

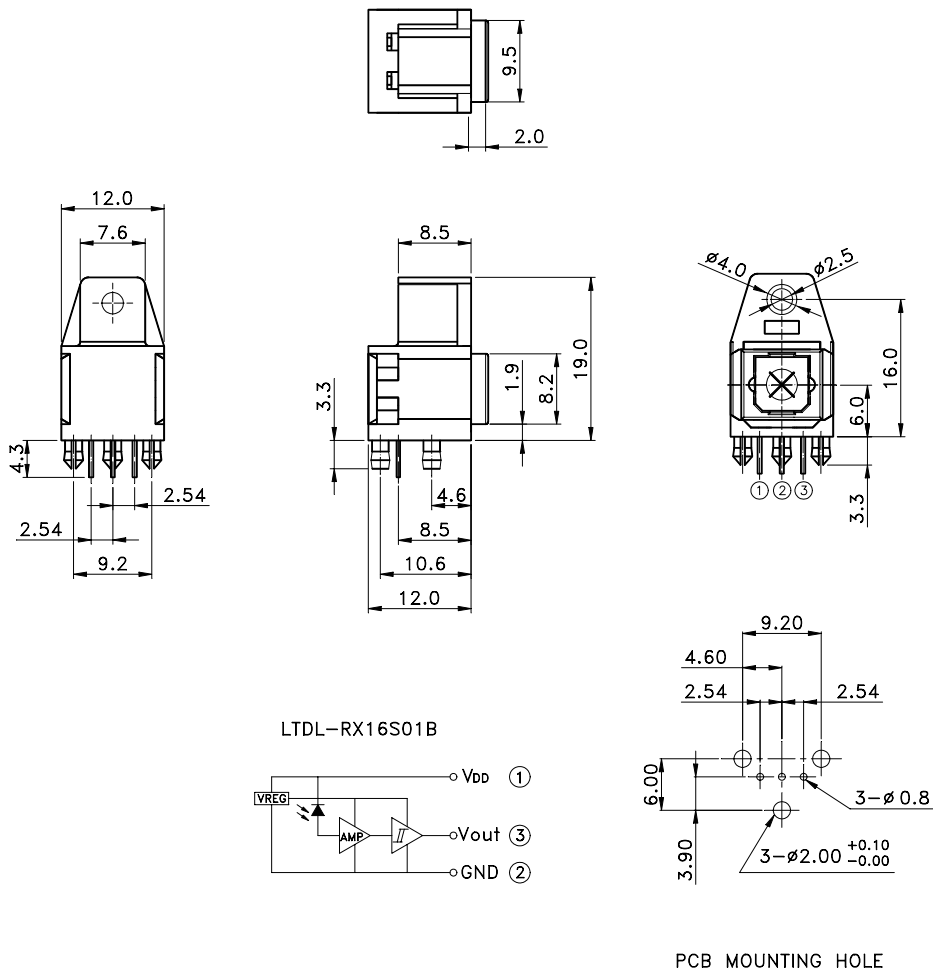
## FEATURES

- \* High speed transmission ( 16 Mbps , NRZ code )
- \* TTL compatible
- \* Same package as fiber optic transmitting module LTDL-TX12S01B

## APPLICATIONS

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

## PACKAGE DIMENSIONS



### 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.



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## ELECTRO - OPTICAL CHARACTERISTICS

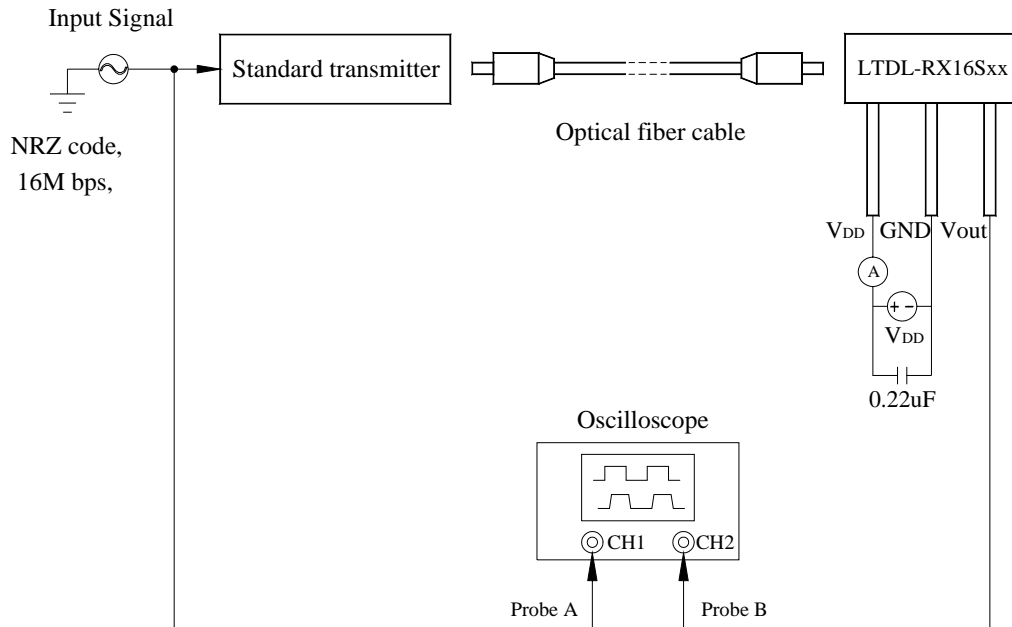
ABSOLUTE MAXIMUM RATINGS AT Ta=25

PARAMETER	MAXIMUM RATING	UNIT
Supply Voltage (V <sub>DD</sub> )	-0.5 ~ +6.0	V
Output Voltage (V <sub>o</sub> )	-0.5 ~ V <sub>DD</sub> + 0.3	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	

