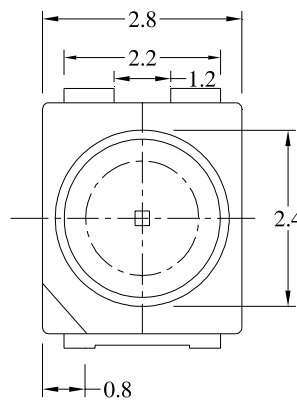
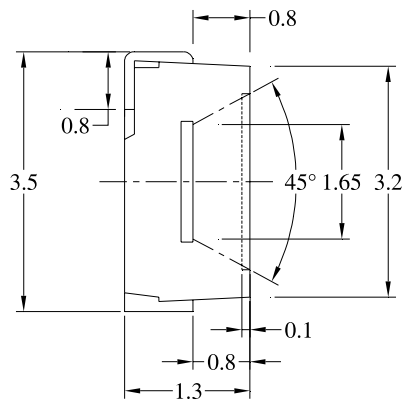


# 3.2mm × 2.8mm 0.5W SMD Type

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## Package Dimensions:



**RoHS  
Compliant**

All dimensions are in mm  
Tolerance:  $\pm 0.25\text{mm}$

## Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
LED Junction Temperature	$T_j$	110	$^\circ\text{C}$
Power Dissipation	$P_D$	570	mW
Reverse Voltage	$V_R$	5	V
D.C. Forward Current	$I_f$	150	mA
Pulsed Forward Current (1 / 10 Duty Cycle, 0.1ms Pulse Width)	$I_f$ (Peak)	300	mA
Operating Temperature Range	$T_{opr.}$	-40 to +75	$^\circ\text{C}$
Storage Temperature Range	$T_{stg.}$	-40 to +105	$^\circ\text{C}$
Soldering Temperature	$T_{sld.}$	Reflow Soldering: $260^\circ\text{C}$ for 10sec. Hand Soldering: $350^\circ\text{C}$ for 3sec.	
Electric Static Discharge Threshold (HBM)	ESD	6,000	V
Thermal Resistance Junction to Board (Heat Sink)	$R\Phi_{J-B}$	31	$^\circ\text{C/W}$

## Electrical & Optical Characteristics:

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Flux*	$\Phi_v$	$I_f = 150\text{mA}$	12	16.1	-	lm
Forward Voltage	$V_f$	$I_f = 150\text{mA}$	-	3.2	3.8	V
Peak Wavelength	$\lambda_p$	$I_f = 150\text{mA}$	-	-	-	nm
Dominant Wavelength	$\lambda_d$	$I_f = 150\text{mA}$	-	525	-	nm
Reverse Current	$I_r$	$V_r = 5\text{V}$	-	-	50	$\mu\text{A}$
Viewing Angle	$2\Phi_{1/2}$	$I_f = 150\text{mA}$	-	120	-	deg
Spectrum Line Halfwidth	$\Delta\lambda$	$I_f = 150\text{mA}$	-	35	-	nm

Note : \*Luminous Flux is converted from Luminous Intensity.

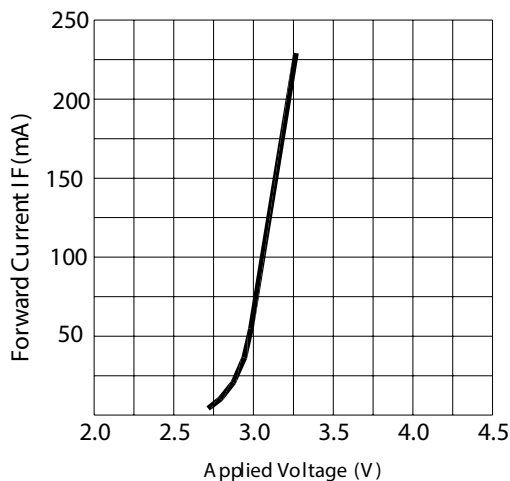
1. The data is tested by an IS tester.
2. Customer's special requirements are also welcome.

