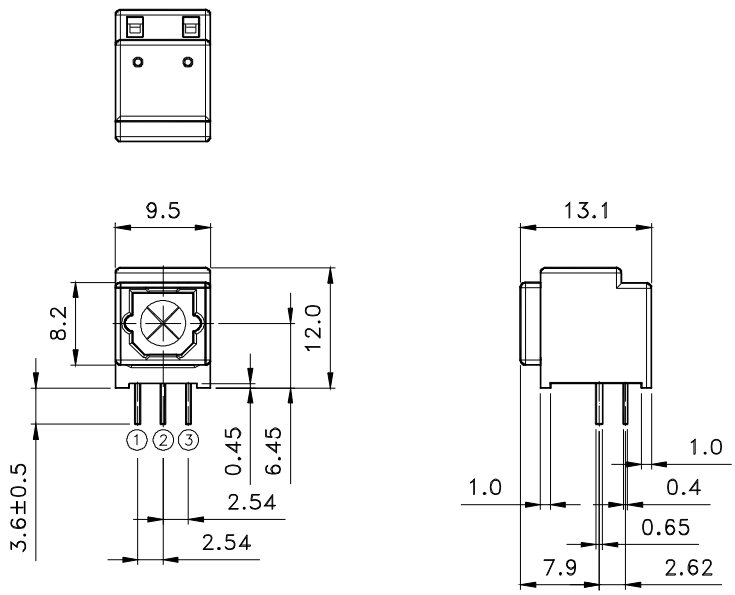
FEATURES

* 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

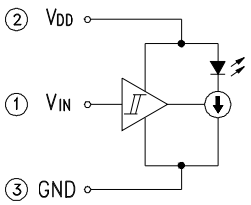
APPLICATIONS

* 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 comfrimation by device data sheets. LITE-ON takes no respondibility for any defects that may occur in equipment using any devices shown in catalogs, data book. etc. Contant LITE-ON in order to obtain the latest device data sheets before using any LITE-ON device.

ELECTRO－OPTICAL CHARACTERISTICS

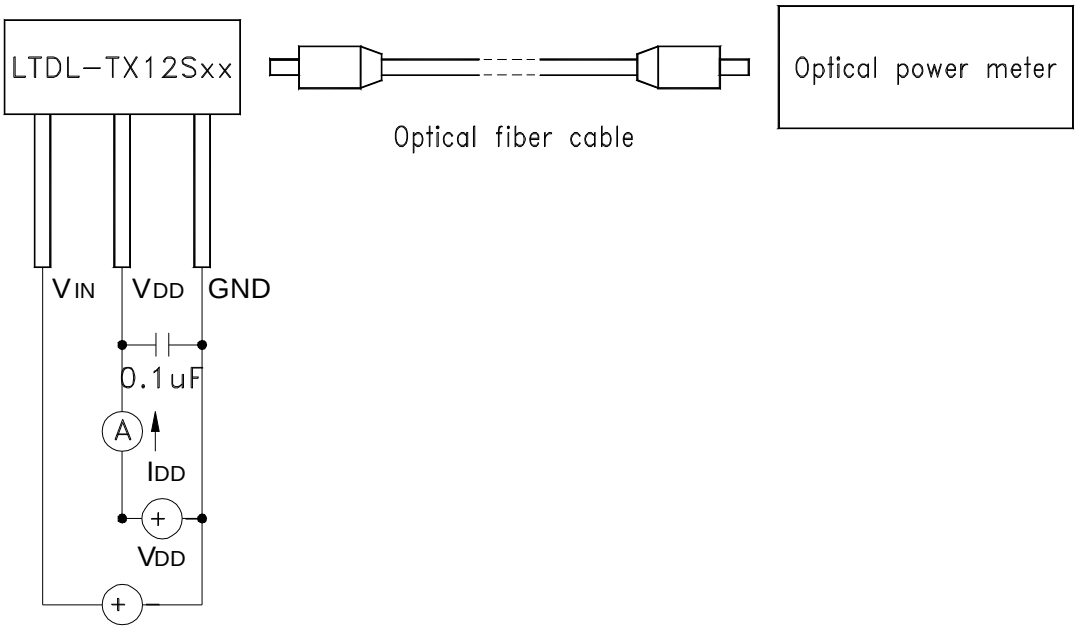
ABSOLUTE MAXIMUM RATINGS AT TA=25℃

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 ℃ 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	Ts	—	—	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	Pc	-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 à High”propagation delay time	t_{PLH}	—	—	166	ns	*2
“High à 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.

