



Photointerrupter

Product Data Sheet

LTH-1550-06

Spec No.: DS-55-99-0008

Effective Date: 06/15/2000

Revision: C

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

LITE-ON Technology Corp. / Optoelectronics

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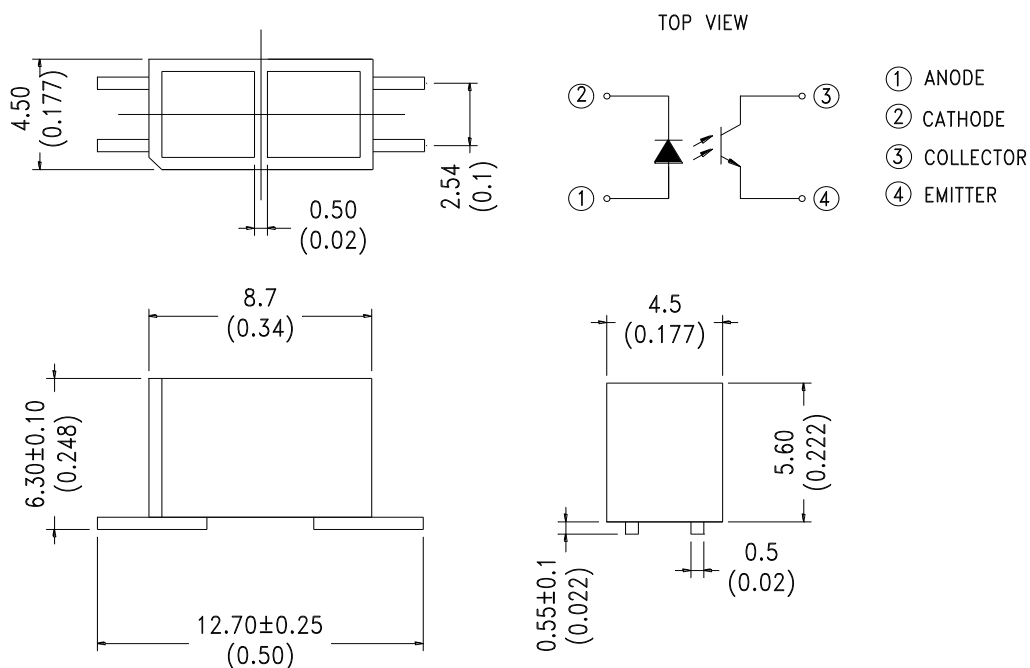
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<http://www.liteon.com/opto>

FEATURES

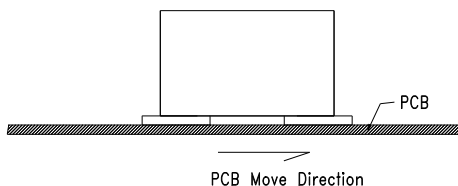
- * NON-CONTACT SWITCHING.
- * FAST SWITCHING SPEED.

PACKAGE DIMENSIONS

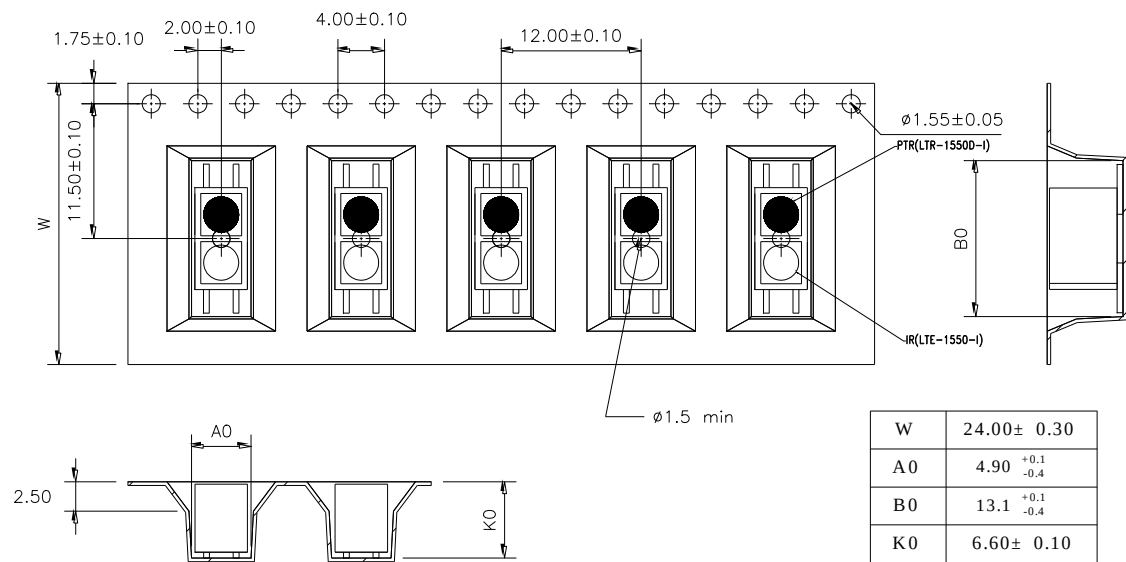


NOTES:

