LITEON
OPTOELECTRONICS

Photointerrupter

Product Data Sheet

LTH-306-04

Spec No.: DS-55-94-0008

Effective Date: 06/29/2000

Revision: -

LITE-ON DCC

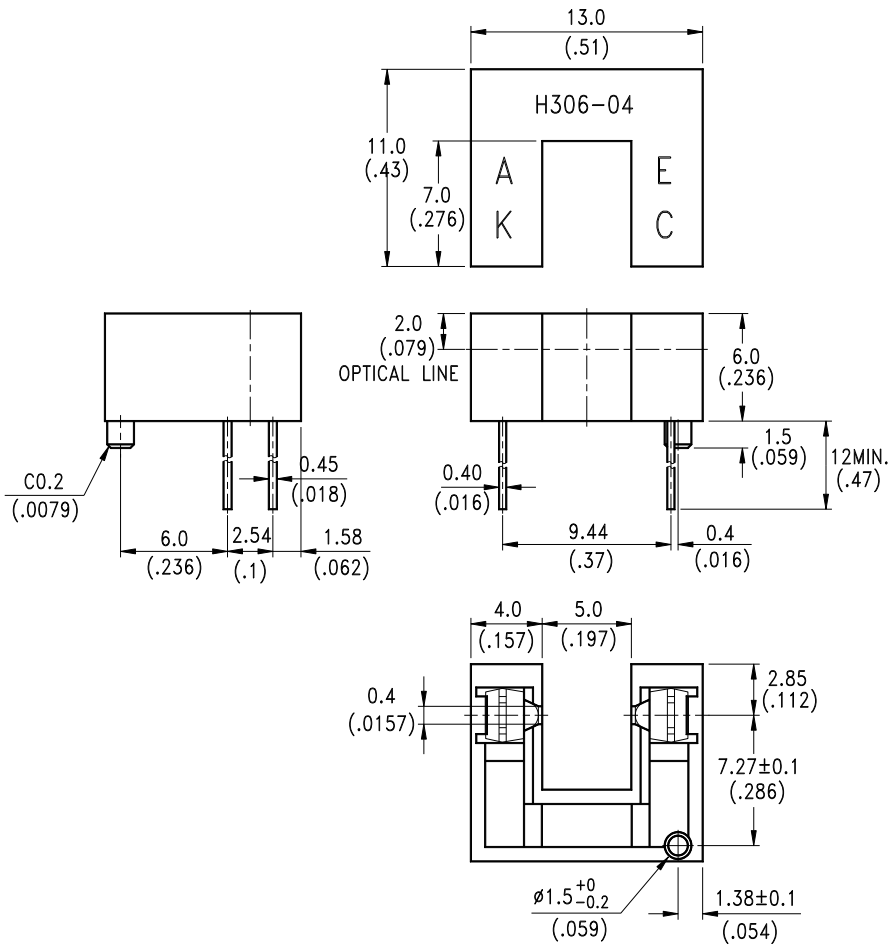
RELEASE

BNS-OD-FC001/A4

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 TA=25℃

PARAMETER	MAXIMUM RATING	UNIT
INPUT LED		
Power Dissipation	75	mW
Peak Forward Current (300 pps , 10 μS pulse)	1	A
Continuous Forward Current	60	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	-40℃ to + 100℃	
Lead Soldering Temperature [1.6mm (.063”) Form Case]	260℃ for 5 Seconds	

ELECTRICAL OPTICAL CHARACTERISTICS AT TA=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 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	2		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

