Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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LITEON®
OPTOELECTRONICS

Photointerrupter

Product Data Sheet

LTH-309-08

Spec No.: DS-55-98-0002

Effective Date: 06/01/2000

Revision: -

LITE-ON DCC

RELEASE

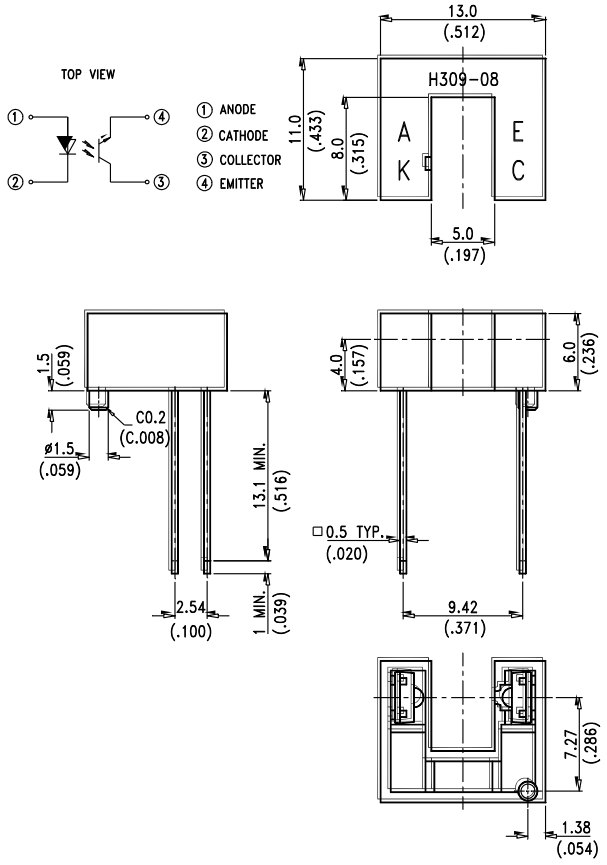
BNS-OD-FC001/A4

LITE-ON Technology Corp. / Optoelectronics
No.90,Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C.
Tel: 886-2-2222-6181 Fax: 886-2-2221-1948 / 886-2-2221-0660
http://www.liteon.com/opto

FEATURES

* NON-CONTACT SWITCHING.
* FOR DIRECT PC BOARD OR DUAL-IN-LINE SOCKET MOUNTING.
* FAST SWITCHING SPEED.

PACKAGE DIMENSIONS



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm(.010") 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
INPUT LED		
Power Dissipation	75	mW
Peak Forward Current (300 pps , 10 μS pulse)	1	A
Continuous Forward Current	50	mA
Reverse Voltage	5	V
OUTPUT PHOTOTRANSISTOR		
Power Dissipation	100	mW
Collector-Emitter Voltage	30	V
Emitter-Collector Voltage	5	V
Collector Current	20	mA
Operating Temperature Range	-25℃ to + 85℃	
Storage Temperature Range	-55℃ to + 100℃	
Lead Soldering Temperature [1.6mm (.063") Form Case]	260℃ for 5 Seconds	

ELECTRICAL OPTICAL CHARACTERISTICS AT T_A=25℃

PARAMETER		SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
INPUT LED							
Forward Voltage		V_F		1.2	1.6	V	I_F = 20mA
Reverse Current		I_R			100	μA	V_R=5V
OUTPUT PHOTOTRANSISTOR							
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	30			V	I_C=1mA
Emitter-Collector Breakdown Voltage		$V_{(BR)ECO}$	5			V	I_E=100 μA
Collector-Emitter Dark Current		I_{CEO}			100	nA	V_{CE}=10V
COUPLER							
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$			0.4	V	I_C=0.25mA I_F=20mA
On State Collector Current		$I_{C(ON)}$	0.5			mA	V_{CE}=5V I_F=20mA
Response Time	Rise Time	T_R		3	15	μS	V_{CE}=5V, I_C=2mA R_L=100 Ω
	Fall Time	T_F		4	20		

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25℃ Ambient Temperature Unless Otherwise Noted)

