

SPECIFICATION

Product : Ceramic 3535 IR LED

Part No. : IWS-C352L-EI-H1

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Proposed By	Checked By	Checked By	Checked By	Approval
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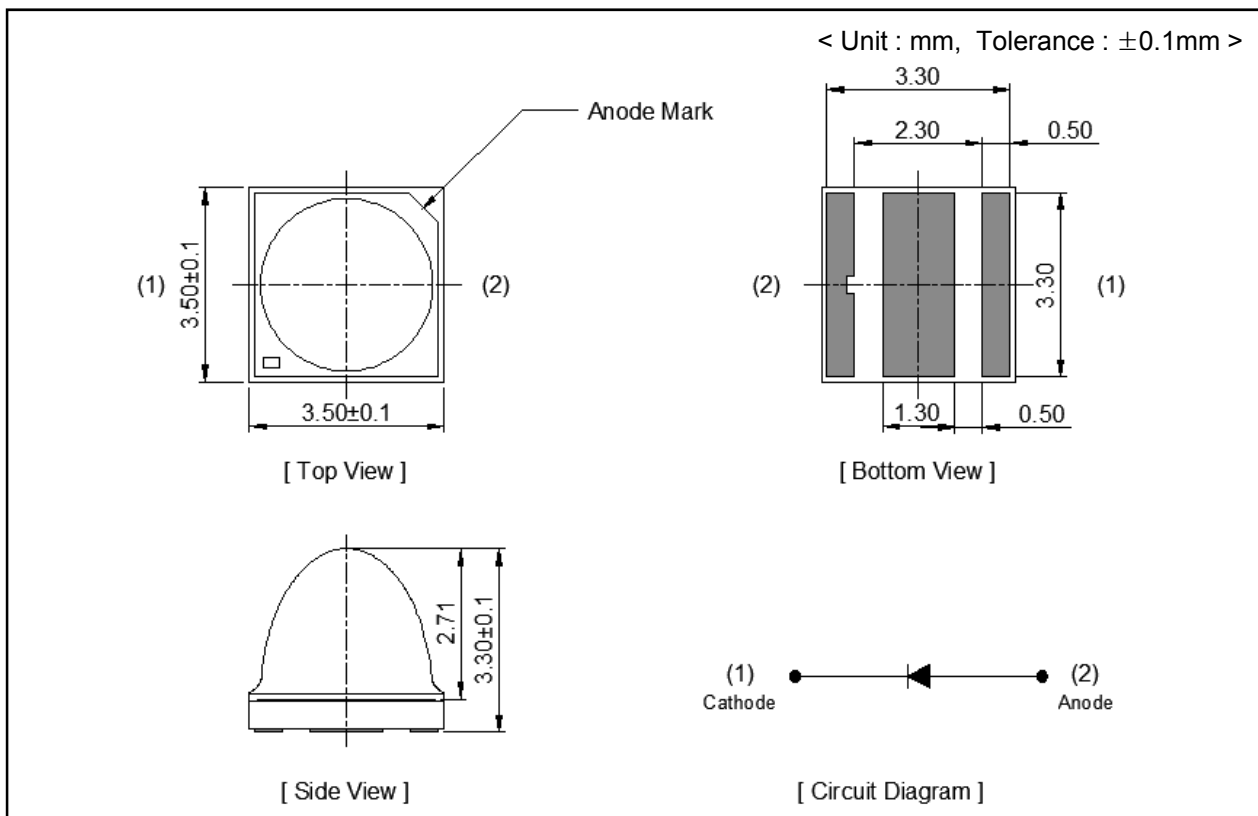
1. Features

- IR Light source
- SMD Ceramic Package with Silicone Lens
- Small Size High-flux LED : 3.5 x 3.5 x 3.3mm
- Wide Viewing Angle : 55°
- MSL 3

2. Applications

- Sensors
- IR Illumination for Cameras
- Surveillance Systems
- Machine Vision Systems

3. Outline Drawing and Dimension



Note

1. All dimensions are in millimeters
2. All dimensions without tolerances are for reference only

4. Absolute Maximum Ratings (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation per Chip	P_d	3.4	W
Continuous Forward Current	I_F	1000	mA
Peak Forward Current *1	I_{FP}	3000	mA
Operating Temperature	T_{opr}	-40 ~ 85	°C
Storage Temperature	T_{stg}	-40 ~ 100	°C
Soldering Temperature	T_{sol}	260 (5sec)	°C

*1 Duty ratio = 1/10, Pulse width = 1ms

5. Electrical & Optical Characteristics (Ta = 25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit.
Forward Voltage *2	V_F	$I_F = 350\text{mA}$	2.8	-	3.4	V
Reverse Current	I_R	$V_R = 5\text{V}$	-	-	10	μA
Radiant Flux *3	Φ_e	$I_F = 350\text{mA}$	300	-	530	mW
Radiant Intensity *4	I_e	$I_F = 350\text{mA}$	200	250	-	mW/sr
Peak Wavelength *5	W_P	$I_F = 350\text{mA}$	840	-	870	nm
Viewing Angle *6	$2\theta_{1/2}$	$I_F = 350\text{mA}$	-	130	-	deg.

*2 Forward Voltage has a tolerance of $\pm 0.05\text{V}$.

*3 Radiant Flux is measured with an integrating sphere and has an accuracy of 10%.

*4 Radiant Intensity is measured at solid angle of $\Omega = 0.01\text{sr}$ and has an accuracy of 10%.

*5 Peak Wavelength has an accuracy of $\pm 0.01\text{nm}$.

*6 Viewing Angle is the angle until 50% of brightness measured from the front part of LED.