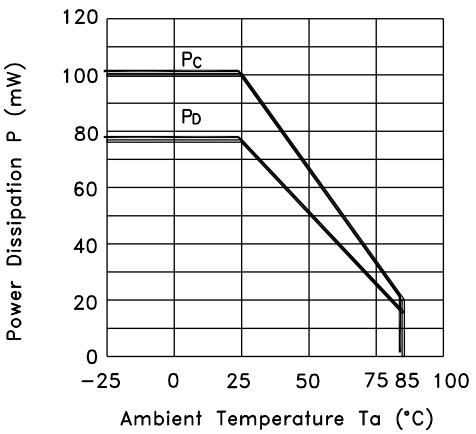


Fig.2 Forward Current vs. Forward Voltage

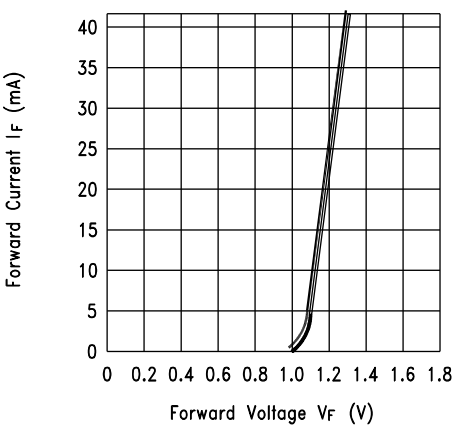


Fig.3 Collector Current vs. Collector−emitter Voltage

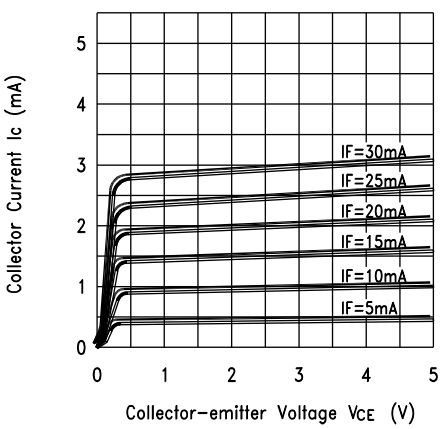
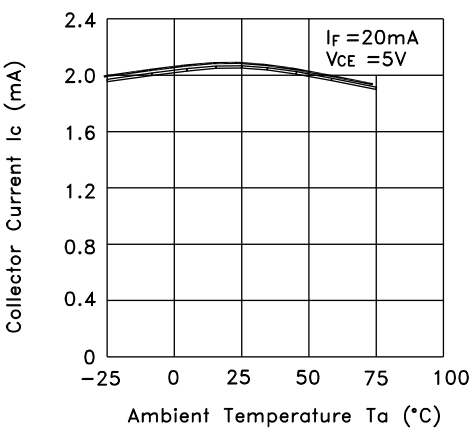


Fig.4 Collector Current vs. Ambient Temperature



TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25℃ Ambient Temperature Unless Otherwise Noted)

Fig.5 Collector-emitter Saturation Voltage vs. Ambient Temperature

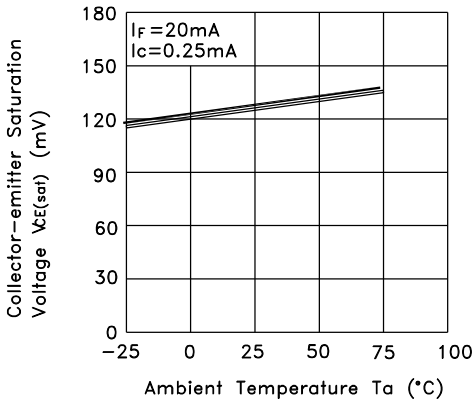
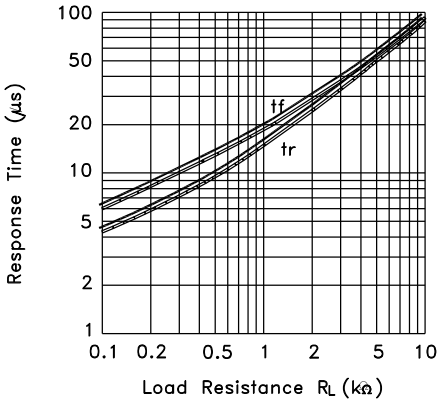
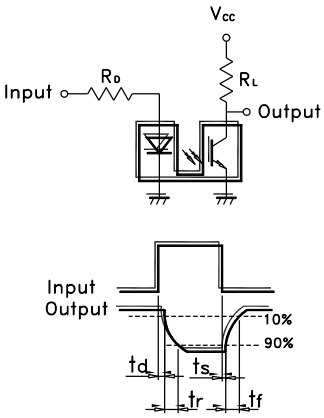


Fig.6 Response Time vs. Load Resistance



Test Circuit for Response Time