

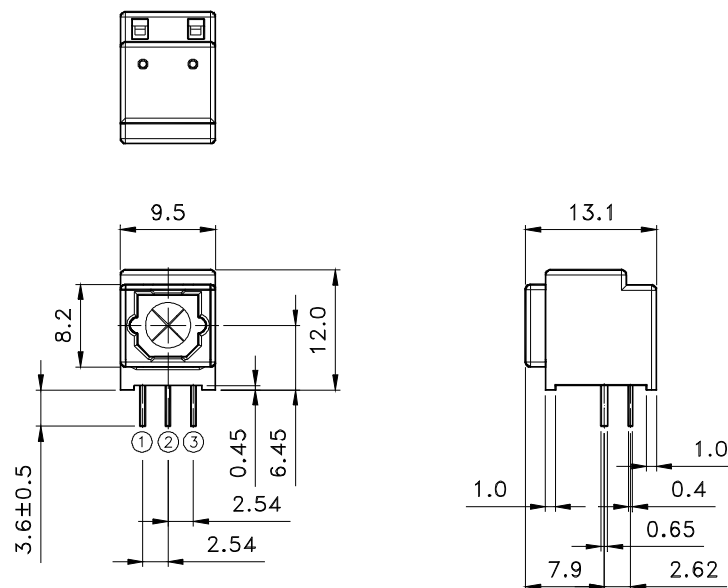
FEATURES

- * 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-TX12S05

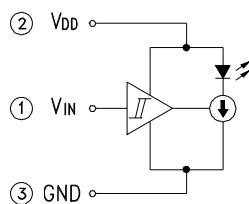
APPLICATIONS

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

PACKAGE DIMENSIONS



LTDL-TX12S05



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 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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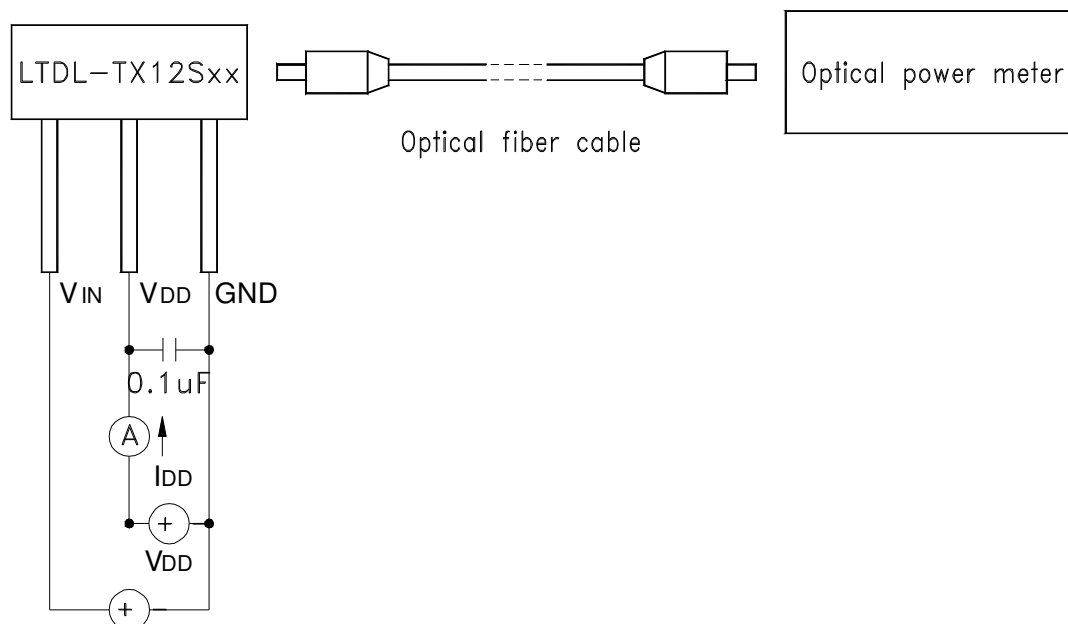
ELECTRO—OPTICAL CHARACTERISTICS

ABSOLUTE MAXIMUM RATINGS AT TA=25°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	

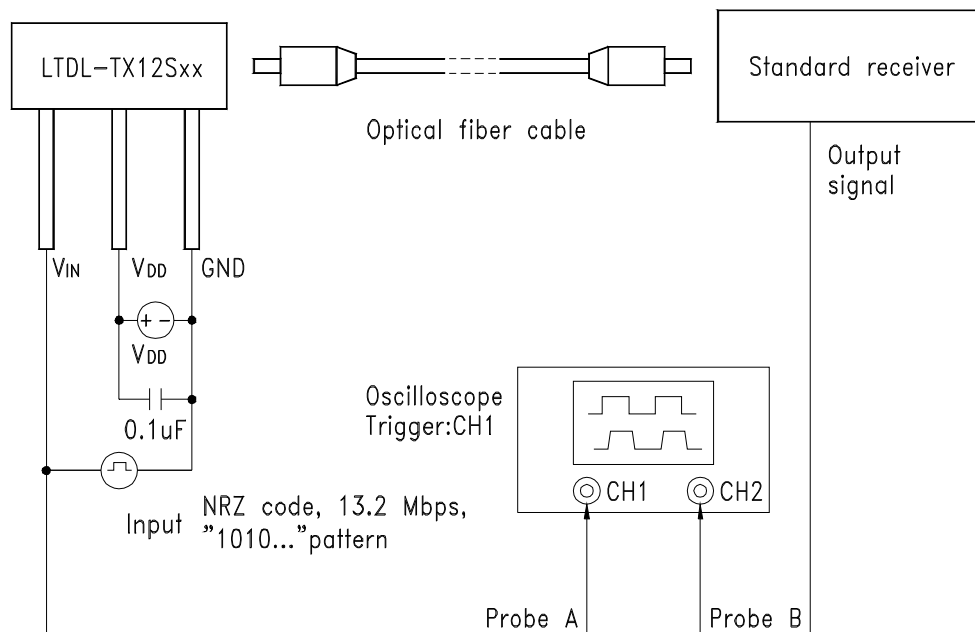
ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