5.1 Radiant Flux Rank

Rank	Radiant Flux (mW)
X	300 ~ 370
Y	370 ~ 440
Z	440 ~ 530

5.2 Forward Voltage Rank

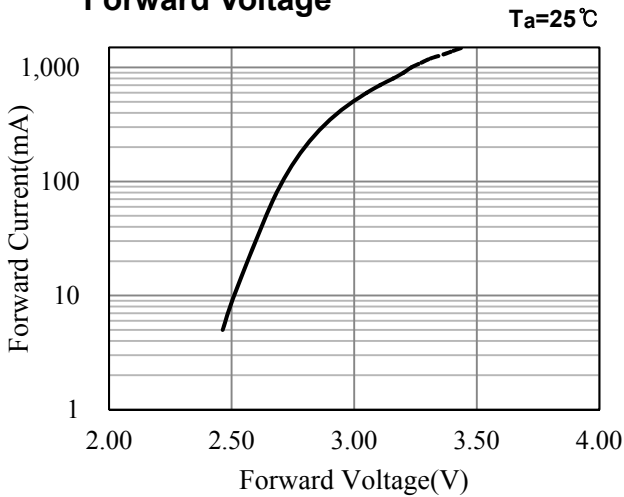
Rank	Forward Voltage (V)
0	2.8 ~ 3.4

5.3 Peak Wavelength Rank

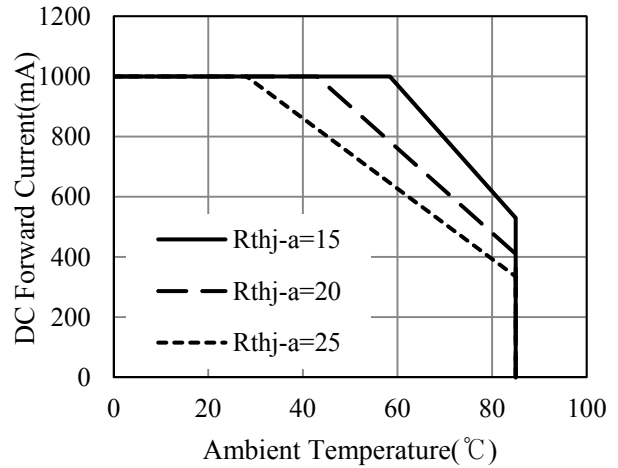
Rank	Peak Wavelength (nm)
Ic	840 ~ 870

6. Typical Characteristic Curve

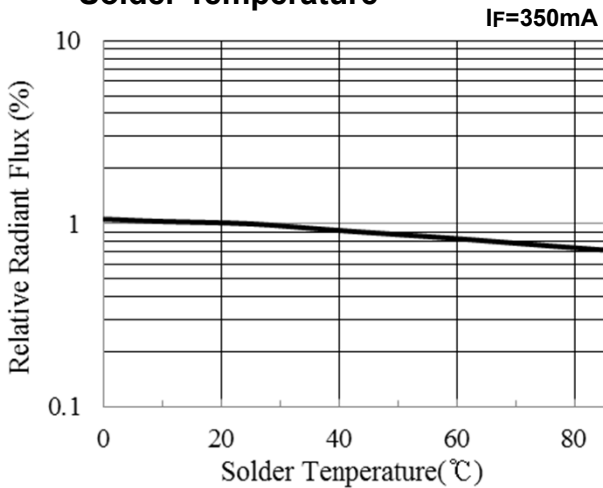
Forward Current vs. Forward Voltage



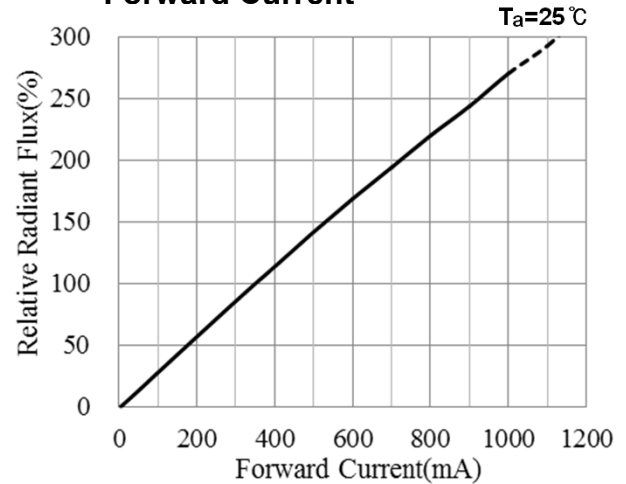
Forward Current vs. Solder Temperature



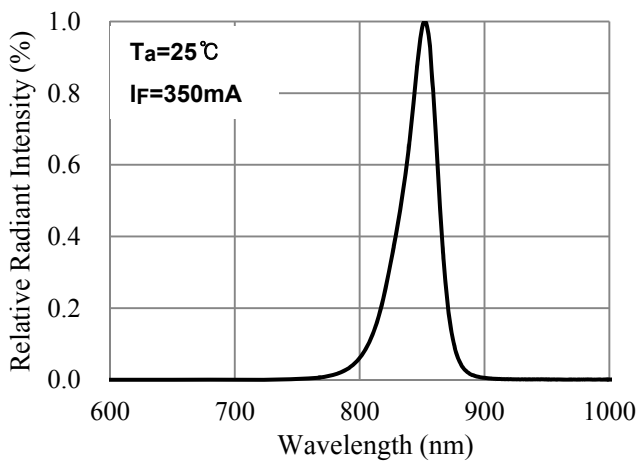
Relative Radiant Flux vs. Solder Temperature



Relative Radiant Flux vs. Forward Current



Relative Radiant Intensity vs. Wavelength



Radiation Diagram

