



LITE-ON TECHNOLOGY CORPORATION

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DESCRIPTION

The LTDL-RA25A-T is an optical data link interface. The LTDL-RA25A-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 25 M baud.

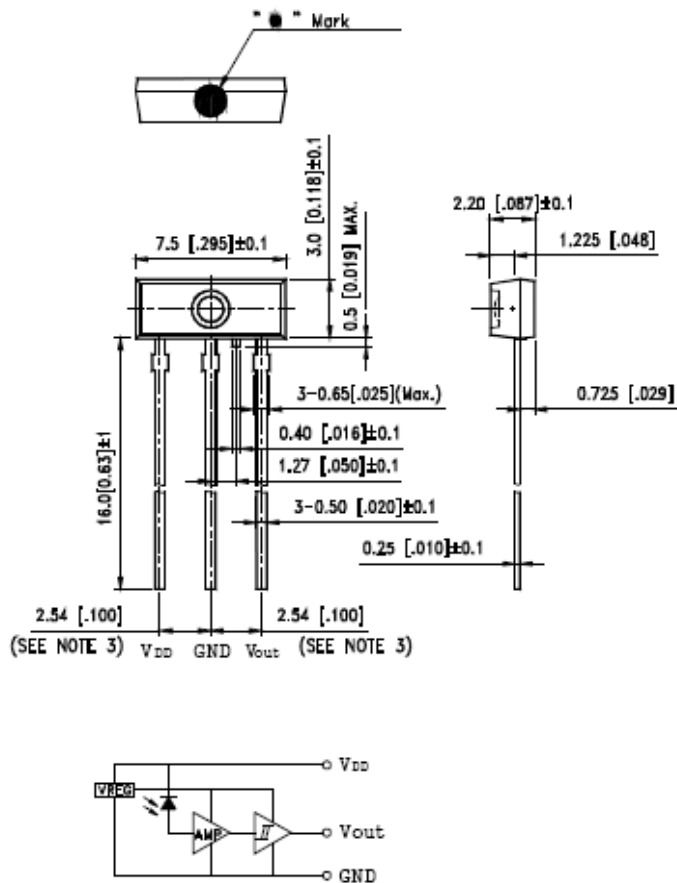
FEATURES

- * High PD sensitivity optimized for red light ($\lambda=650\text{nm}$)
- * Data Rates between 100Kbps and 25 Mbps
- * Low power consumption for extended battery life.
- * Built-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 $\pm 0.15\text{mm}$ (.006") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Mark color: Purple



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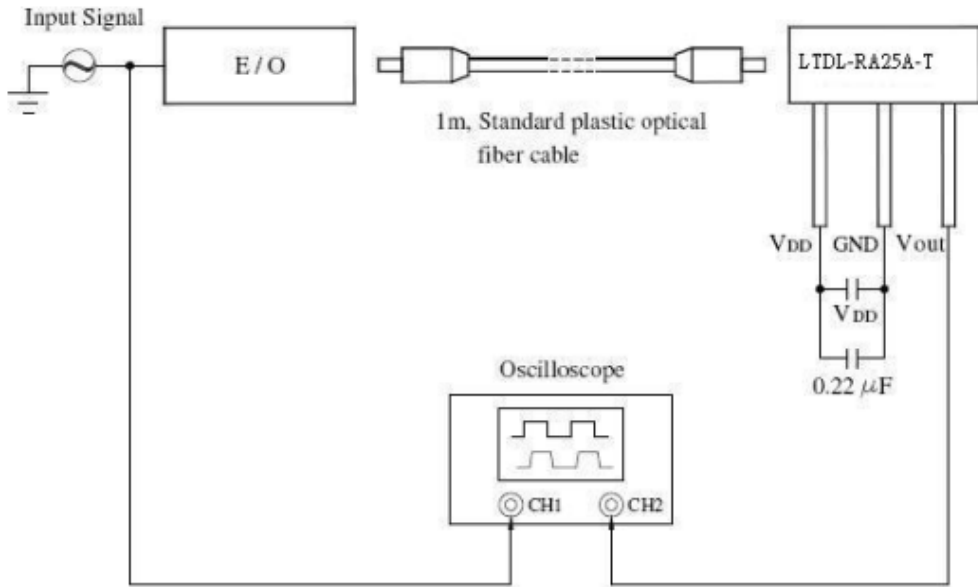
ABSOLUTE MAXIMUM RATINGS AT TA=25°C

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

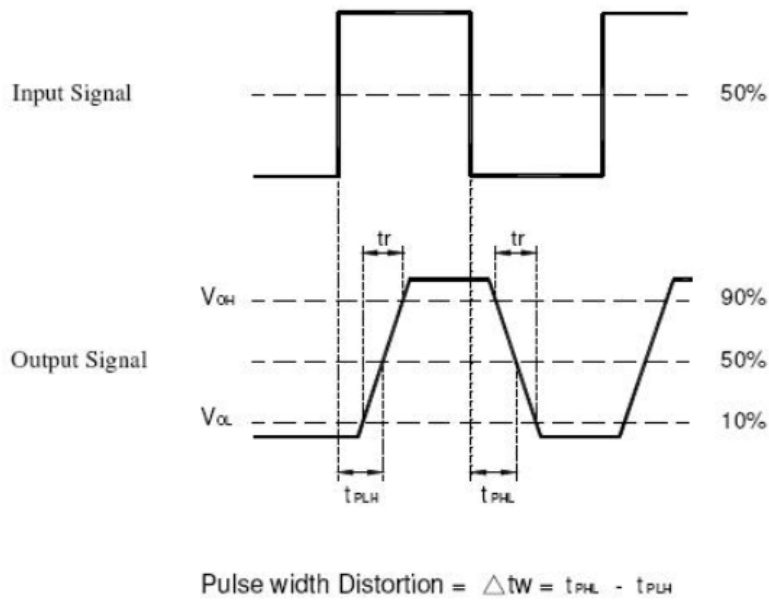
ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Data Rate	T _s	100 K	-	25	Mbps	NRZ signal
Operating Voltage	V _{DD}	2.75	-	5.25	V	
Peak Emission Wavelength	λ _{Peak}	630	650	670	nm	
Input Sensitivity	P _i	-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}	-	-	100	ns	*1
“High→Low”propagation delay time	t _{PHL}	-	-	100	ns	
Pulse width distortion	Δt _w	-25		+25	ns	
Jitter	Δt _j	-	-	10	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**



***2 Jitter**