# 3.2mm × 2.8mm 0.5W SMD Type

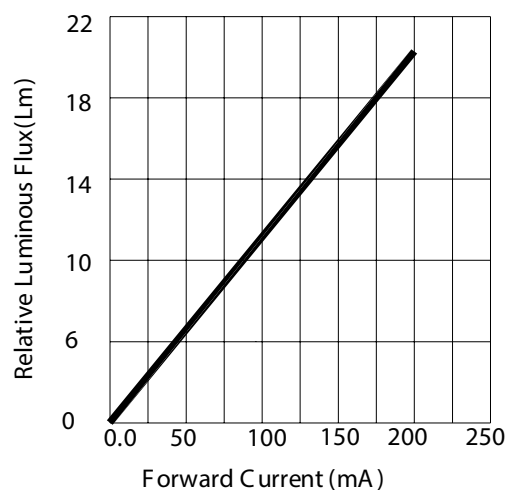
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## Typical Electrical & Optical Characteristics Curves:

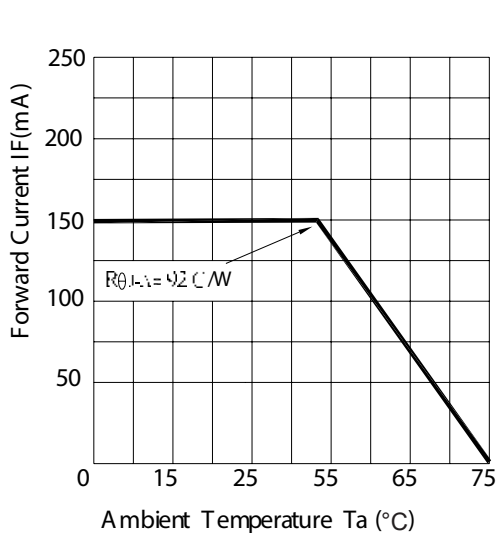
(25°C Ambient temperature unless otherwise noted)



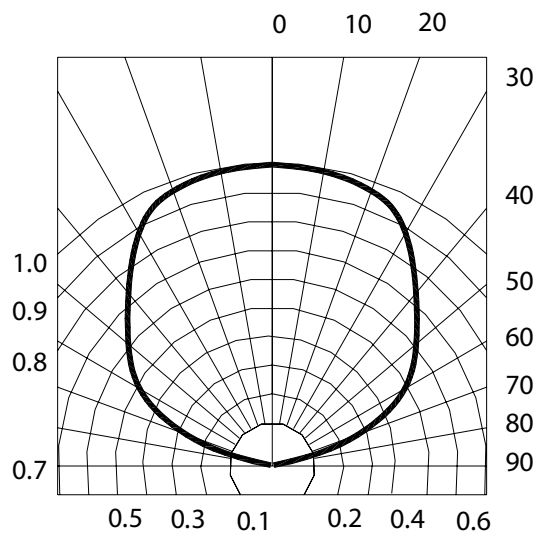
Forward Current V S. Applied Voltage



Forward Current VS. Luminous Intensity



Ambient Temperature V S. Forward Current



Radiation Diagram

# 3.2mm × 2.8mm

## 0.5W SMD Type

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### Recommended Storage Environment:

- Temperature: 5°C to 30°C (41°F to 86°F)
- Humidity: 60% RH Max.
- Use within 7 days after opening of sealed vapour/ESD barrier bags

If moisture absorbent material (silica gel) has faded away or LEDs have exceeded the storage time, baking treatment should be performed using the following conditions:

- Baking Treatment : 60 ± 5°C for 24 hours
- Fold the opened bag firmly and keep in dry environment

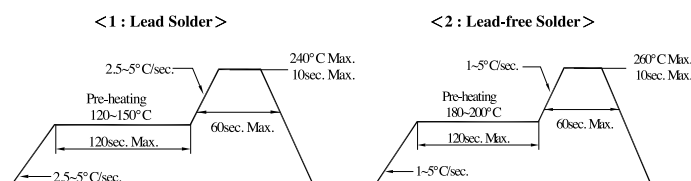
### Soldering

Reflow Soldering			Hand Soldering	
	Lead Solder	Lead-free Solder		
Pre-heat	12°C ~ 150°C	180°C ~ 200°C	Temperature	350°C Max.
Pre-heat Time	120sec. max.	120sec. max	Soldering Time	3sec. Max (one time only)
Peak Temperature	240°C max.	260°C max.		
Soldering Time	10sec max.	10sec. max		
Condition	Refer to Temperature Profile 1	Refer to Temperature Profile 2		

\*After reflow soldering rapid cooling should be avoided.

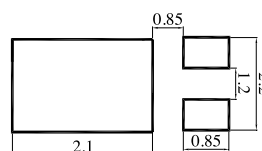
### Temperature-profile (surface of circuit board)

Use the conditions shown under figure.



### Recommended Soldering Pad Design

Use the conditions shown under figure.



### Part Number Table

LED Chip		Lens Colour	Part Number
Material	Emitting Colour		
InGa <sub>N</sub> / Al <sub>2</sub> O <sub>3</sub>	True Green	Water Clear	703-1038

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