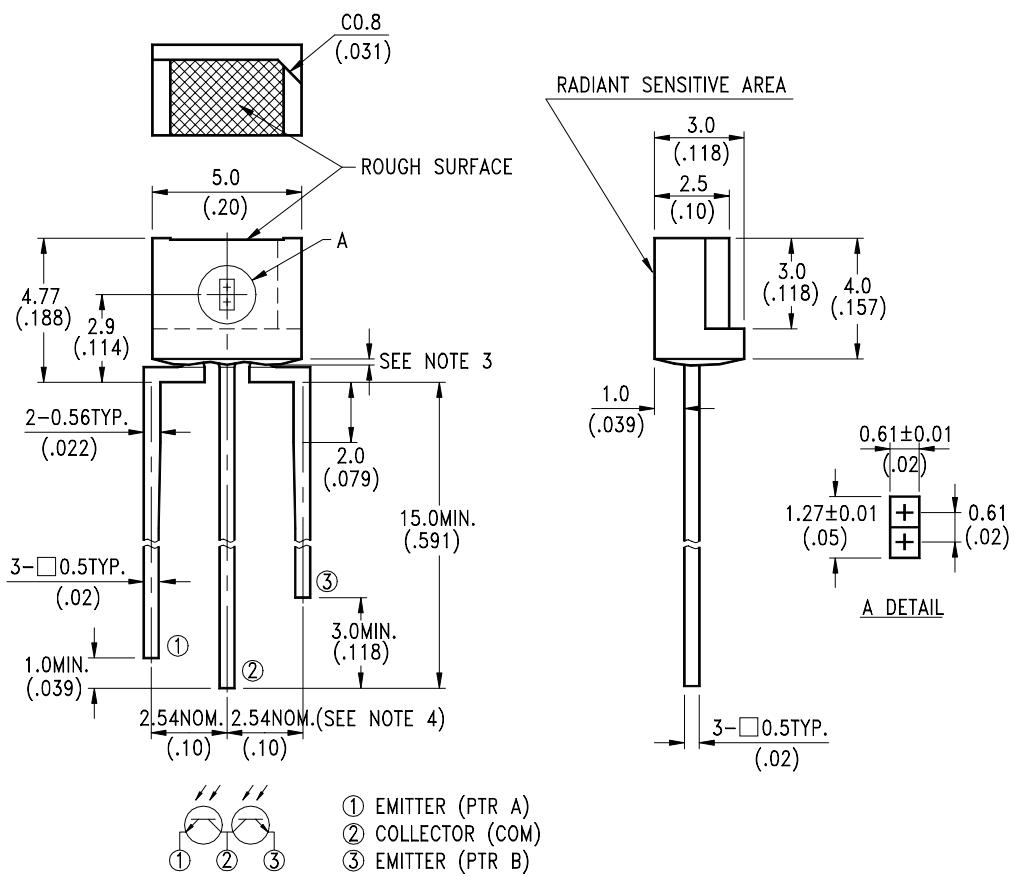


## FEATURES

- \* WIDE RANGE OF COLLECTOR CURRENT
- \* HIGH SENSITIVITY
- \* FAST SWITCHING TIME
- \* THE LTR-5986D IS A SPECIAL DARK GREEN PLASTIC PACKAGE THAT CUT THE VISIBLE FOR THE DETECTORS OF INFRARED APPLICATIONS

## PACKAGE DIMENSIONS



## NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25\text{mm} (.010")$  unless otherwise noted.
3. Protruded resin under flange is 1.5mm (.059") max.
4. Lead spacing is measured where the leads emerge from the package.



LITE-ON ELECTRONICS, INC.

