



IR Emitter and Detector Product Data Sheet LTDL-TX12P01B

Spec No.: DS50-2003-033

Effective Date: 09/27/2003

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

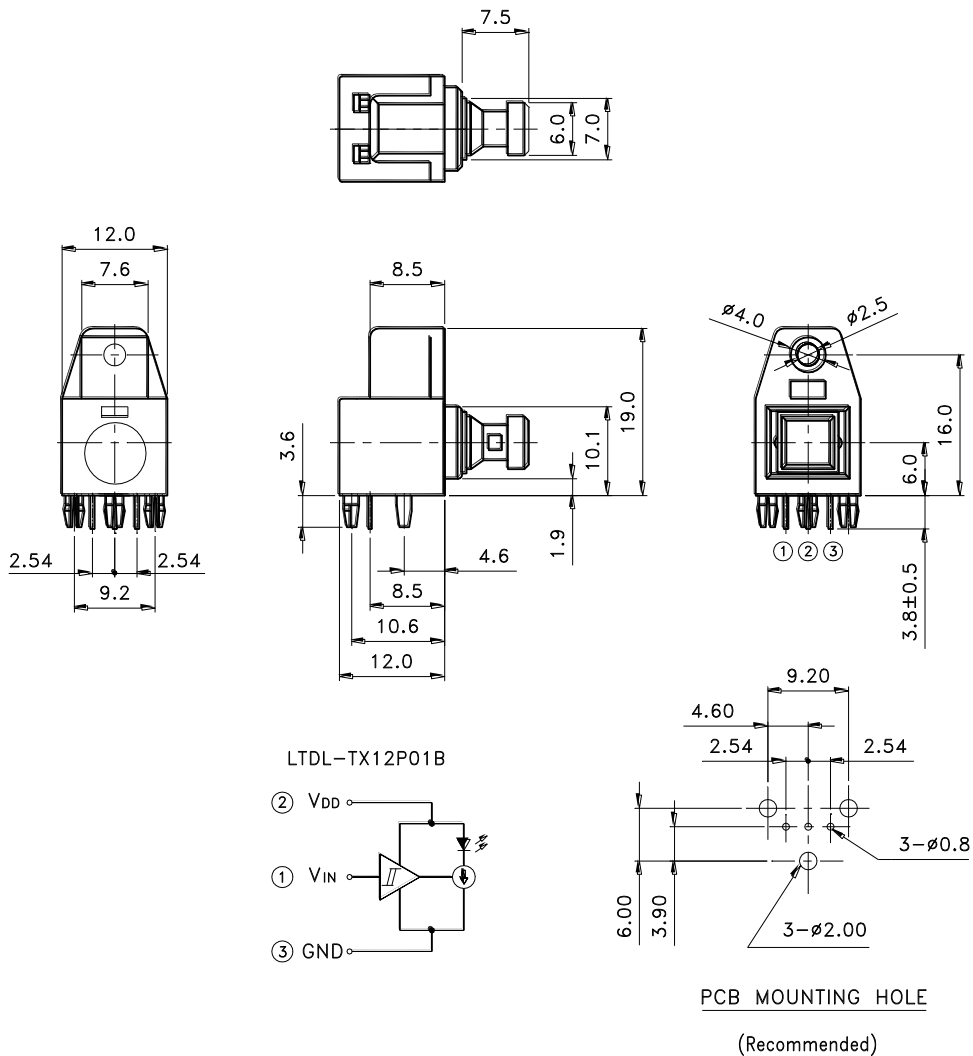
FEATURES

- * High speed transmission (13.2 Mbps , NRZ code)
- * Build-in LED driving circuit allows connecting directly to modulation IC for digital audio equipment.
- * Wide range of operating voltage from 3V to 5V
- * Same package as fiber optic receiving module LTDL-RX16P01B

APPLICATIONS

- * Digital audio system
- * CD & DVD players

PACKAGE DIMENSIONS



NOTES:

1. All dimensions are in millimeters.
2. Tolerance is ±0.3 mm unless otherwise noted.



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ELECTRO—OPTICAL CHARACTERISTICS

