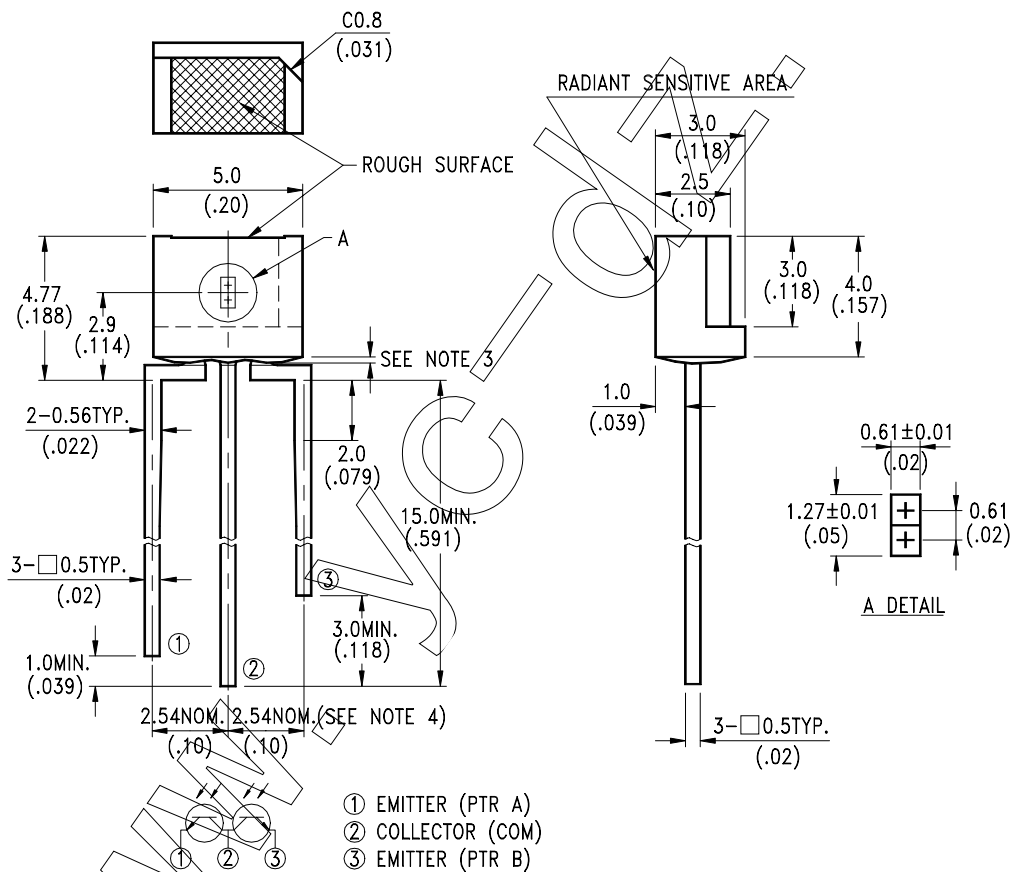


## FEATURES

- \* 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  $\pm 0.25\text{mm} (.010\text{"})$  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.

**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	$I_E = 100\mu A$ $E_e = 0mW/cm^2$		
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		$\mu s$	$V_{CC} = 5V$ $I_C = 1mA$		
Fall Time	$T_f$		18		$\mu s$	$R_L = 1K\Omega$		
Collector Dark Current	$I_{CEO}$		0.1	100	nA	$V_{CE} = 10V$ $E_e = 0mW/cm^2$		
On State Collector Current Range Setting of LITE-ON Production $[I_{C(ON)(a)} + I_{C(ON)(b)}] / 2$	$I_{C(ON)}$	0.20		0.26	mA	$V_{CE} = 5V$ $E_e = 1mW/cm^2$	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 $[I_{C(ON)(a)} + I_{C(ON)(b)}] / 2$	$I_{C(ON)}$	0.16		0.31	mA	$V_{CE} = 5V$ $E_e = 1mW/cm^2$	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)

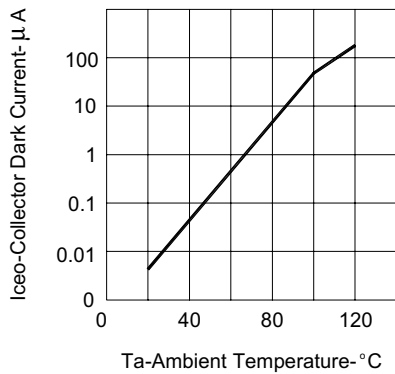


FIG. 1 COLLECTOR DARK CURRENT VS AMBIENT TEMPERATURE

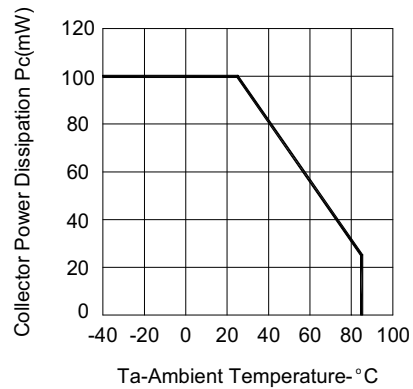


FIG. 2 COLLECTOR POWER DISSIPATION VS AMBIENT TEMPERATURE

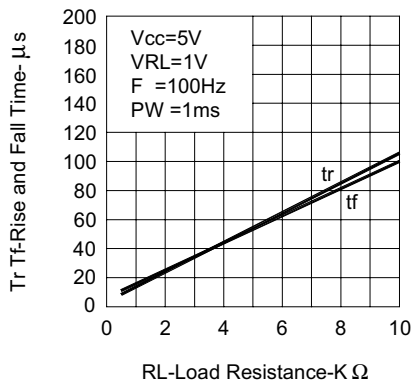


FIG. 3 RISE AND FALL TIME VS LOAD RESISTANCE

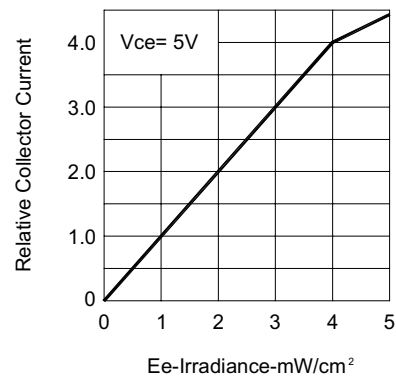


FIG. 4 RELATIVE COLLECTOR CURRENT VS IRRADIANCE