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**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 <sub>(BR)CEO</sub>	30			V	I <sub>C</sub> = 1mA Ee = 0mW/cm <sup>2</sup>		
Emitter-Collector Breakdown Voltage	V <sub>(BR)ECO</sub>	5			V	I <sub>E</sub> = 100 μA Ee = 0mW/cm <sup>2</sup>		
Collector Emitter Saturation Voltage	V <sub>CE(SAT)</sub>		0.1	0.4	V	I <sub>C</sub> = 50 μA Ee = 0.5mW/cm <sup>2</sup>		
Rise Time	Tr		15		μs	V <sub>CC</sub> = 5V I <sub>C</sub> = 1mA R <sub>L</sub> = 1KΩ		
Fall Time	Tf		18		μs			
Collector Dark Current	I <sub>CEO</sub>		0.1	100	nA	V <sub>CE</sub> = 10V Ee = 0mW/cm <sup>2</sup>		
On State Collector Current Range Setting of LITE-ON Production [I <sub>C(ON)(a)</sub> + I <sub>C(ON)(b)</sub> ] / 2	I <sub>C(ON)</sub>	0.20		0.26	mA	V <sub>CE</sub> = 5V Ee = 1mW/cm <sup>2</sup>	BIN A	Red
		0.26		0.32			BIN B	Black
		0.32		0.38			BIN C	Green
		0.38		0.46			BIN D	Blue
		0.46		0.52			BIN E	White
		0.52		0.58			BIN F	Purple
		0.58		0.64			BIN G	Yellow
		0.64		0.70			BIN H	Orange
On State Collector Current Range [I <sub>C(ON)(a)</sub> + I <sub>C(ON)(b)</sub> ] / 2	I <sub>C(ON)</sub>	0.16		0.31	mA	V <sub>CE</sub> = 5V Ee = 1mW/cm <sup>2</sup>	BIN A	Red
		0.20		0.38			BIN B	Black
		0.26		0.46			BIN C	Green
		0.30		0.55			BIN D	Blue
		0.36		0.62			BIN E	White
		0.42		0.70			BIN F	Purple
		0.46		0.76			BIN G	Yellow
		0.51		0.84			BIN H	Orange

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

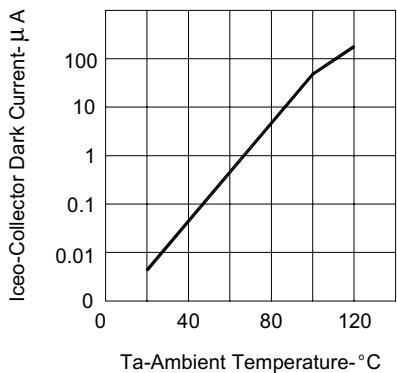


FIG.1 COLLECTOR DARK CURRENT VS AMBIENT TEMPERATURE

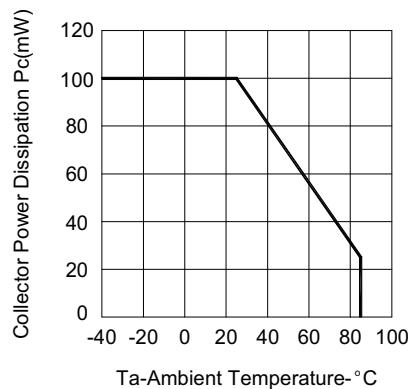


FIG.2 COLLECTOR POWER DISSIPATION VS AMBIENT TEMPERATURE

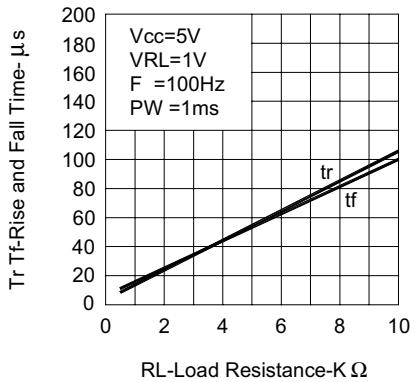


FIG.3 RISE AND FALL TIME VS LOAD RESISTANCE

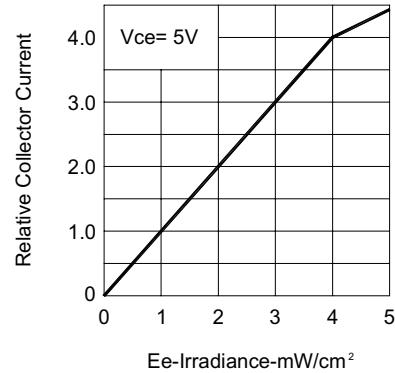


FIG.4 RELATIVE COLLECTOR CURRENT VS IRRADIANCE