ELECTRICAL OPTICAL CHARACTERISTICS AT Ta=25

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Data Rate	T <sub>s</sub>	0.1	-	16	Mbps	NRZ signal
Operating Voltage	V <sub>DD</sub>	4.75	-	5.25	V	
Peak Sensitivity Wavelength	Peak	-	650	-	nm	
Input Sensitivity	P <sub>i</sub>	-24	-	-14	dBm	
Dissipation current	I <sub>DD</sub>	-	4	6	mA	*1
High level output voltage	V <sub>OH</sub>	2.4	4.8	-	V	*1
Low level output voltage	V <sub>OL</sub>	-	0.2	0.4	V	*1
“Low→High”propagation delay time	t <sub>PLH</sub>	-	-	166	ns	*1
“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	5	ns	*1
Rise Time	t <sub>r</sub>	-	8	20	ns	*1
Fall Time	t <sub>f</sub>	-	8	20	ns	*1

## \*1 Setup of Measuring System

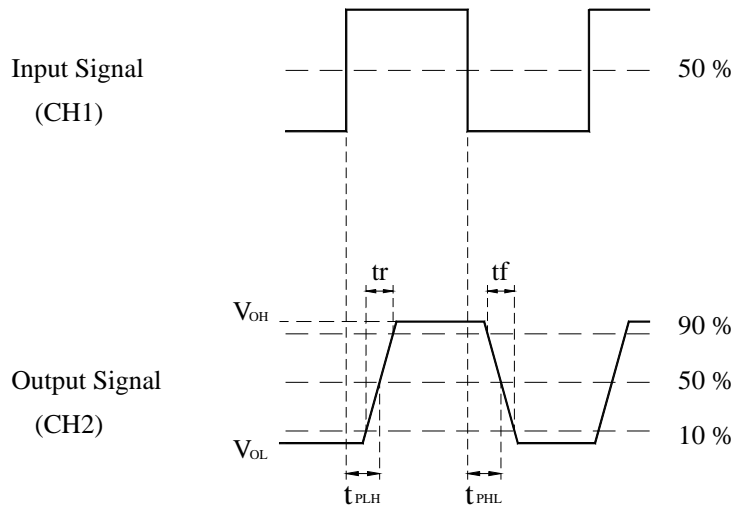


### Note :

- ( 1 )  $V_{DD} = + 5.0 V \pm 0.05V$
- ( 2 ) Input signal : 16M bps, NRZ code,  $t_r, t_f = 5ns$
- ( 3 ) Characteristics of standard transmitter are according to another sheet.
- ( 4 ) The SONY POC-10 ( POF, 1m ) or its equivalent fiber optic cable should be used.
- ( 5 ) The Tektronix TDS380P or its equivalent oscilloscope should be used.
- ( 6 ) The probe B for the oscilloscope must be more than  $1M\Omega$  and less than  $10pF$ .
- ( 7 ) When measuring delay time, use same type and length of probe A and B.
- ( 8 ) It measures in the condition where did fiber optic cable straight, but the curve of the range within contented.

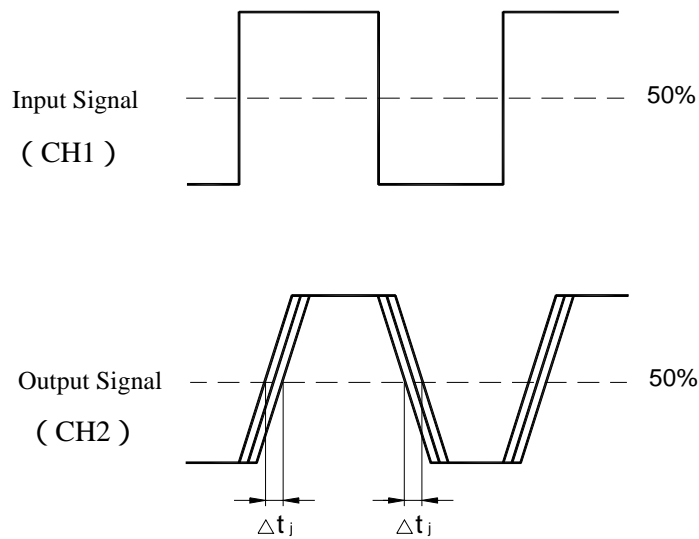
Item	Measuring Method
$I_{DD}$	Measured on the ammeter
$V_{OH}$	Measured on the oscilloscope
$V_{OL}$	Measured on the oscilloscope
$t_{PLH}$	Measured on the oscilloscope
$t_{PHL}$	Measured on the oscilloscope
$t_w$	Measured on the oscilloscope
$t_r$	Measured on the oscilloscope
$t_f$	Measured on the oscilloscope
$t_j$	Measured on the oscilloscope

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



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

**Jitter**





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    - Office automation equipment
    - Telecommunication equipment 【 terminal 】
    - Test and measurement equipment
    - Industrial control
    - Audio visual equipment
    - Consumer electronics
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    - Traffic signals
    - Gas leakage sensor breakers
    - Alarm equipment
    - Various safety devices, etc.
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