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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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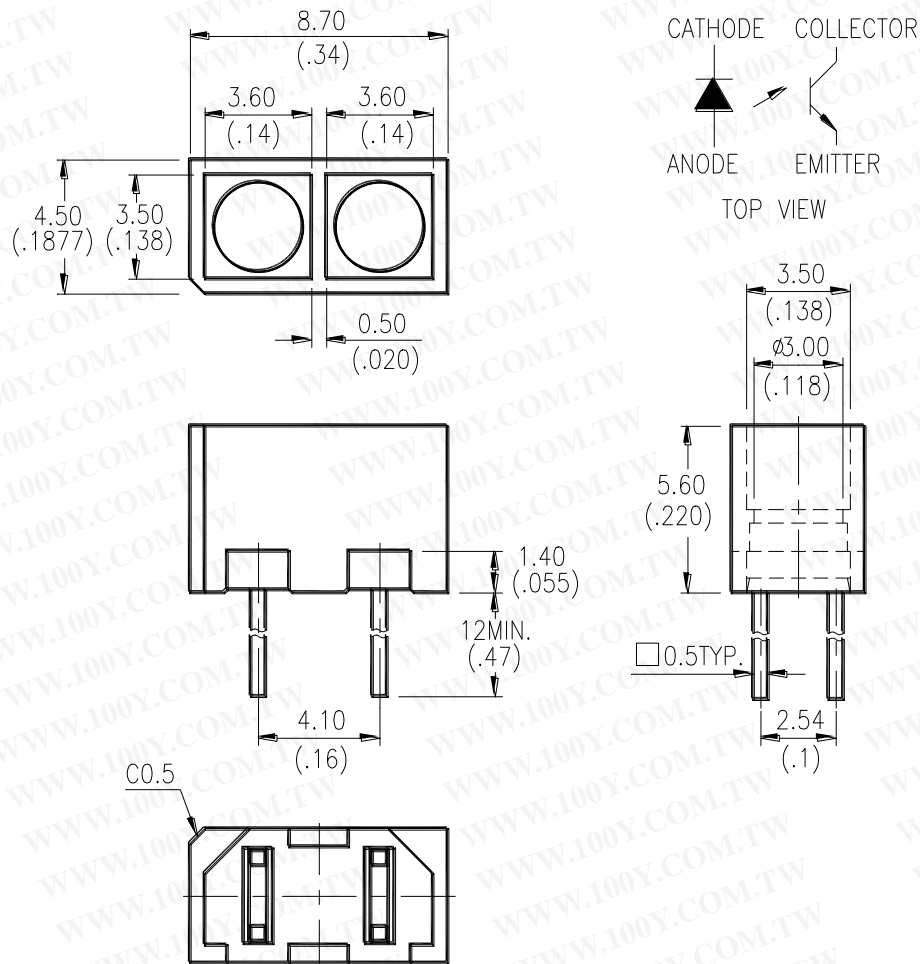
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<http://www.liteon.com/opto>

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

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Property of Lite-On Only

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	

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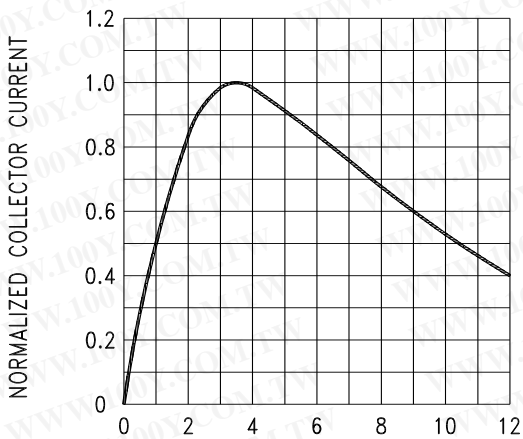
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ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

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)



d-DISTANCE TO REFLECTIVE SURFACE-millimeter
Fig.1 NORMALIZED COLLECTOR CURRENT VS. OBJECT DISTANCE

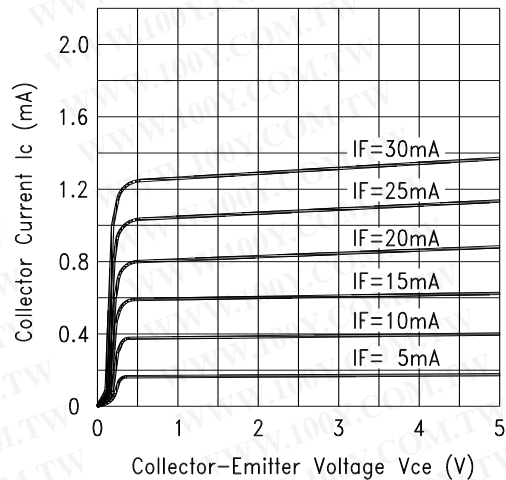


Fig.2 COLLECTOR CURRENT VS. COLLECTOR VOLTAGE

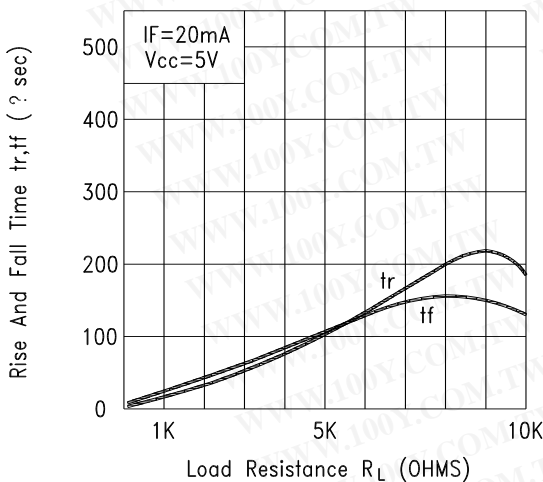


Fig.3 RISE AND FALL TIME VS. LOAD RESISTANCE

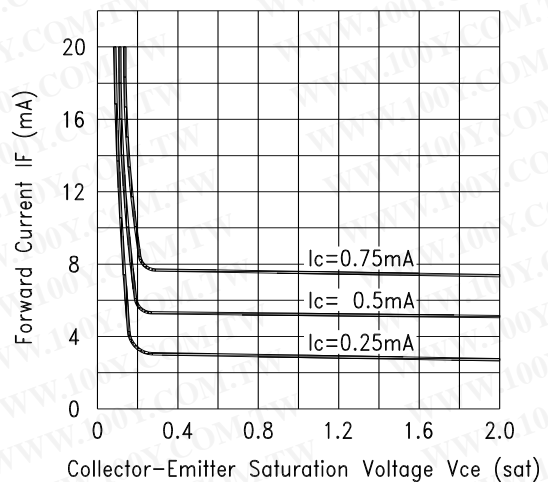


Fig.4 FORWARD CURRENT VS. Collector-Emitter Saturation Voltage