



Photointerrupter Product Data Sheet LTH-306-64

Spec No.: DS55-2008-0010

Effective Date: 05/10/2008

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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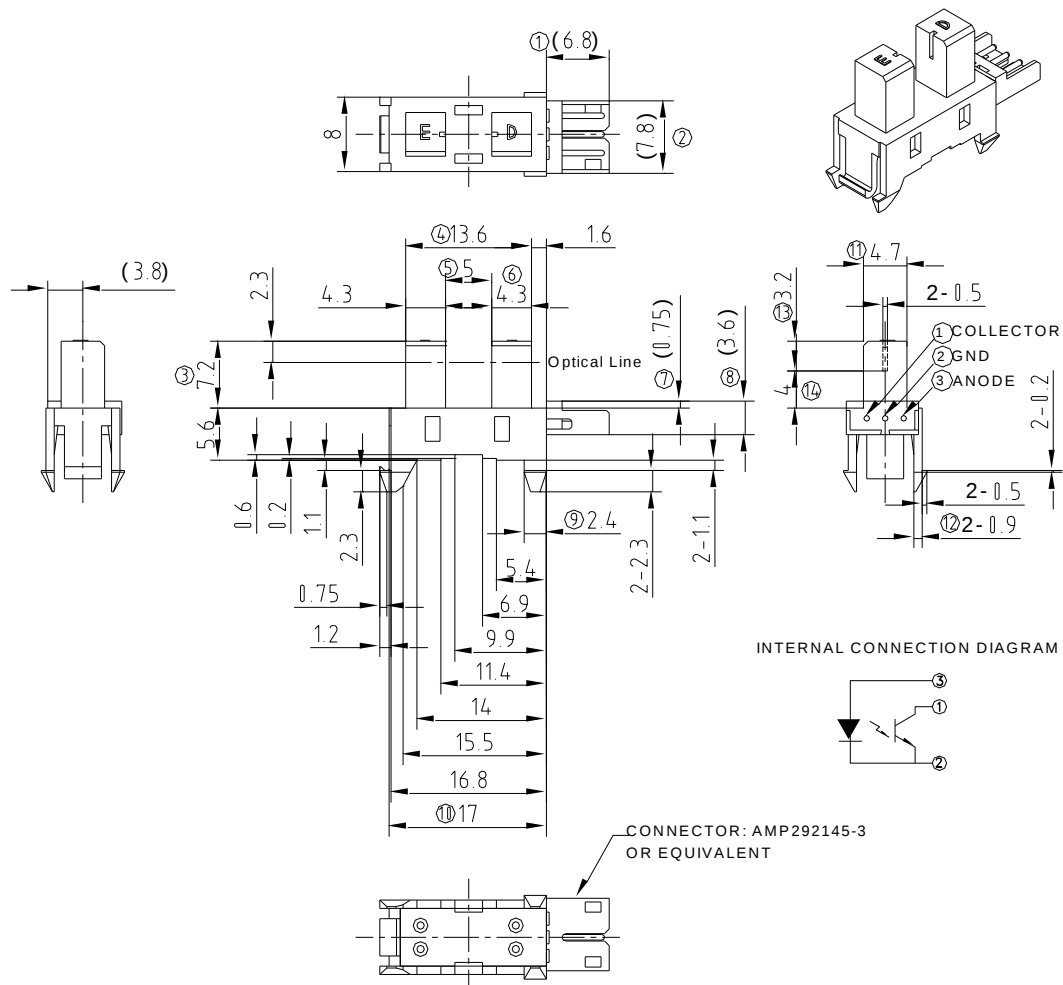
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Origin Date : 04/29/2008		Originator : Shiqincui		Page : 0 of 5
Rev.	Date	ECN OR QCN	Description of Change	Checker
-	04/29/2008		NEW SPEC	Shiqincui
Part No. : LTH-306-64 DATA SHEET				

FEATURES

- * SNAP MOUNTING.
- * MECHANICAL SWITCH REPLACEMENT.
- * ROHS COMPLIANT

PACKAGE DIMENSIONS



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.15\text{mm}$ (.006") unless otherwise noted.

**ABSOLUTE MAXIMUM RATINGS AT TA=25°C**

PARAMETER	SYMBOL	MAXIMUM RATING	UNIT
INPUT LED			
Power Dissipation	P_D	75	mW
Peak Forward Current (300 pps , 10 μ S pulse)	I_{CP}	1	A
Continuous Forward Current	I_F	50	mA
Reverse Voltage	V_R	6	V
OUTPUT PHOTOTRANSISTOR			
Power Dissipation	P_C	100	mW
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Collector Voltage	V_{ECO}	5	V
Collector Current	I_C	20	mA
Operating Temperature Range	T_{opr}	-25°C to + 85°C	
Storage Temperature Range	T_{stg}	-55°C to + 100°C	

ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

PARAMETER		SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
INPUT LED							
Forward Voltage		V_F		1.2	1.4	V	$I_F = 20\text{mA}$
Forward Voltage		V_F		0.8	1	V	$I_F = 1\mu\text{A}$
Reverse Current		I_R			10	μA	$V_R=3\text{V}$
OUTPUT PHOTOTRANSISTOR							
Collector-Emitter Dark Current		I_{CEO}		1	100	nA	$V_{CE}=20\text{V}$
Collector-Emitter Voltage		BV_{CEO}	30			V	$I_{CE}=1\text{mA}$
Emitter-Collector Voltage		BV_{ECO}	5			V	$I_{EC}=100\mu\text{A}$
COUPLER							
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$			0.4	V	$I_C=0.25\text{mA}$ $I_F=20\text{mA}$
On State Collector Current		$I_{C(ON)}$	0.5		15	mA	$V_{CE}=5\text{V}$ $I_F=20\text{mA}$
Response Time	Rise Time	T_R		3	15	μS	$V_{CE}=2\text{V}, I_C=2\text{mA}$ $R_L=100\Omega$
	Fall Time	T_F		4	20		