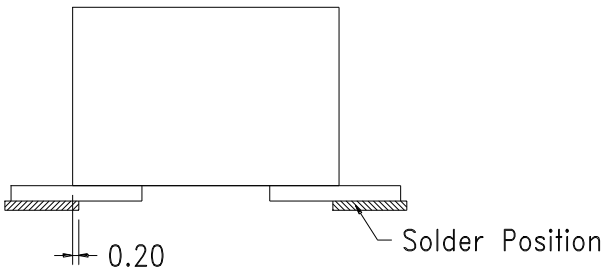
- All dimensions are in millimeters (inches).
- Tolerance is $\pm 0.25\text{mm}$ (.010") unless otherwise noted.
- Applicable to reflow soldering :
 - Preheat : 160°C within 120 seconds
 - Reflow : 220°C within 20 seconds
 - (Peak : 220°C)
- Device put on PCB position for reflow as follow :



TAPING DIMENSIONS



SOLDERING AREA :



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
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	$I_C=0.5\text{mA}$ $I_F=20\text{mA}$
On State Collector Current	$I_{C(ON)}$	BIN A	750		1150	μA	$V_{CE}=5\text{V}$ $I_F=20\text{mA}$ D=3.5 mm (90% Reflective White Paper)
		BIN B	1090		1430		
		BIN C	1370		1770		
Response Time	Rise Time	T_R		3	15	μS	$V_{CE}=5\text{V}, I_C=2\text{mA}$ $R_L=100\ \Omega$
	Fall Time	T_F		4	20		

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

Fig.1 Power Dissipation vs. Ambient Temperature

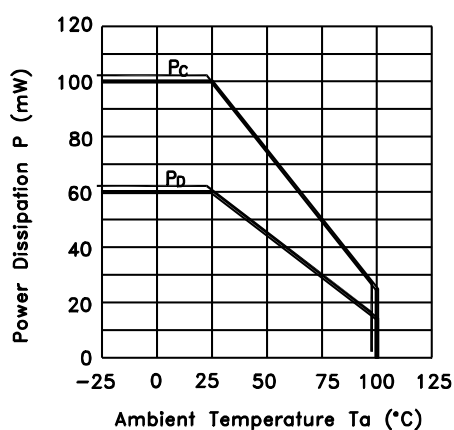


Fig.2 Forward Current I_f vs. Forward Voltage

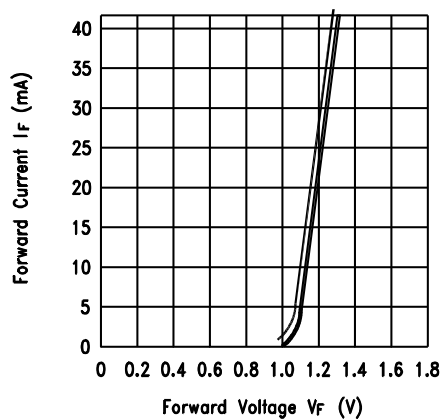


Fig.3 Collector Current vs. Forward Voltage

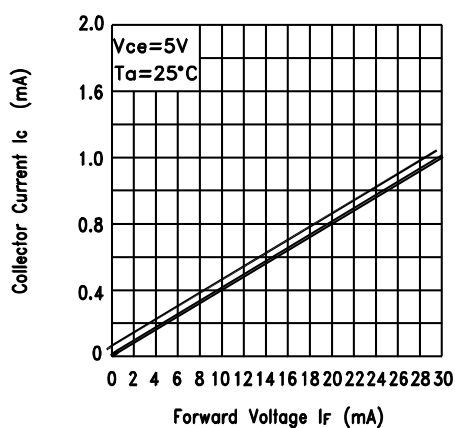
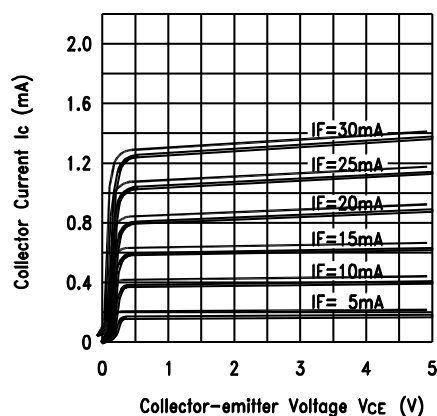


Fig.4 Collector Current vs. Collector-emitter Voltage



TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

Fig.5 Collector Current vs.
Ambient Temperature

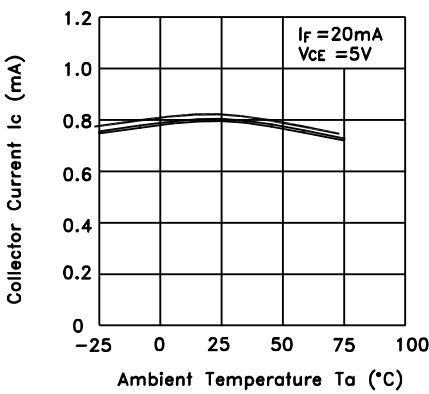


Fig.6 Collector-emitter Saturation
Voltage vs. Ambient Temperature

