

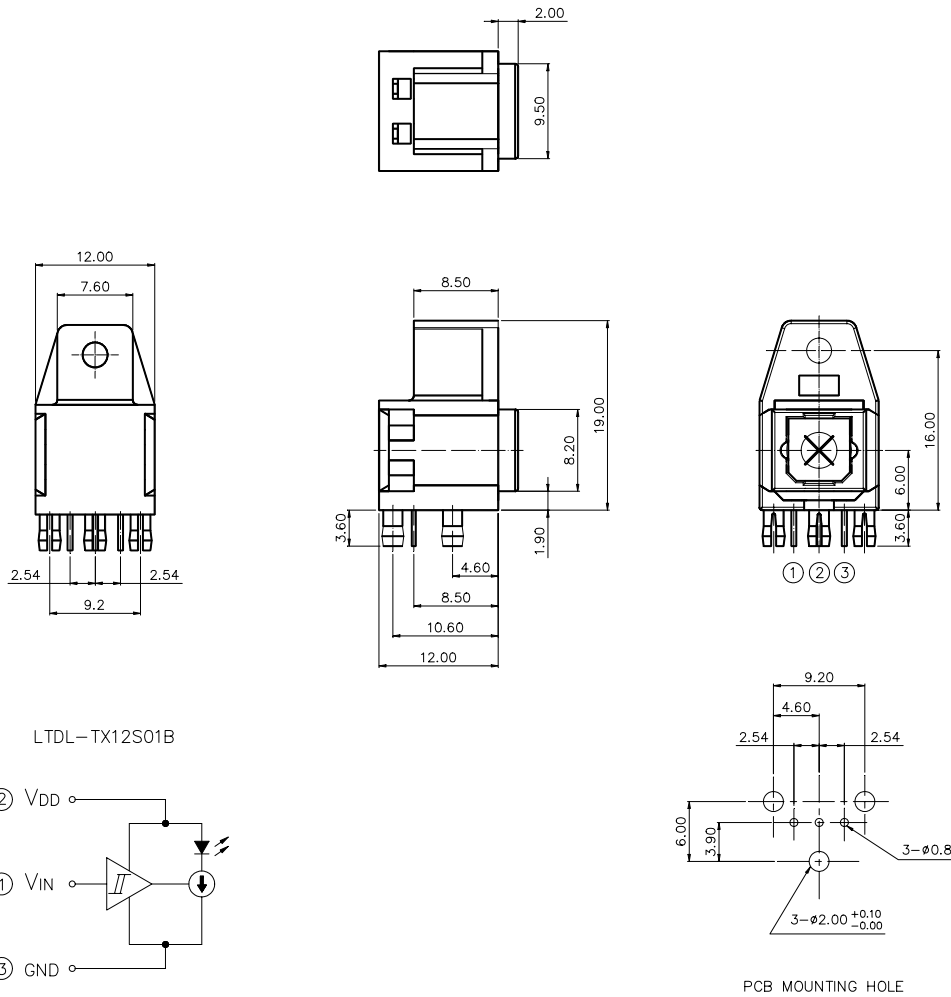
## FEATURES

- \* 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-RX16S01B

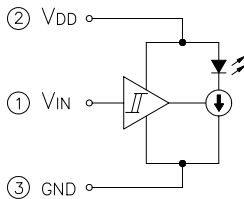
## APPLICATIONS

- \* Digital audio system
- \* CD, MD & DVD players

## PACKAGE DIMENSIONS



LTDL-TX12S01B



## NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.3$  mm (.012") unless otherwise noted.
3. In the absence of confirmation by device data sheets, LITE-ON takes no responsibility for any defects that may occur in equipment using any devices shown in catalogs, data book, etc. Contact LITE-ON in order to obtain the latest device data sheets before using any LITE-ON device.



# LITE-ON TECHNOLOGY CORPORATION

Property of Lite-On Only

## ELECTRO - OPTICAL CHARACTERISTICS

### ABSOLUTE MAXIMUM RATINGS AT TA=25

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

The shutter may not recover completely after duration or when it was used in high temperature enviroment.

### ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25

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

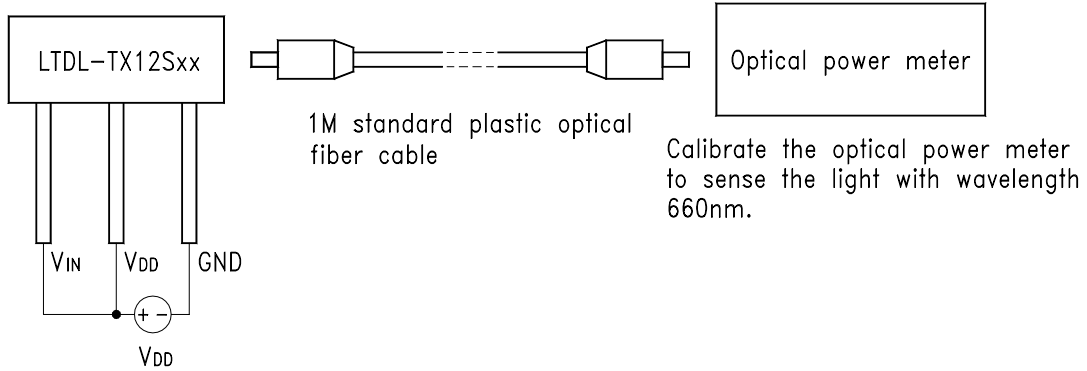


# LITE-ON TECHNOLOGY CORPORATION

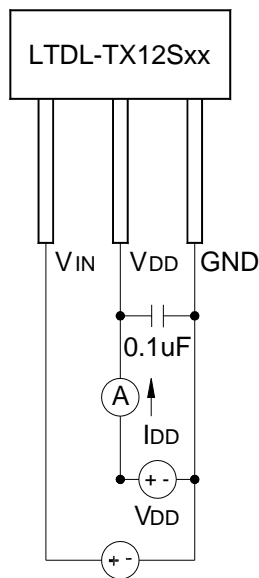
Property of Lite-On Only

BNS-OD-C131/A4

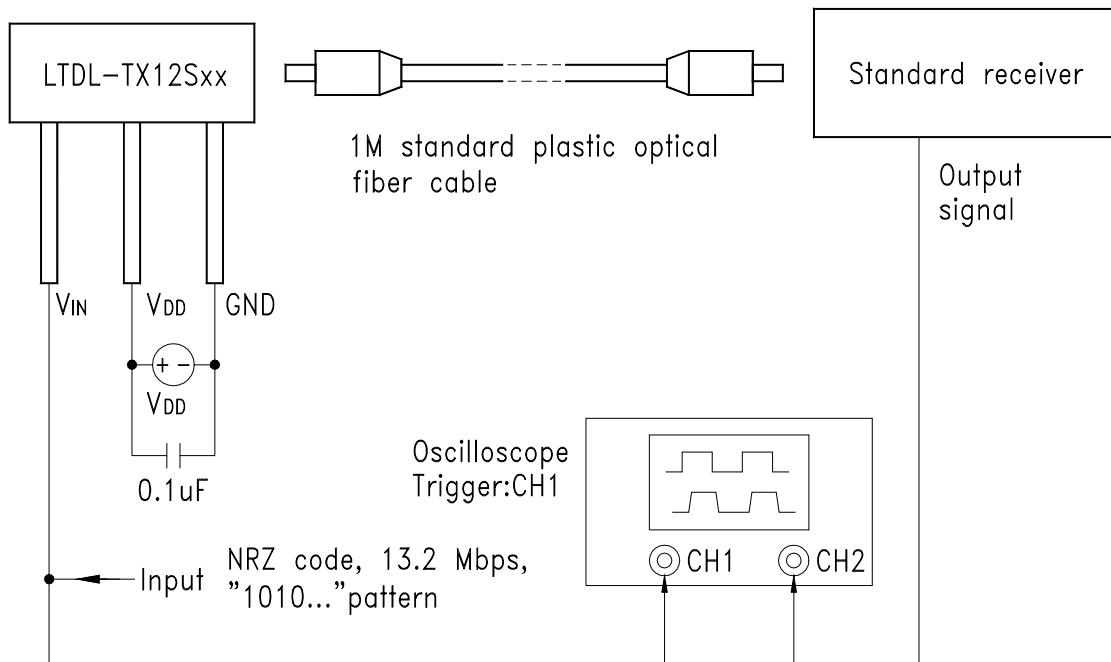
**\*1 Measuring method of optical output coupling power**



