SMD 90° IR SENSOR

P/N: RCB-1760-S000

RoHS COMPLIANT

Features

- Small double-end package
- Viewing Angle = $\pm 30^0$
- High reliability
- RoHS compliance

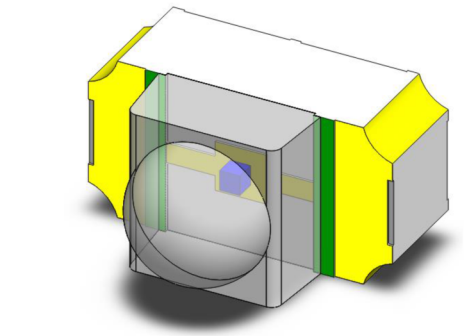
Description

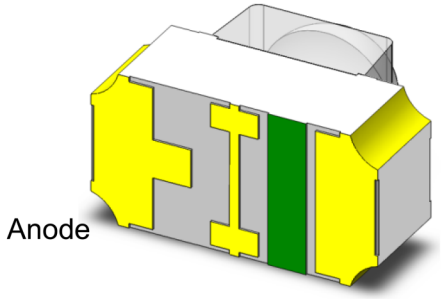
The Sensor is a InGaAsP infrared LED housed in a miniature SMD package. The device has a peak wavelength of 1350nm LED spectrally matched with phototransistor or photodiode.

Applications

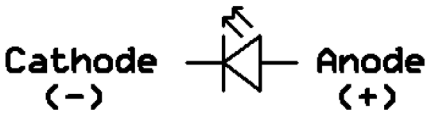
- Infrared sensor
- Infrared Touch Panel Solutions

Package Outline





Schematic



Absolute Maximum Rating at 25^0C

Symbol	*Parameters*	*Ratings*	*Units*	*Notes*
I_F	Continuous Forward Current	70	mA	
I_{FP}	Peak Forward Current	0.7	A	1
V_R	Reverse Voltage	5	V	
T_{opr}	Operating Temperature	-40 ~ +85	^{0}C	
T_{stg}	Storage Temperature	-40 ~ +100	^{0}C	
T_{sol}	Soldering Temperature	260	^{0}C	2
P_D	Power Dissipation at(or below) 25℃ Free Air Temperature	91	mW	

Electro-Optical Characteristics *TA = 25°C (unless otherwise specified)*

Optical Characteristics

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
Ie	Radiant Intensity	I_F=20mA	0.4	0.8	-	mW/sr	
		I_F =70mA	-	2.6	-		
Po	Total radiated power	I_F=20mA	-	1.25	-	mW	
λp	Peak Wavelength	I_F=20mA	-	1350	-	nm	
Δλ	Spectral Bandwidth	I_F=20mA	-	80	-	nm	
θ1/2	Angle of Half Intensity	I_F=20mA	-	±30	-	deg	

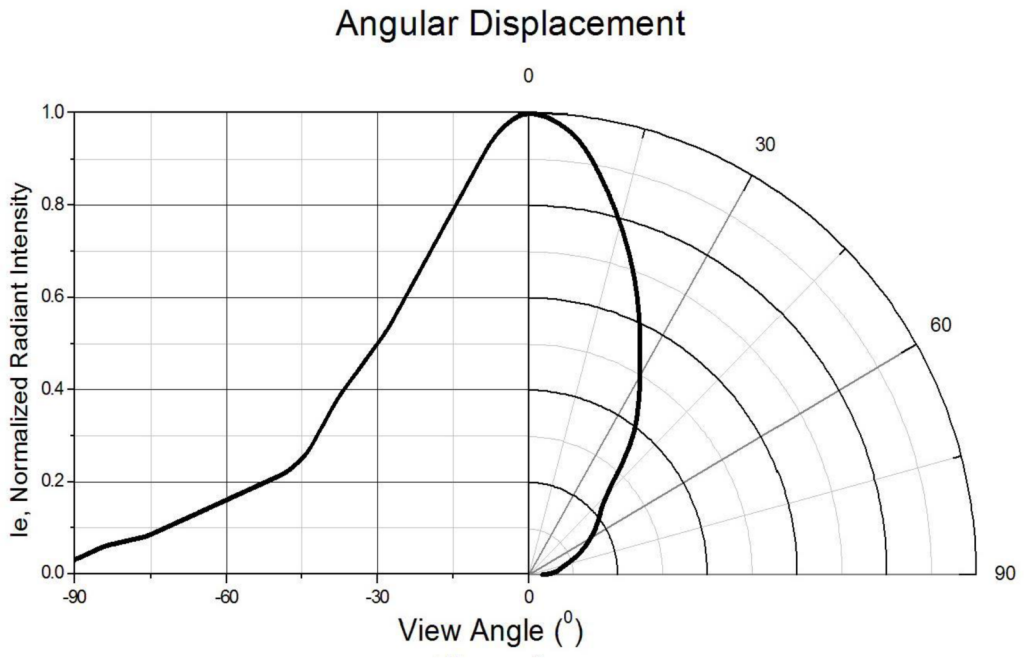
Electrical Characteristics

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
V_F	Forward Voltage	I_F=20mA	0.6	0.79	1.2	V	
		I_F=70mA	0.7	0.85	1.3		
I_R	Reverse Current	V_R=5V	-	-	10	μA	