Bin Match table vs. Icon value(mA) (For Reference)

LTE-306 LTR-306	BinC	BinD	BinE	BinF
BinD	✗	✓	✓	✓
BinE	✓	✓	✓	✓
BinF	✓	✓	✓	✓
BinG	✓	✓	✓	✓
BinH	✓	✓	✓	✓

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

Fig.1 Power Dissipation vs. Ambient Temperature

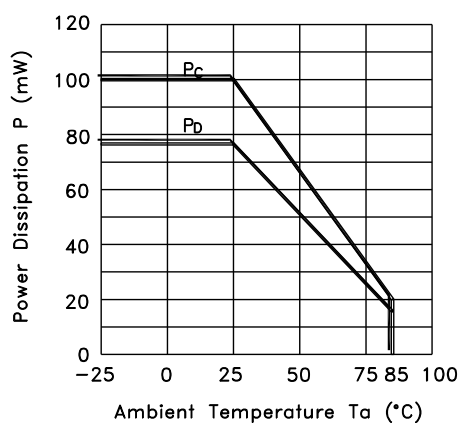


Fig.2 Forward Current vs. Forward Voltage

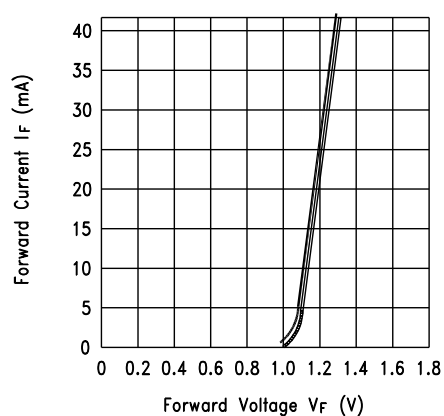


Fig.3 Collector Current vs. Forward Voltage

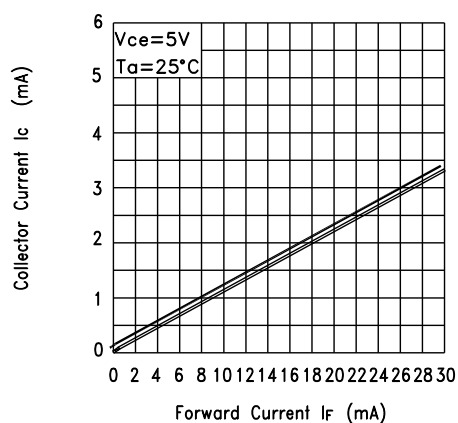
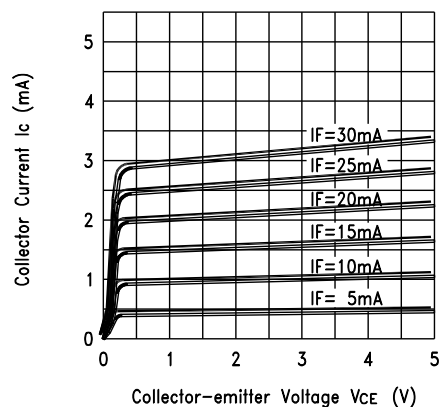


Fig.4 Collector Current vs. Collector-emitter Voltage



TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

Fig.5 Collector Current vs. Ambient Temperature

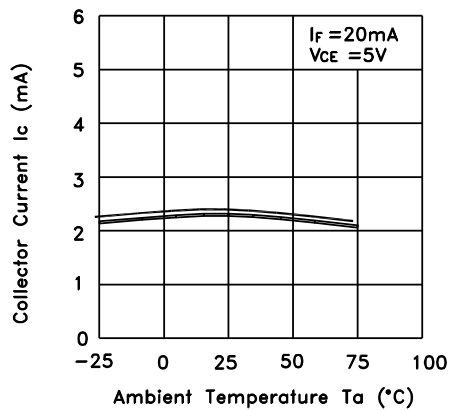


Fig.6 Collector-emitter Saturation Voltage vs. Ambient Temperature

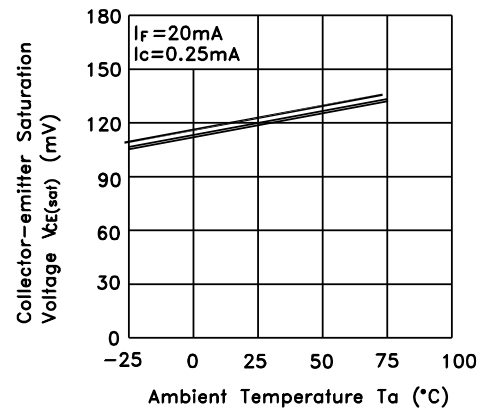
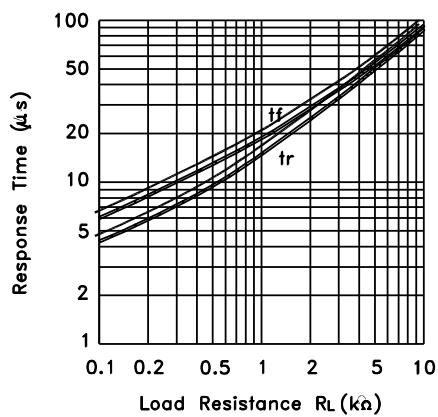


Fig.7 Response Time vs. Load Resistance



Test Circuit for Response Time

