



Photointerrupter Product Data Sheet LTH-1550-01

Spec No.: DS-55-94-0001

Effective Date: 04/07/2000

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

LITE-ON Technology Corp. / Optoelectronics

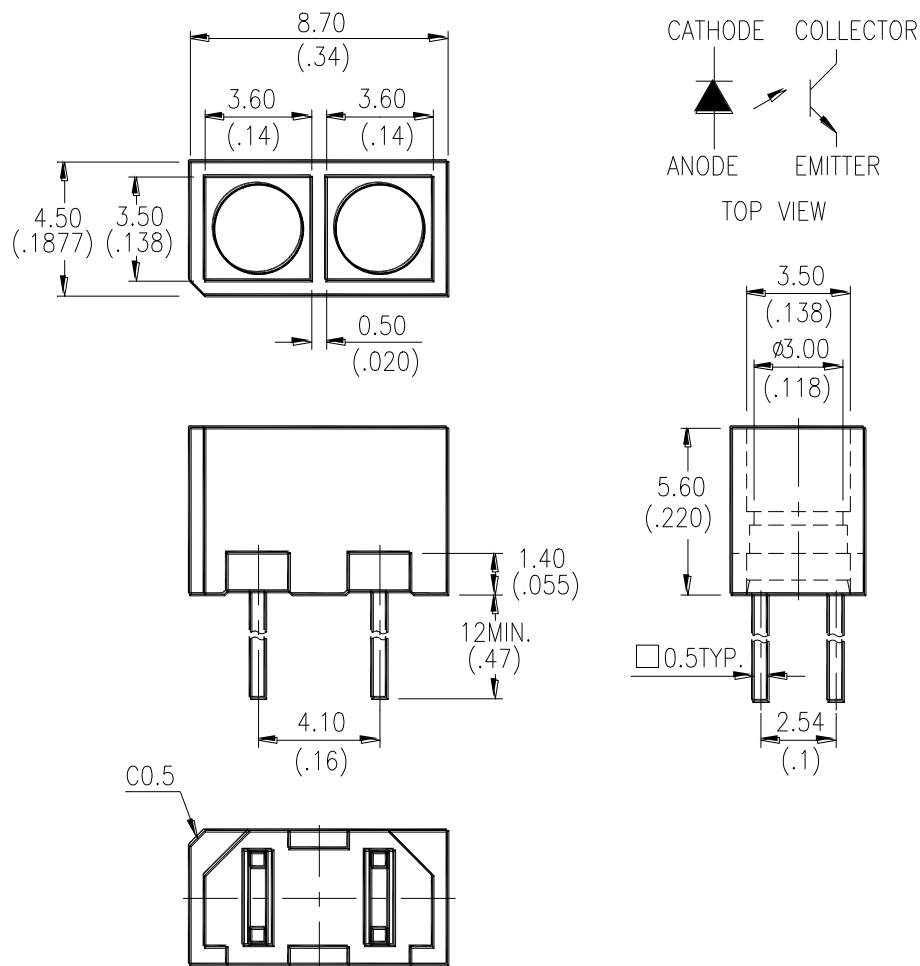
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FEATURES

- * 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 $\pm 0.25\text{mm}$ (.010") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.

ABSOLUTE MAXIMUM RATINGS AT TA=25°C

PARAMETER	SYMBOL	MAXIMUM RATING	UNIT
INPUT DIODE			
Power Dissipation	P _D	90	mW
Peak Forward Current (300 pps , 10 μ S pulse)	I _{CP}	1	A
Continuous Forward Current	I _F	60	mA
Reverse Voltage	V _R	5	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}	-40°C to + 100°C	
Lead Soldering Temperature [1.6mm (.063") Form Case]	T _S	260°C for 5 Seconds	

ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION	Bin No.
INPUT DIODE							
Forward Voltage	V_F		1.2	1.6	V	$I_F = 20\text{mA}$	
Reverse Current	I_R			100	μA	$V_R=5\text{V}$	
OUTPUT PHOTOTRANSISTOR							
Collector-Emitter Dark Current	I_{CEO}			100	nA	$V_{CE}=10\text{V}$	
COUPLER							
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$			0.4	V	$I_C=0.2\text{mA}$ $I_F=20\text{mA}$	
On State Collector Current	$I_{C(ON)}$	200		400	μA	$V_{CE}=5\text{V}$ $I_F=20\text{mA}$ $d=3.5\text{mm}$ (90% Reflective White Paper)	BIN A
		300		600			BIN B
		500		1000			BIN C
		800		1600			BIN D