Notes:

1. I_{FP} Conditions--Pulse Width≦ 100μs and Duty≦ 1%.
2. Soldering time≦ 5 seconds.

Typical Characteristic Curves



Typical Characteristic Curves

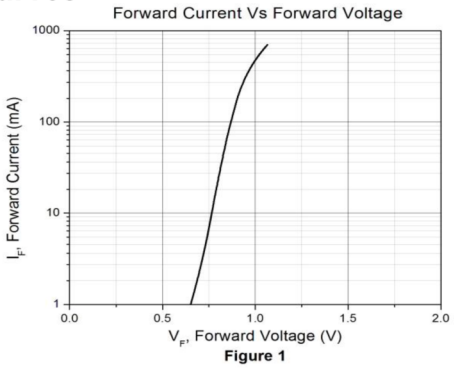


Figure 1

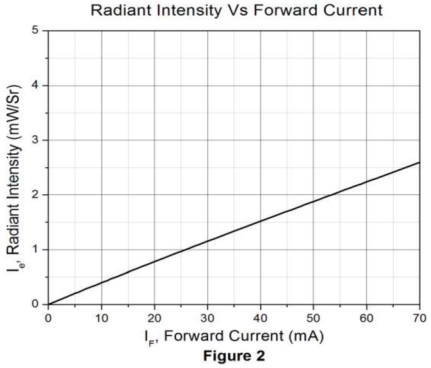


Figure 2

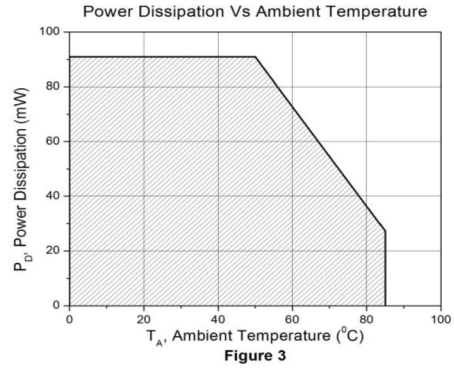


Figure 3

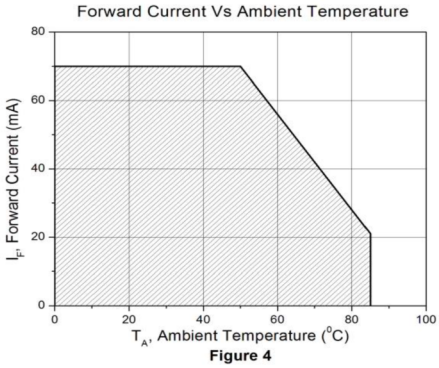
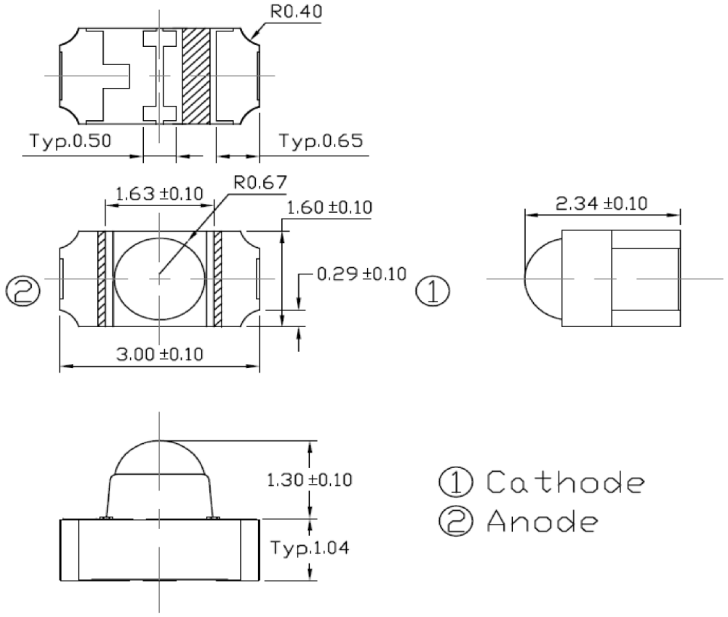


Figure 4

Package Dimension *All dimensions are in mm, unless otherwise stated*



Recommended Soldering Mask *All dimensions are in mm, unless otherwise stated*