**\*2 Power dissipation measuring method**



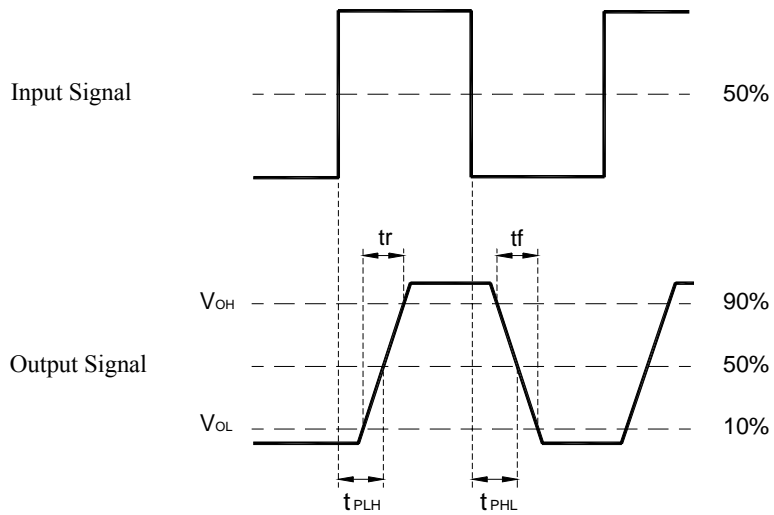
**\*3 Measuring pulse response**



Note :

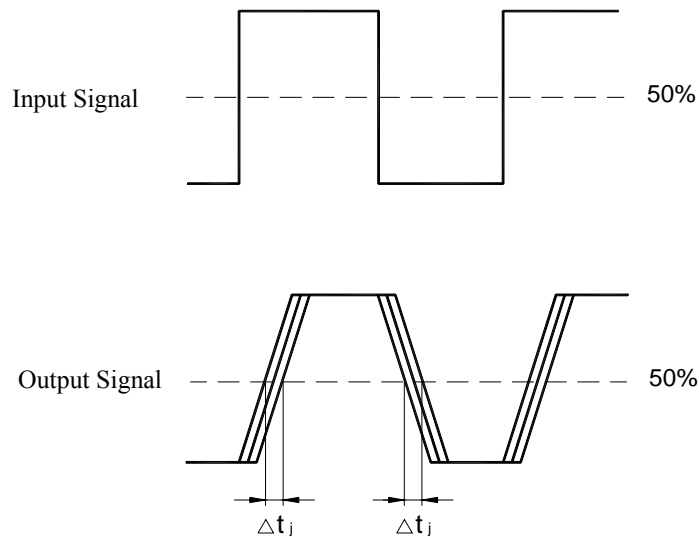
(1)The impedance of the probe for the oscilloscope must be more than 1MΩ and less than 10pf.

**Rise and Fall Times and Pulse Width Distortion**



*Pulse Width Distortion =  $\Delta tw = t_{PHL} - t_{PLH}$*

**Jitter**





# LITE-ON TECHNOLOGY CORPORATION

Property of Lite-On Only

## Notice

- The circuit application examples in this publication are provided to explain representative applications of LITE-ON devices and are not intended to guarantee any circuit design or license any intellectual property rights. LITE-ON takes no responsibility for any problems related to any intellectual property right of a third party resulting from the use of LITE-ON devices.
- Contact LITE-ON in order to obtain the latest device data sheets before using any LITE-ON device. LITE-ON reserves the right to make changes in the specifications, characteristics, data, materials, structure, and other contents described herein at any time without notice in order to improve design or reliability. Manufacturing locations are also subject to change without notice.
- Observe the following points when using any devices in this publication. LITE-ON takes no responsibility for damage caused by improper use of the devices which does not meet the conditions and absolute maximum ratings to be used specified in the relevant data sheet nor meet the following conditions :
  - ( i ) The devices in this publication are designed for use in general electronic equipment designs such as :
    - Personal computers
    - Office automation equipment
    - Telecommunication equipment 【 terminal 】
    - Test and measurement equipment
    - Industrial control
    - Audio visual equipment
    - Consumer electronics
  - ( ii ) Measure such as fail-safe function and redundant design should be taken to ensure reliability and safety when LITE-ON device are used for or in connection with equipment that requires higher reliability such as :
    - Transportation control and safety equipment ( i.e., aircraft, train, automobiles, ect. )
    - Traffic signals
    - Gas leakage sensor breakers
    - Alarm equipment
    - Various safety devices, etc.
  - ( iii ) LITE-ON devices shall not be used for or in connection with equipment that requires an extremely high level of reliability and safety such as :
    - Space applications
    - Telecommunication equipment ( trunk lines )
    - Nuclear power control equipment
    - Medical and other life support equipment ( e.g., scuba )
- If the LITE-ON devices listed in this publication fall within the scope of strategic products described in the Foreign Exchange and Foreign Trade Law of Republic of China , it is necessary to obtain approval to export such LITE-ON devices.
- This publication is the proprietary product of LITE-ON and is copyrighted, with all rights reserved. Under the copyright laws, no part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, in whole or in part, without the express written permission of LITE-ON. Express written permission is also required before any use of this publication may be made by a third party.
- Contact and consult with a LITE-ON representative if there are any questions about the contents of this publication.