



Photointerrupter

Product Data Sheet

LTH-872-N55T1

Spec No.: DS-55-99-0001

Effective Date: 05/25/2000

Revision: -

LITE-ON DCC

RELEASE

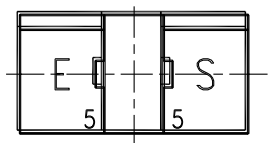
FEATURES

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

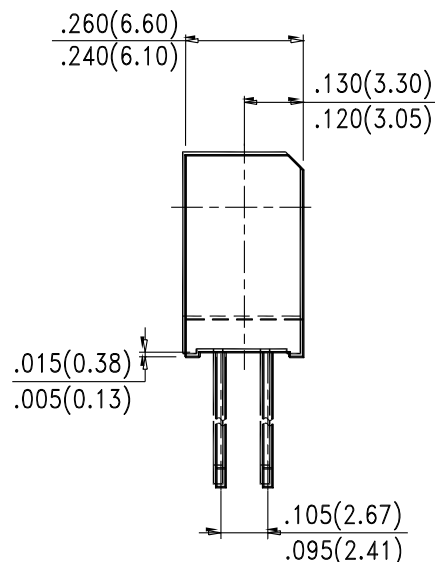
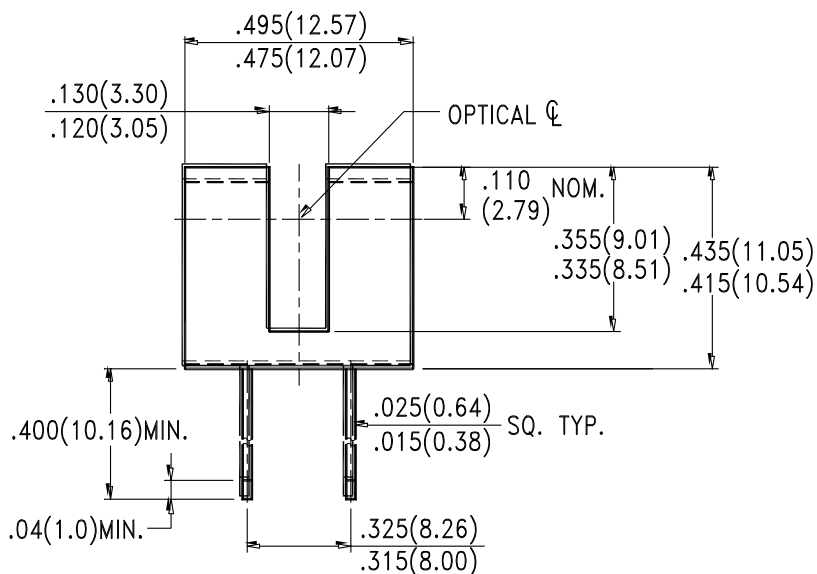
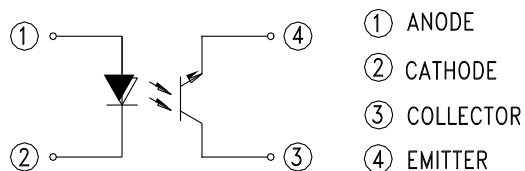
APPLICATION

- * SCANNER, PRINTER.

PACKAGE DIMENSIONS



TOP VIEW



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}(.010")$ unless otherwise noted.

ABSOLUTE MAXIMUM RATINGS AT TA=25°C

PARAMETER	SYMBOL	MAXIMUM RATING	UNIT
INPUT LED			
Power Dissipation	P_D	75	mW
Continuous Forward Current	I_F	50	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}	-55°C to + 100°C	
Lead Soldering Temperature [1.6mm (.063") Form Case]	T_{sol}	260°C for 5 Seconds	

ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

PARAMETER		SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
INPUT LED							
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	$I_C=0.25\text{mA}$ $I_F=20\text{mA}$
On State Collector Current		$I_{C(ON)}$	0.5			mA	$V_{CE}=5\text{V}$ $I_F=20\text{mA}$
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

