LITEON®
OPTOELECTRONICS

IR Emitter and Detector

Product Data Sheet

LTDL-TA16A-T

Spec No.: DS50-2007-0049

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Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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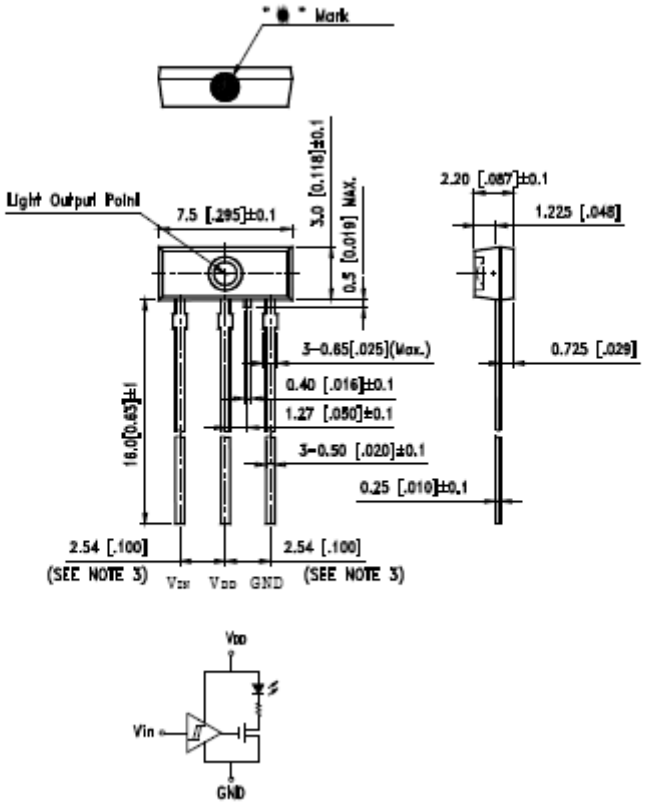
FEATURES

* TTL INTERFACE COMPATIBLE
* HIGH SPEED OPTIC SIGNAL TRANSMISSION
* BUILT-IN LED DRIVER
* LOW POWER CONSUMPTION

*	V_{DD}	Vin	LED	V_{DD}	Vin	LED
	2.7V ~ 5.25V	HIGH	ON	FLOATING	HIGH	OFF
	2.7V ~ 5.25V	LOW	OFF	FLOATING	LOW	OFF
	2.7V ~ 5.25V	FLOATING	OFF			

* WATER CLEAR EPOXY COMPOUND PACKAGED.

PACKAGE DIMENSIONS



NOTES:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.1mm(.004") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Mark color:Black

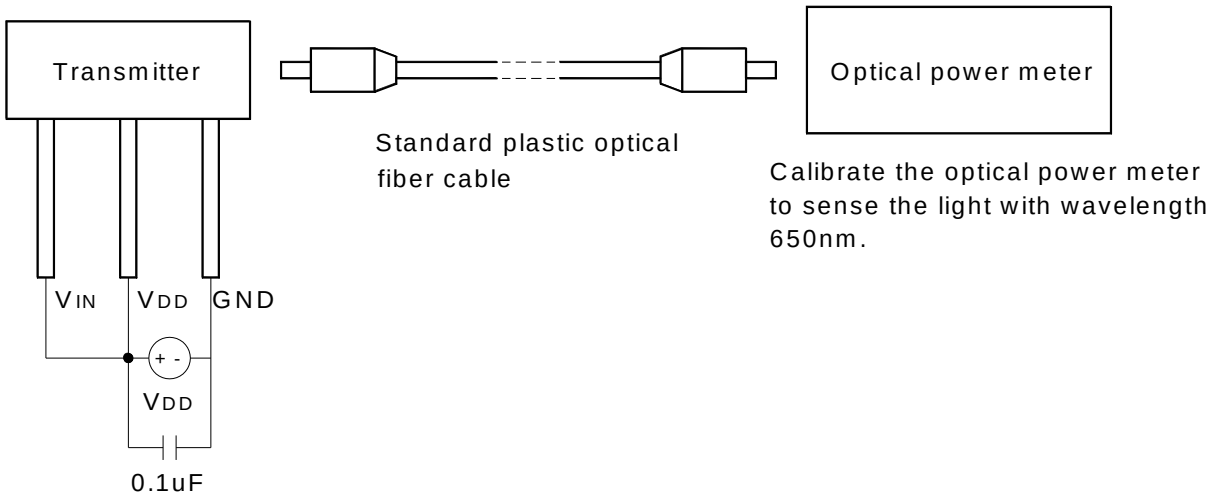
ABSOLUTE MAXIMUM RATINGS AT T_A=25℃

PARAMETER	MAXIMUM RATING	UNIT
Supply Voltage (V_{DD})	-0.5 ~ +7	V
Input Voltage (V_{IN})	-0.5 ~ V_{DD} +0.5	V
Power Dissipation (P)	120	mW
Operating Temperature Range	-25 ℃ to + 70 ℃	
Storage Temperature Range	-40 ℃ to + 70 ℃	
Lead Soldering Temperature [1.6mm(.063") From Body]	260℃ ≦5 Seconds	