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

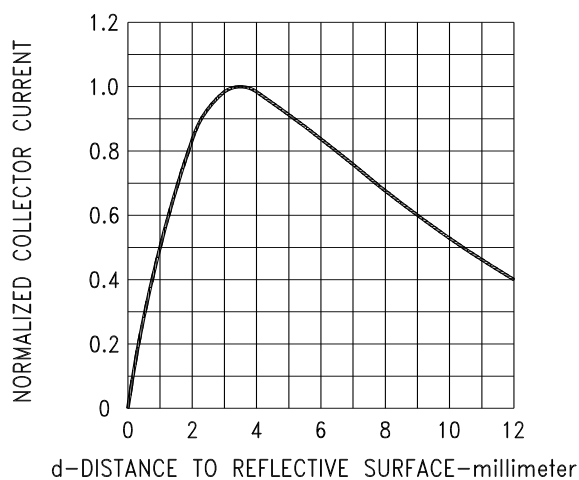


Fig.1 NORMALIZED COLLECTOR CURRENT VS. OBJECT DISTANCE

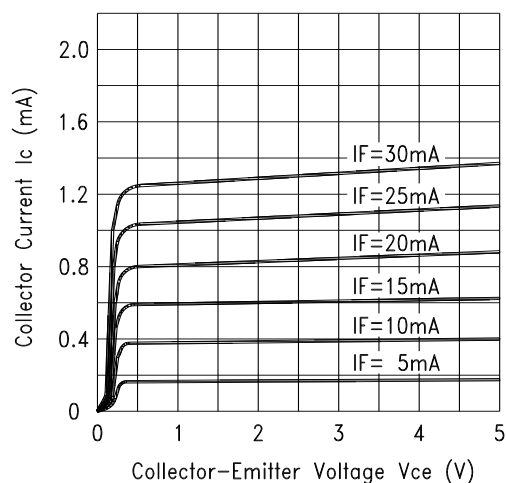


Fig.2 COLLECTOR CURRENT VS. COLLECTOR VOLTAGE

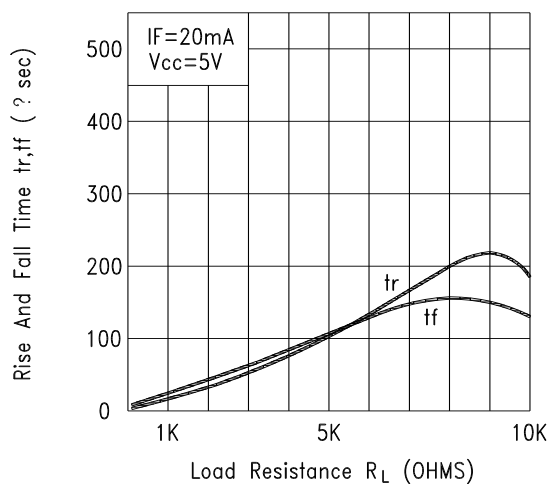


Fig.3 RISE AND FALL TIME VS. LOAD RESISTANCE

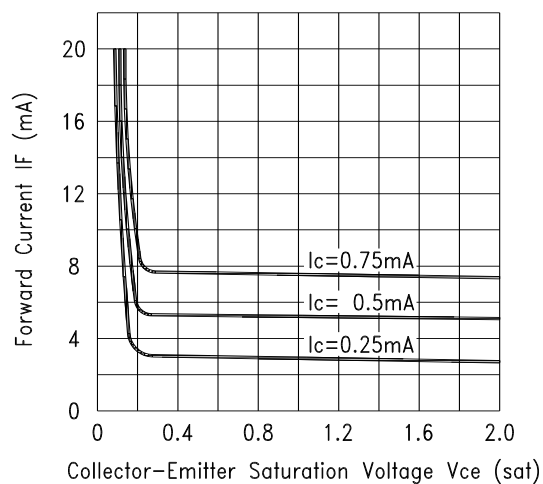


Fig.4 FORWARD CURRENT VS. Collector-Emitter Saturation Voltage