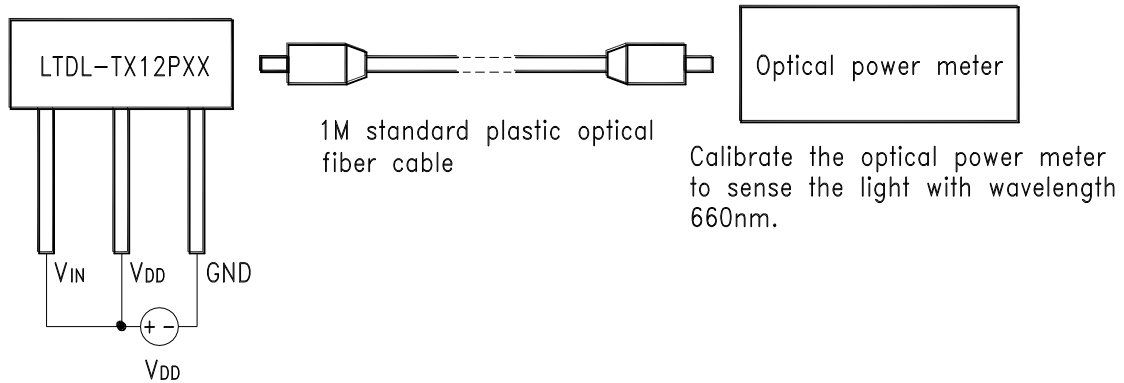
ABSOLUTE MAXIMUM RATINGS AT TA=25°C

PARAMETER	MAXIMUM RATING	UNIT
Supply Voltage (V _{DD})	-0.5 ~ +7	V
Input Voltage (V _{IN})	-0.5 ~ V _{DD} +0.5	V
Operating Temperature Range	-20 °C to +70 °C	
Storage Temperature Range	-30 °C to +80 °C	
Lead Soldering Temperature [1.6mm(.063") From Body]	260°C for 5 Seconds	

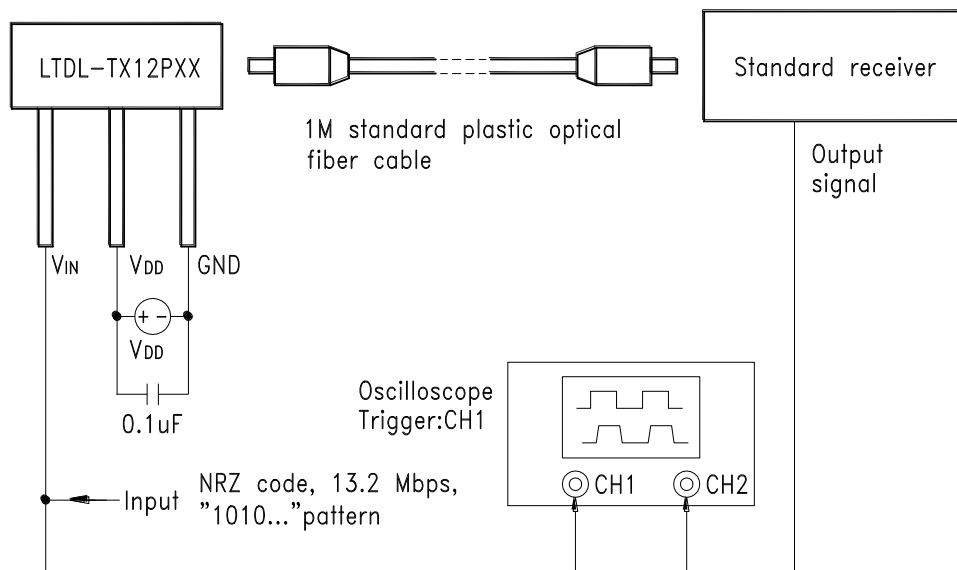
ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Data Rate	T _s	—	—	13.2	Mbps	NRZ code
Operating Voltage	V _{DD}	2.75	—	5.25	V	
Peak Emission Wavelength	λ _{Peak}	630	650	690	nm	
Fiber Coupling Light Output	P _c	-21	-17	-15	dBm	*1
Current Consumption	I _{DD}	—	6	8	mA	
High Level Input Voltage	V _{IH}	2	—	—	V	
Low Level Input Voltage	V _{IL}	—	—	0.8	V	
“Low→High” propagation delay time	t _{PLH}	—	—	166	ns	*2
“High→Low” propagation delay time	t _{PHL}	—	—	155	ns	
Pulse Width Distortion	Δt _w	-18	—	+18	ns	
Jitter	Δt _j	—	1	18	ns	*2

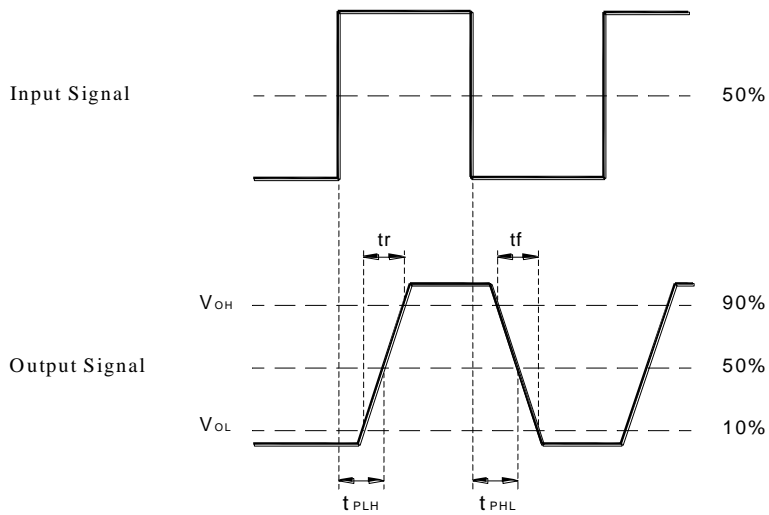
*1 Measuring method of fiber coupling optical power output



*2 Measuring method of pulse response and jitter



Rise and Fall Times and Pulse Width Distortion



$$\text{Pulse Width Distortion} = \Delta t_w = t_{PHL} - t_{PLH}$$

Jitter

