LITEON
OPTOELECTRONICS

Photointerrupter

Product Data Sheet

LTH-301A

Spec No.: DS-55-92-0001

Effective Date: 03/05/2002

Revision: A

LITE-ON DCC

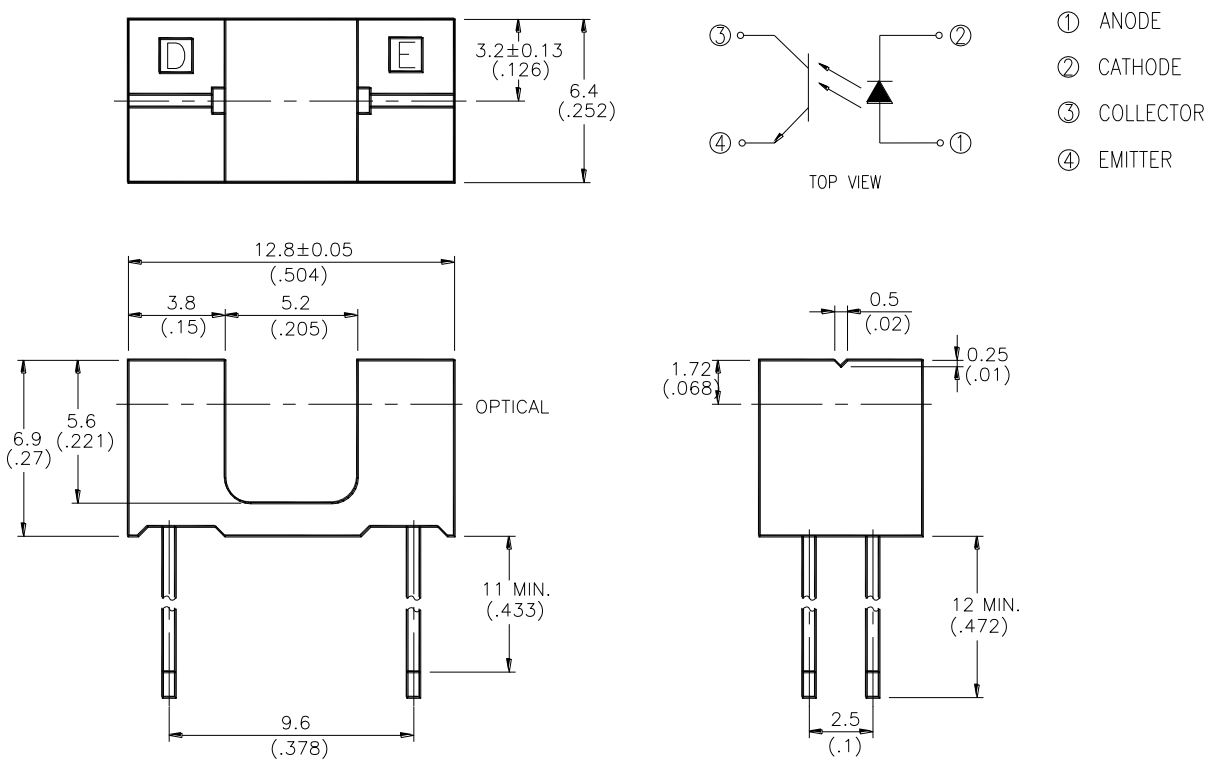
RELEASE

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. Specifications are subject to change without notice.

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	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	-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	VF		1.2	1.6	V	I_F = 20mA
Reverse Current	IR			100	μA	VR=5V
OUTPUT PHOTOTRANSISTOR						
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30			V	IC=1mA
Emitter-Collector Breakdown Voltage	$V_{(BR)ECO}$	5			V	IE=100 μA
Collector-Emitter Dark Current	ICEO			100	nA	VCE=10V
COUPLER						
Collector-Emitter Saturation Voltage	VCE(SAT)			0.4	V	IC=0.25mA IF=20mA
On State Collector Current	Ic(ON)	0.5			mA	VCE=5V IF=20mA

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25℃ Ambient Temperature Unless Otherwise Noted)

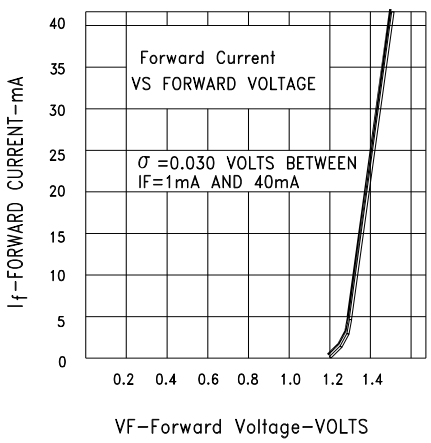


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

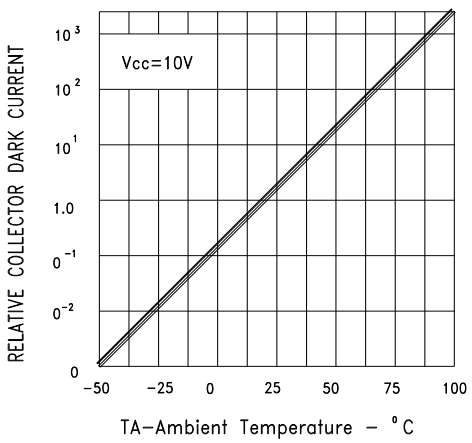


Fig.2 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

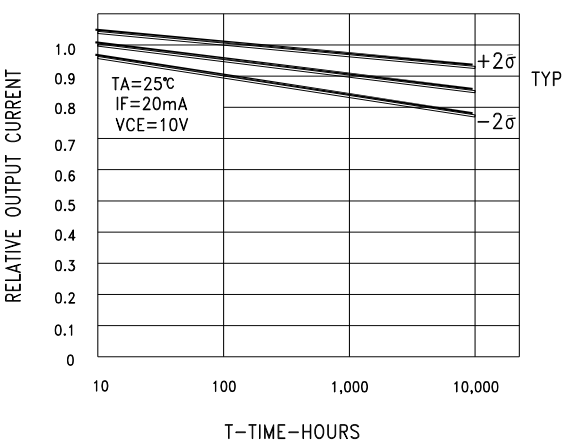


Fig.3 RELATIVE OUTPUT CURRENT VS TIME

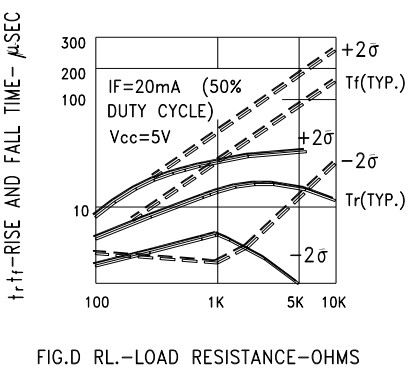


Fig.4 RISE AND FALL TIME VS LOAD RESISTANCE