



# IR Emitter and Detector Product Data Sheet

LTR-5576D

Spec No.: DS-50-92-0125

Effective Date: 06/10/2010

Revision: J

**LITE-ON DCC**

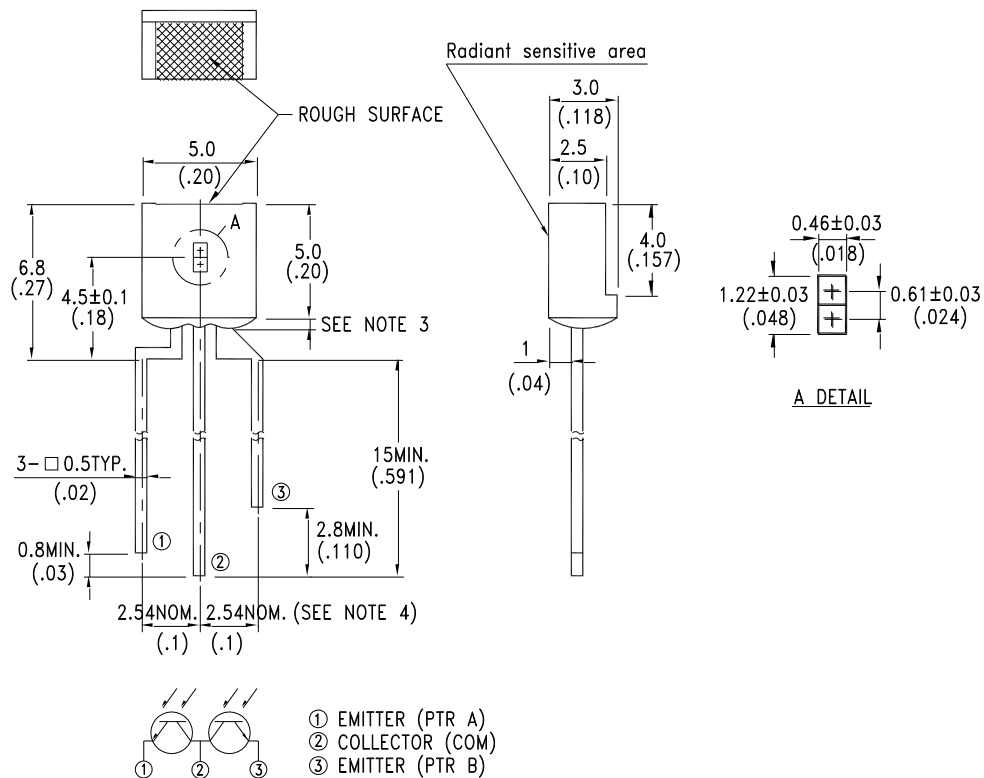
**RELEASE**

BNS-OD-FC001/A4

## FEATURES

- \* WIDE RANGE OF COLLECTOR CURRENT
- \* HIGH SENSITIVITY
- \* FAST SWITCHING TIME
- \* THE LTR-5576D IS A SPECIAL DARK GREEN PLASTIC PACKAGE THAT CUT THE VISIBLE LIGHT FOR THE DETECTORS OF INFRARED APPLICATIONS

## PACKAGE DIMENSIONS



### NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.15\text{mm} (.006\text{"})$  unless otherwise noted.
3. Protruded resin under flange is  $1.5\text{mm} (.059\text{"})$  max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.



## ABSOLUTE MAXIMUM RATINGS AT TA=25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation	100	mW
Collector-Emitter Voltage	30	V
Emitter-Collector Voltage	5	V
Operating Temperature Range	-40°C to + 85°C	
Storage Temperature Range	-55°C to + 100°C	
Lead Soldering Temperature [1.6mm(.063") From Body]	260°C for 5 Seconds	

## ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX	UNIT	TEST CONDITION	BIN No.	Color Marking
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30			V	$I_c = 1mA$ $E_e = 0mW/cm^2$		
Emitter-Collector Breakdown Voltage	$V_{(BR)ECO}$	5			V	$IE = 100 \mu A$ $E_e = 0mW/cm^2$		
Collector Emitter Saturation Voltage	$V_{CE(SAT)}$		0.1	0.4	V	$I_c = 50 \mu A$ $E_e = 0.5mW/cm^2$		
Rise Time	$T_r$		15		$\mu s$	$V_{CC} = 5V$ $I_c = 1mA$ $R_L = 1K \Omega$		
Fall Time	$T_f$		18		$\mu s$			
Collector Dark Current	$I_{CEO}$		0.1	100	nA	$V_{CE} = 10V$ $E_e = 0mW/cm^2$		
On Stage Collector Current Ratio ( $I_{L1}/I_{L2}$ )	R	0.8	1.0	1.25				
Average On State Collector Current Range Setting of LITE-ON Production ( $I_{L1}/I_{L2}$ ) / 2	$I_{C(ON)}$	200		300	$\mu A$	$V_{CE} = 5V$ $E_e = 1mW/cm^2$	BIN A	Red
		300		400			BIN B	Black
		400		500			BIN C	Green
		500		600			BIN D	Blue
		600		700			BIN E	White
		700		800			BIN F	Purple
Average On State Collector Current Range Q.C Limits ( $I_{L1}/I_{L2}$ ) / 2	$I_{C(ON)}$	160		360	$\mu A$	$V_{CE} = 5V$ $E_e = 1mW/cm^2$	BIN A	Red
		240		480			BIN B	Black
		320		600			BIN C	Green
		400		720			BIN D	Blue
		480		840			BIN E	White
		560		960			BIN F	Purple

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

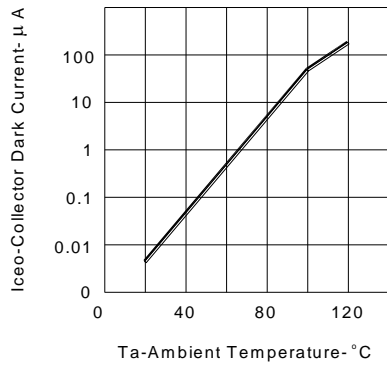


FIG.1 COLLECTOR DARK CURRENT VS AMBIENT TEMPERATURE

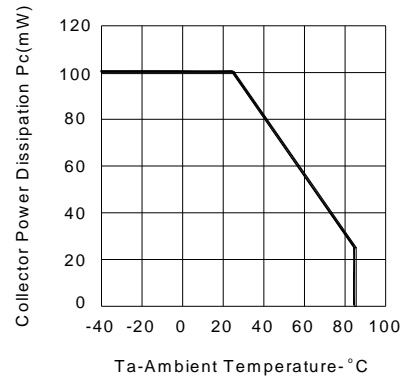


FIG.2 COLLECTOR POWER DISSIPATION VS AMBIENT TEMPERATURE

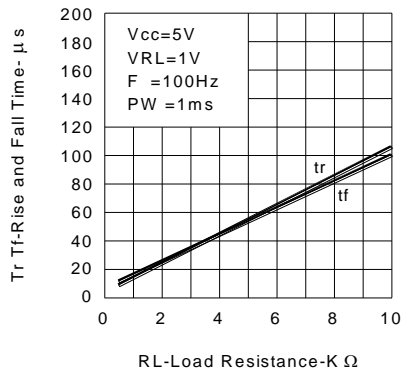


FIG.3 RISE AND FALL TIME VS LOAD RESISTANCE

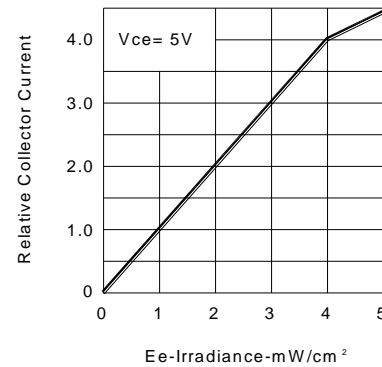


FIG.4 RELATIVE COLLECTOR CURRENT VS IRRADIANCE






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