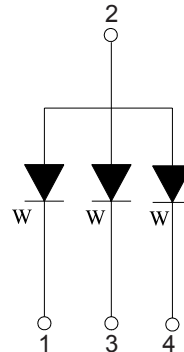
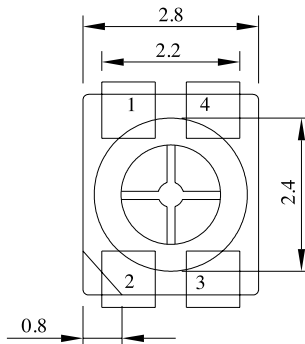
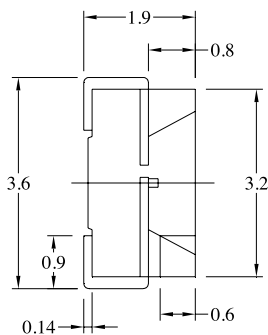


3mm × 2mm 0.2W SMD Type



Package Dimensions:



All dimensions are in mm
Tolerance: ±0.25mm

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Power Dissipation*	P _D	120	mW
Reverse Voltage*	V _R	5	V
D.C. Forward Current*	I _f	30	mA
Pulsed Forward Current (1 / 10 Duty Cycle, 0.1ms Pulse Width)*	I _f (Peak)	100	mA
Operating Temperature Range	T _{opr.}	-40 to +100	°C
Storage Temperature Range	T _{stg.}	-40 to +100	°C
Soldering Temperature	T _{slid.}	Reflow Soldering: 260°C for 10sec. Hand Soldering: 350°C for 3sec.	
Electric Static Discharge Threshold (HBM)*	ESD	6,000	V

* The values are based on 1 die performance.

Electrical & Optical Characteristics:

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity* ²		I _v	I _f = 20mA* ¹	3,159	5,500	-	mcd
Luminous Flux* ²		Φ _v	I _f = 20mA* ¹	-	11,300	-	mlm
Forward Voltage* ²		V _f	I _f = 20mA* ¹	-	3.2	4	V
Correlated Colour Temperature* ²	25	CCT	I _f = 20mA* ¹	2,500	-	2,600	K
	26			2,600	-	2,700	
	27			2,700	-	2,900	
Colour Rendering Index (Ra)* ²		CRI	I _f = 20mA* ¹	-	64	-	Ra
Reverse Current* ¹		I _r	V _r =5V* ¹	-	-	50	μA
Viewing Angle* ²		2θ ½	I _f = 20mA* ¹	-	120	-	deg

- Note: 1. The data is tested by an IS tester
 2. Customer's special requirements are also welcome.
 3. *¹ For each die
 4. *² When all LED dies are operated simultaneously



3mm × 2mm 0.2W SMD Type



Typical Electrical & Optical Characteristics Curves:

(25°C Ambient temperature unless otherwise noted)

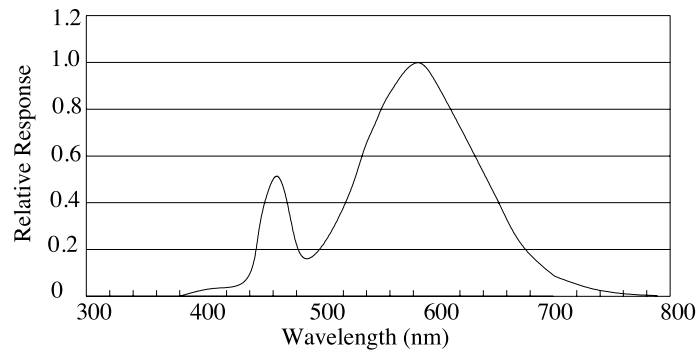
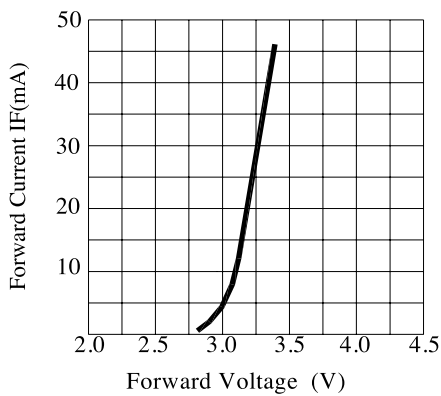
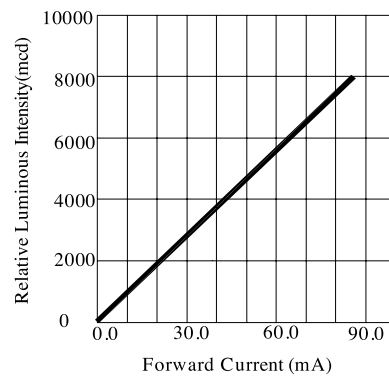


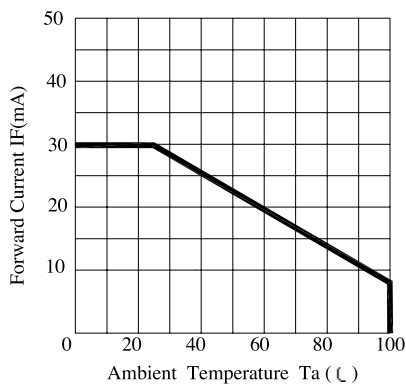
Fig.1 WHITE LED Spectrum VS. WAVELENGTH



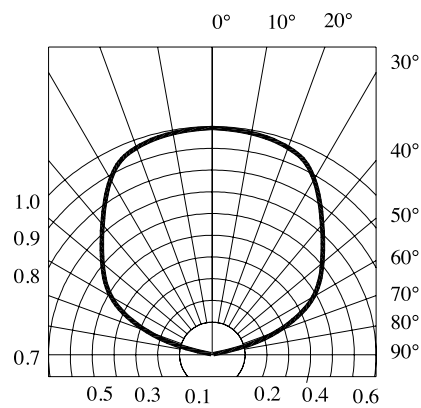
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Intensity



Ambient Temperature VS. Forward Current



Radiation Diagram



3mm × 2mm 0.2W SMD Type



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

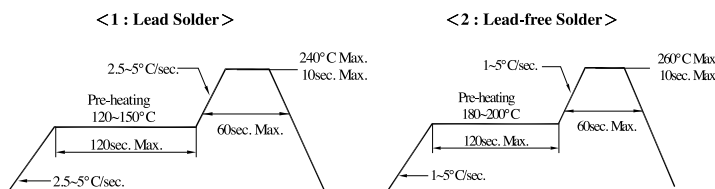
Soldering

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 1		

*After reflow soldering rapid cooling should be avoided.

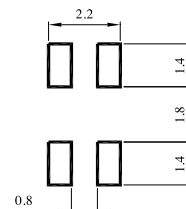
Temperature-profile (surface of circuit board)

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		
InGaN / Sapphire	Warm White	Water clear	703-1032

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