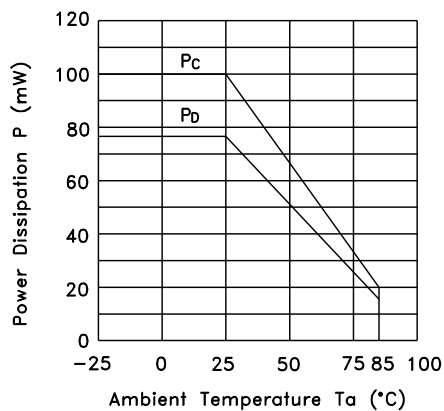


Fig.2 Forward Current vs. Forward Voltage

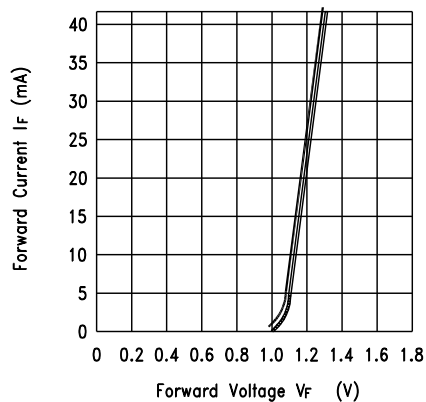


Fig.3 Collector Current vs. Collector-emitter Voltage

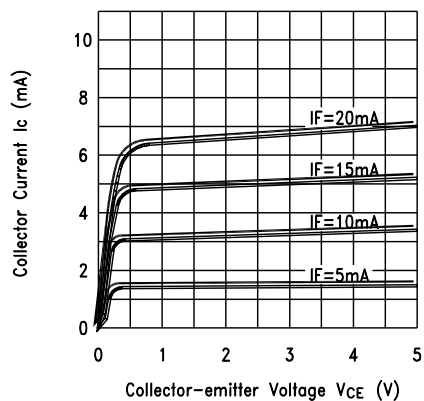
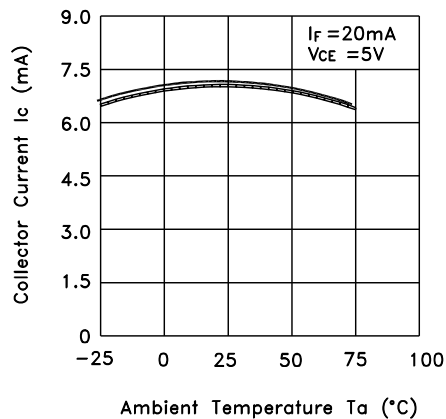


Fig.4 Collector Current vs. Ambient Temperature



TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

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

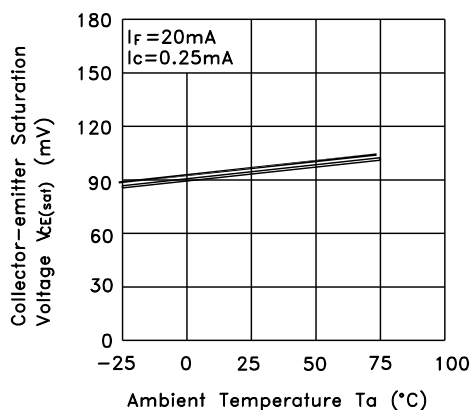
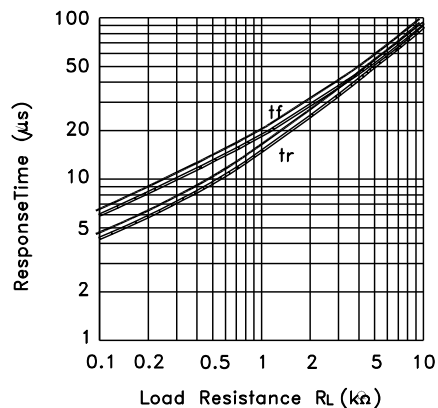


Fig.6 Response Time vs. Load Resistance



Test Circuit for Response Time

