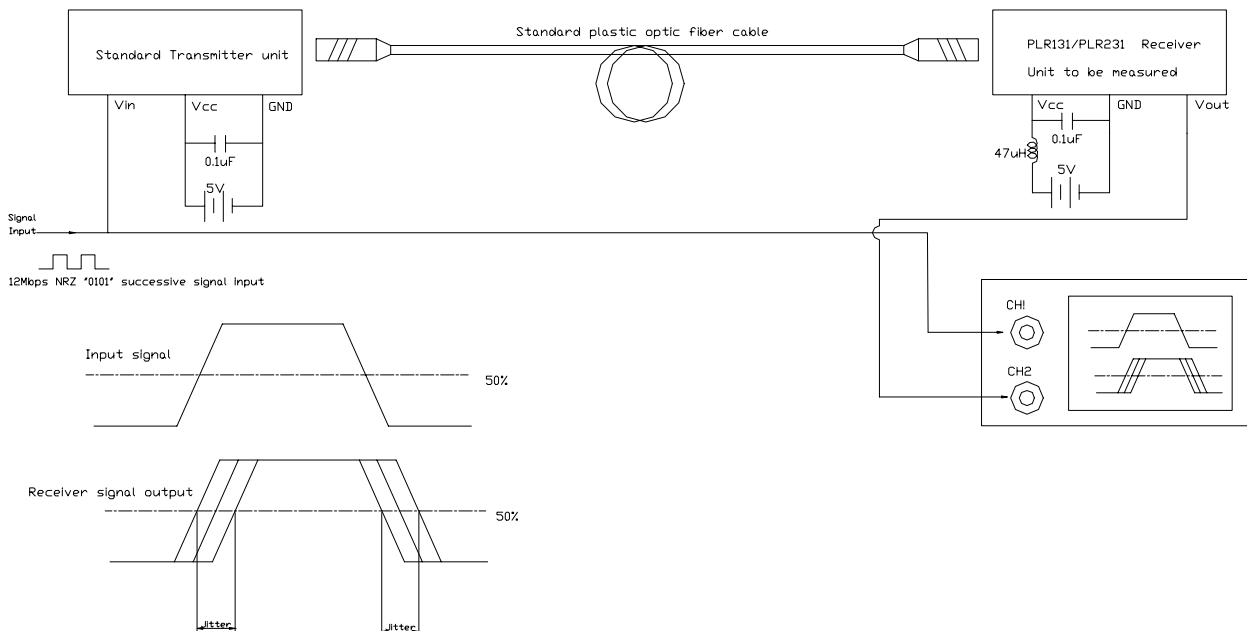
*Fig.2 Measuring Method of Dissipation Current



***Fig.3 Measuring Method of Output Voltage and Pulse**



***Fig.4 Measuring Method of Jitter**



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>

Device NO.:DPL-832-002