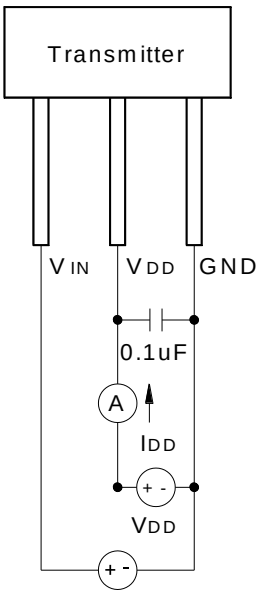
ELECTRICAL OPTICAL CHARACTERISTICS AT T_A=25℃

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Transmission Speed	Ts	—	—	16	Mbps	NRZ signal
Operating Voltage	V_{DD}	2.75	—	5.25	V	
Peak Emission Wavelength	λ_{Peak}	630	650	690	nm	
Fiber coupling light output	Pc	-21	-17	-15	dBm	*1
Dissipation current	I_{DD}	—	5	12	mA	*2
High level input voltage	V_{IH}	2	—	—	V	
Low level input voltage	V_{IL}	—	—	0.8	V	
"Low→High"propagation delay time	t_{PLH}	—	—	100	ns	*3
"High→Low"propagation delay time	t_{PHL}	—	—	100	ns	
Pulse width distortion	Δt_W	-15	—	15	ns	
Jitter	Δt_j	—	—	15	ns	

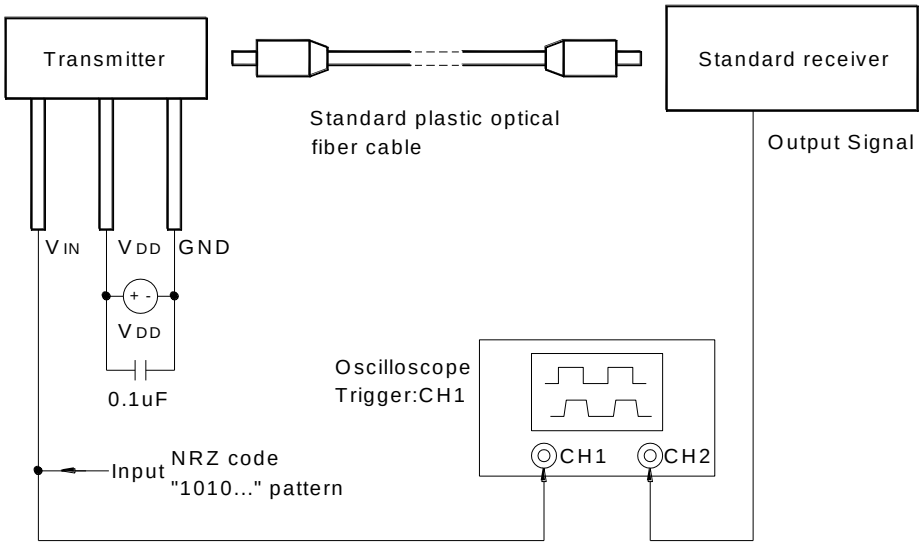
***1 Measuring method of optical output coupling power**

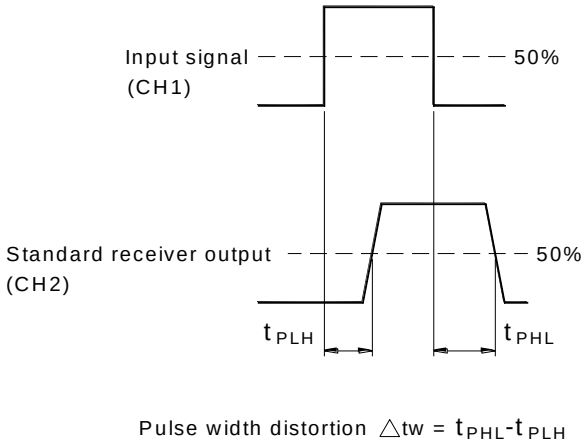


***2 Power dissipation measuring method**



***3 Measuring pulse response**





Pulse width distortion $\triangle tw = t_{PHL} - t_{PLH}$

Note
(1) NRZ code: 16MHz

(2)The impedance of the probe for the oscilloscope must be more than 1MΩ and less than 10pf.