DESCRIPTION

The LTDL-RA16A-T is a optical data link interface. The LTDL-RA16A-T consists of an optical sensor with an I / V amplifier, a Schmitt trigger, and a TTL output interface operating at data rates between 100K baud and 16M baud.

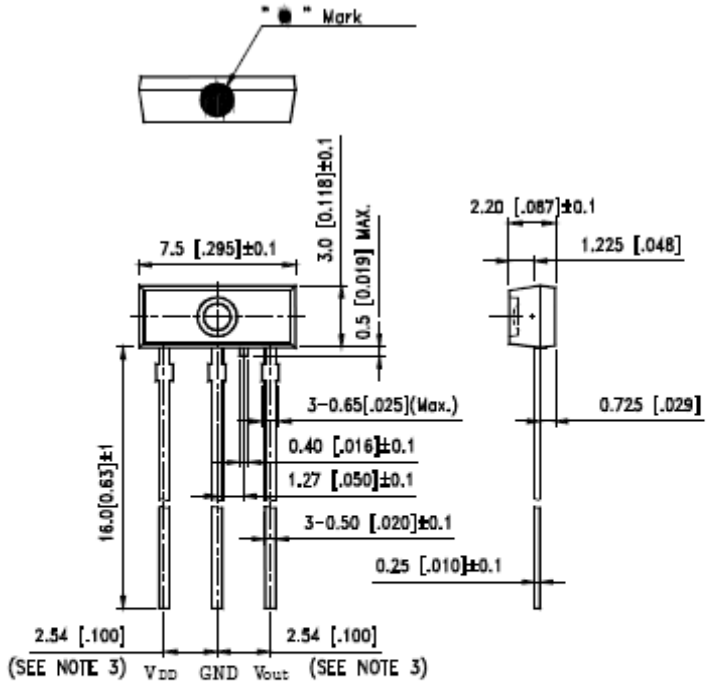
FEATURES

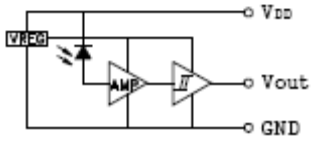
* High PD sensitivty optimized for red light (λ=650nm)
* Data Rates between 100Kbps and 16Mbps
* Low power consumption for extended battery life.
* Builit-in threshold control for improved noise margin

APPLICATIONS

* Digital Optical Data-Link
* Dolby AC-3 Digital Audio Interface

PACKAGE DIMENSIONS





NOTES:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.15mm (.006") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4.Mark color:Orange

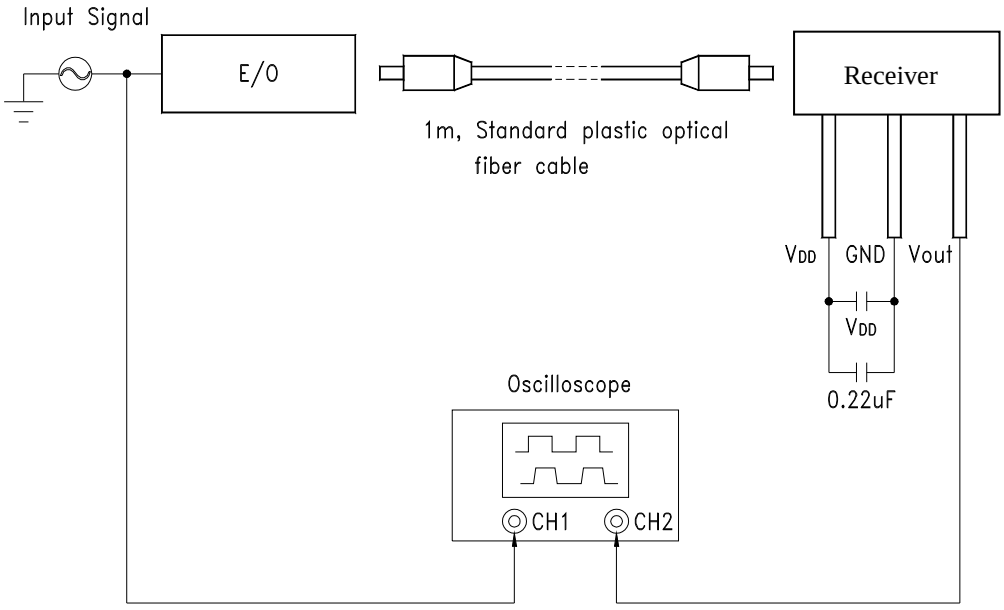
ABSOLUTE MAXIMUM RATINGS AT T_A=25℃

PARAMETER	MAXIMUM RATING	UNIT
Supply Voltage (V_{DD})	5.25	V
Output Voltage (V_O)	V_{DD} +0.3	V
Operating Temperature Range	-20℃ to + 70℃	
Storage Temperature Range	-30℃ to + 70℃	
Lead Soldering Temperature [1.6mm(.063") From Body]	260℃ for 5 Seconds	

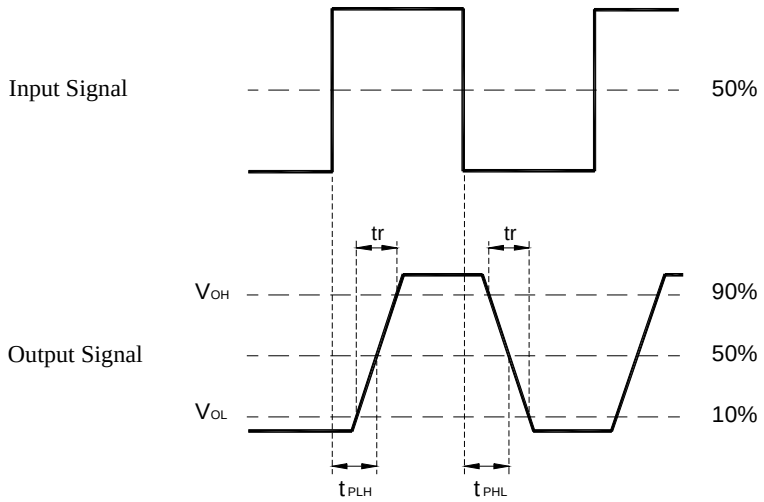
ELECTRICAL OPTICAL CHARACTERISTICS AT T_A=25℃

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Data Rate	Ts	100 K	-	16	Mbps	NRZ signal
Operating Voltage	V_{DD}	2.75	-	5.25	V	
Peak Emission Wavelength	λ_{Peak}	630	650	670	nm	
Input Sensitivity	Pi	-27	-	-14	dBm	
Dissipation current	I_{DD}	-	-	10	mA	
High level output voltage	V_{OH}	2.1	2.5	-	V	Dc Light , I_{OH} = -20 μA
Low level output voltage	V_{OL}	-	0.2	0.4	V	Dark , V_{OL} = 0.6mA
"Low→High"propagation delay time	t_{PLH}	-	-	120	ns	*1
"High→Low"propagation delay time	t_{PHL}	-	-	120	ns	
Pulse width distortion	Δt_W	-25		25	ns	
Jitter	Δt_j	-	-	5	ns	*2
Rise Time	t_r	-	10	20	ns	*1
Fall Time	t_f	-	10	20	ns	*1

Setup of Measuring System



***1 Rise and Fall Time and Propagation Delays**



$$\text{Pulse width Distortion} = \triangle tw = \frac{t_{PHL} - t_{PLH}}{2}$$

***2 Jitter**