DESCRIPTION

The LTDL-RA12A is a optical data link interface. The LTDL-RA12A 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 13.2 M baud.

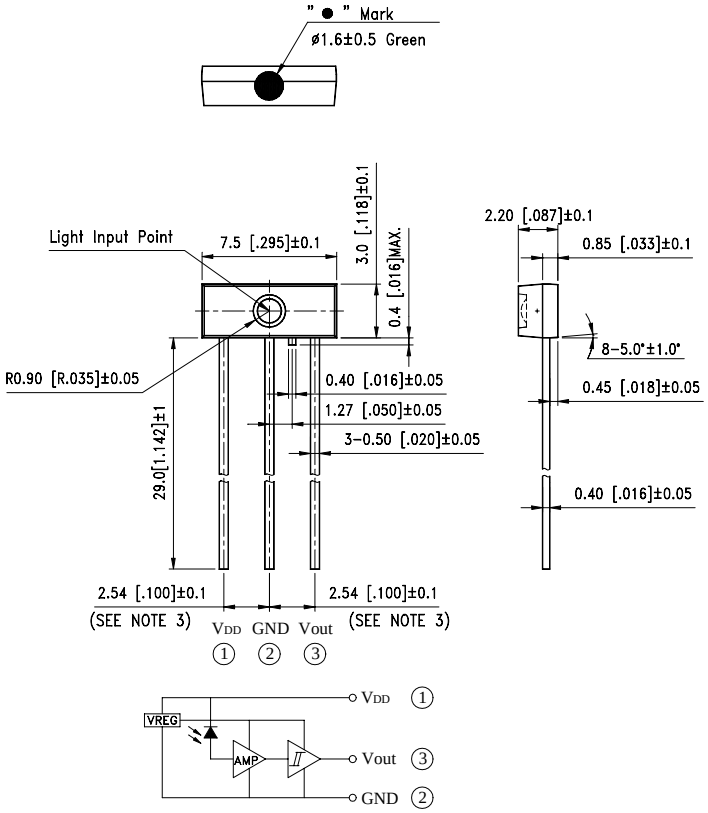
FEATURES

* High PD sensitivty optimized for red light (λ =650nm)
* Data Rates between 100Kbps and 13.2 Mbps
* 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 ±0.15 mm (.006") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.

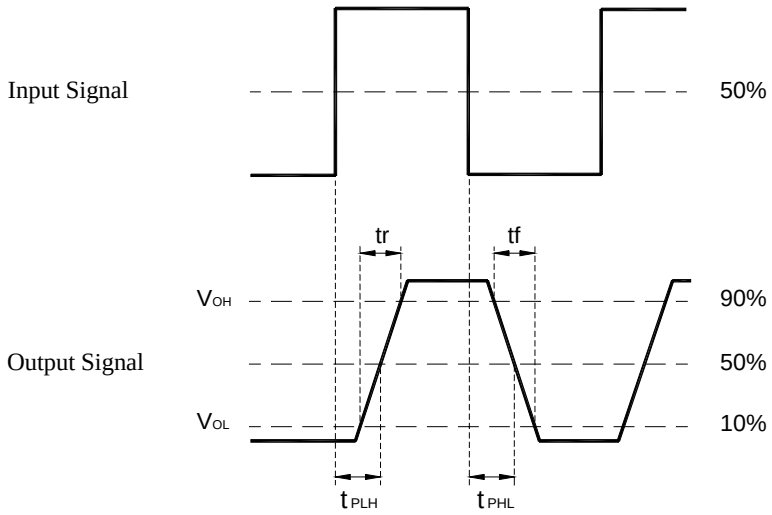
ABSOLUTE MAXIMUM RATINGS AT T_A=25℃

PARAMETER	MAXIMUM RATING	UNIT
Supply Voltage (V_{DD})	6.0	V
Output Voltage (V_O)	V_{DD} + 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 T_A=25℃

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Data Rate	Ts	0.1	—	13.2	Mbps	NRZ signal
Operating Voltage	V_{DD}	4.75	—	5.25	V	
Peak Sensitivity Wavelength	λ_{Peak}	—	650	—	nm	
Input Sensitivity	Pi	-24	—	-14	dBm	
Dissipation current	I_{DD}	—	4	6	mA	
High level output voltage	V_{OH}	2.4	4.8	—	V	Dc Light , I_{OH} = -20 μA
Low level output voltage	V_{OL}	—	0.2	0.4	V	Dark , I_{OL} = 0.6mA
"Low→High"propagation delay time	t_{PLH}	—	—	100	ns	*1
"High→Low"propagation delay time	t_{PHL}	—	—	100	ns	
Pulse width distortion	Δt_W	-25	—	+25	ns	
Jitter	Δtj	—	1	5	ns	*2
Rise Time	t_r	—	8	20	ns	*1
Fall Time	t_f	—	8	20	ns	*1

Rise and Fall Times and Pulse Width Distortion



Pulse Width Distortion= △tw = t_{PHL}-t_{PLH}

Jitter