Fig.1 Power Dissipation vs. Ambient Temperature

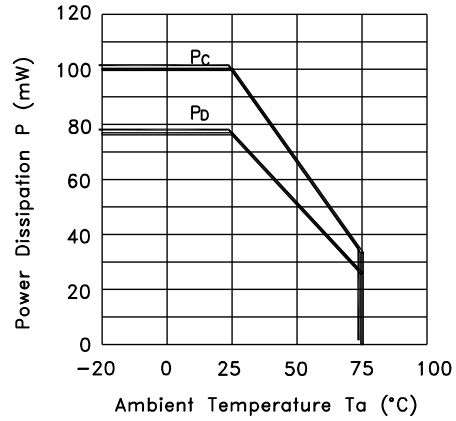


Fig.2 Forward Current vs. Forward Voltage

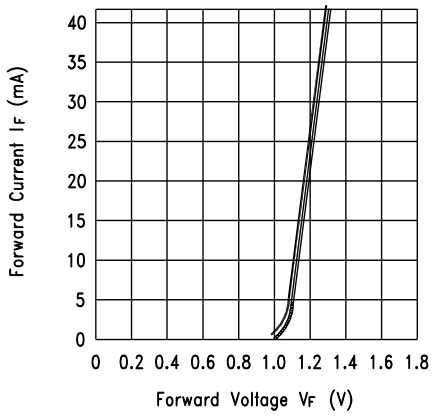


Fig.3 Collector Current vs. Forward Voltage

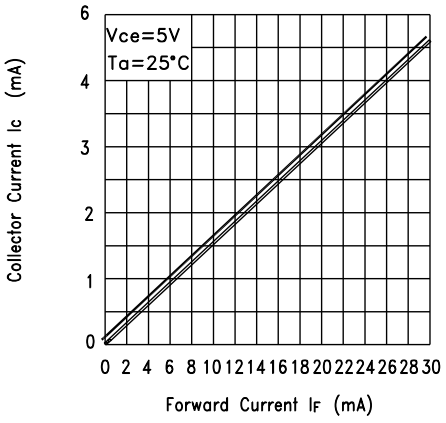
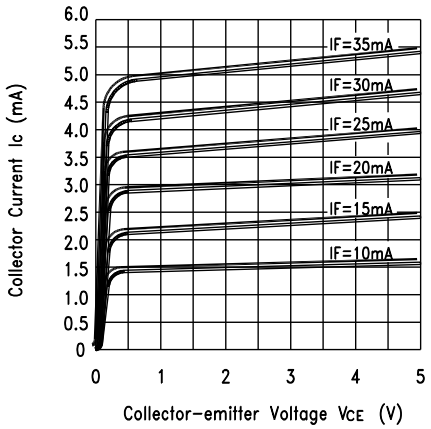


Fig.4 Collector Current vs. Collector-emitter Voltage



TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25℃ Ambient Temperature Unless Otherwise Noted)

Fig.5 Collector Current vs. Ambient Temperature

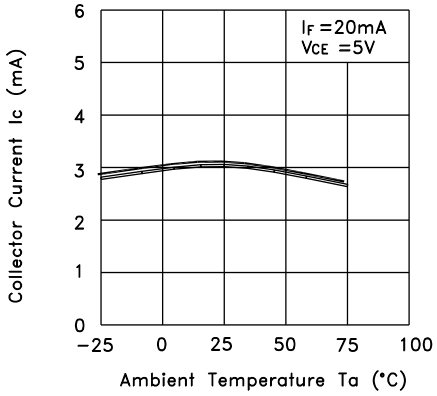


Fig.6 Collector−emitter Saturation Voltage vs. Ambient Temperature

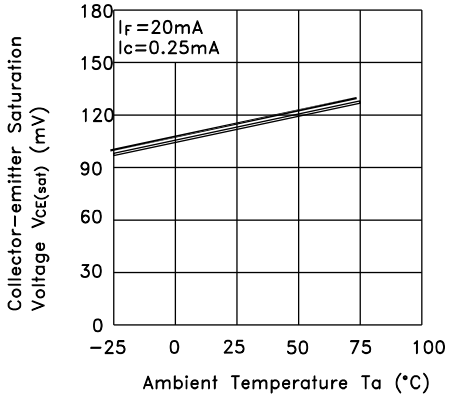
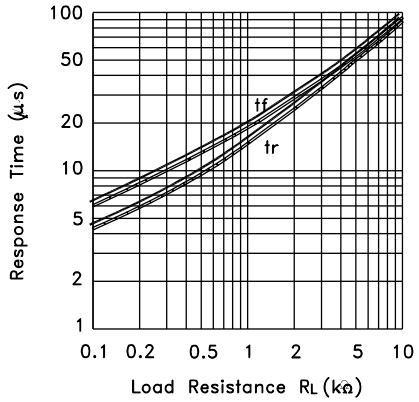


Fig.7 Response Time vs. Load Resistance



Test Circuit for Response Time