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	V _{DD} = 2.75 ~ 5.25 V
Fiber Coupling Light Output	P _C	-21	-18	-15	dBm	*1
Current Consumption	I _{DD}	—	6	8	mA	*1
High Level Input Voltage	V _{IH}	2	—	—	V	*1
Low Level Input Voltage	V _{IL}	—	—	0.8	V	*1
“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 optical output coupling power**


- (1) THE SONY POC-10 (POF, 1m) or its equivalent fiber optic cable should be used as the standard fiber optic cable.
- (2) The ANRITSUML910B (receiver MA9802) or its equivalent optical power meter shall be used.
- (3) Set the sensitivity of wavelength of the optical power at 660nm.
- (4) It measures in the condition where the fiber optic cable is straight, but the curve of range within contains a performance of the fiber optic cable makes a passable.

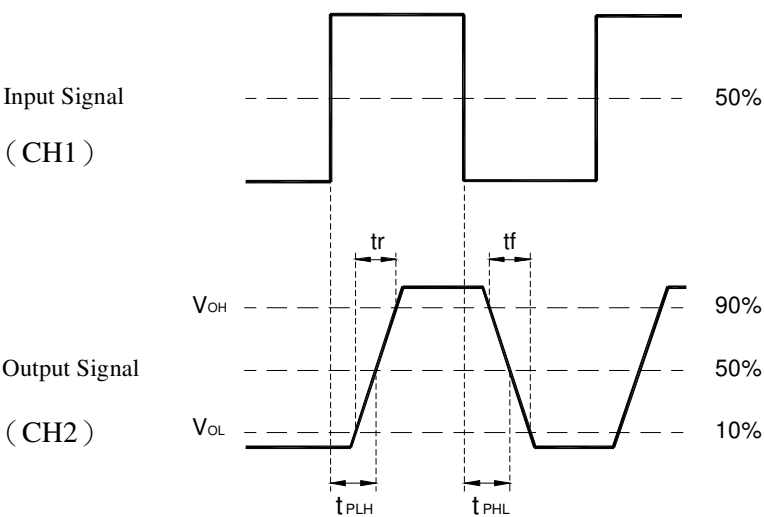
Item	Measuring Method
P _c	Measured on the optical power meter.
I _{DD}	Measured on the ammeter.
V _{IH}	At the optical fiber coupling light output : $-21 \leq P_c \leq -15\text{dBm}$
V _{IL}	At the optical fiber coupling light output : $P_c \leq -36 \text{ dBm}$

*** 2 Measuring pulse response**


Note :

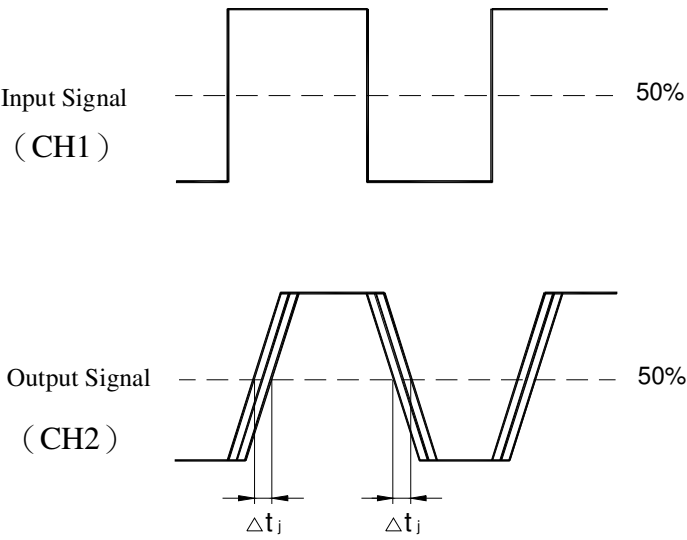
- (1) $V_{CC} = 2.75V \sim 5.25V$
- (2) Input Singnal : 13.2 M bps NRZ code , $V_{IH} \geq 2.0V$, $V_{IL} \geq 0.8V$, t_r , $t_f \leq t_{ns}$.
- (3) The SONY POC-10 (POF 1m) or its equivalent optical fiber cable should be used.
- (4) Characteristics of standard rceiver are according to another sheet.
- (5) The Tektronix TDS380P or its equivalent oscilloscope should be used.
- (6) When measuring delay time, use the probe A and B of the same type and length.

Rise and Fall Times and Pulse Width Distortion



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

Jitter





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 - Traffic signals
 - Gas leakage sensor breakers
 - Alarm equipment
 - Various safety devices, etc.
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