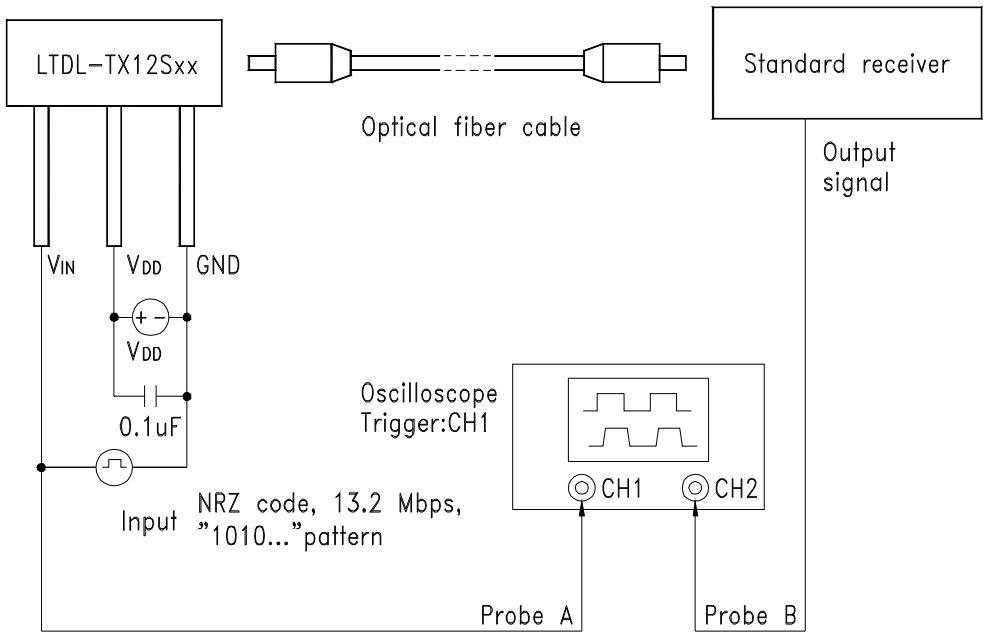
（2） The ANRITSUML910B（receiver MA9802）or its equivalent optical power meter shall be used.

（3） Set the sensitivity of wavelength of the optical power at 660nm.

（4） It measuers in the condition where did fiber optic cable straight , but the curve of range within contented a prtformance of the fiber optic cable makes a passable.

Item	Measuring Methed
Pc	Measured on the optical power meter.
I_{DD}	Measured on the ammeter.
V_{IH}	At the optical fiber coupling light output： -21 ≦ Pc ≦ -15dBm
V_{IL}	At the optical fiber coupling light output： Pc ≦ -36 dBm

*** 2 Measuring pulse response**



Note：

（1）V_{CC} = 2.75V~ 5.25V

（2） Input Singnal：13.2 M bps NRZ code , $V_{IH} \geqq 2.0V$, $V_{IL} \geqq 0.8V$, tr , tf $\leqq$ Ins.

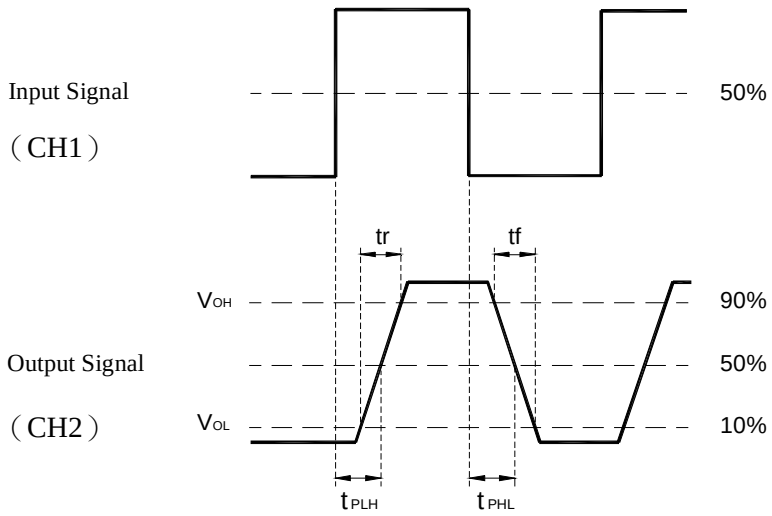
（3） The SONY POC-10（POF 1m）or its equivalent optical fiber cable should be used.

（4） Characteristics of standard rceiver are according to another sheet.

（5） The Tektronix TDS380P or its equivalent oscilloscope should be used.

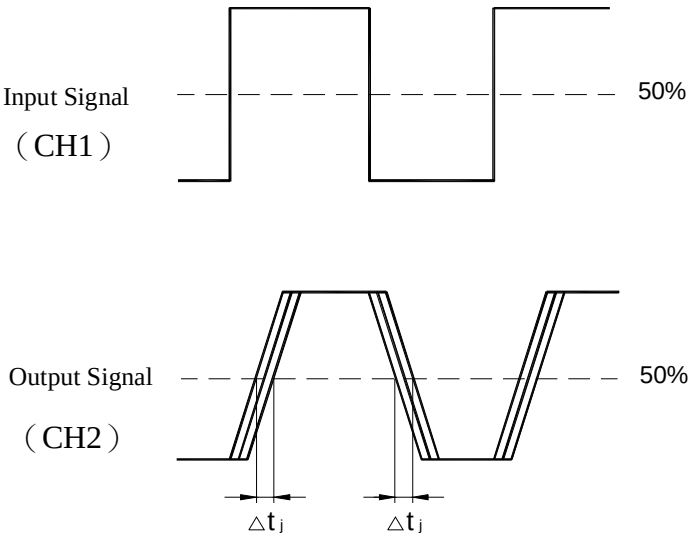
（6） When measuring delay time, use the probe A and B of the same type and length.

Rise and Fall Times and Pulse Width Distortion



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

Jitter



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.
-
- Contact and consult with a LITE-ON representative if there are any questions about the contents of this publication.