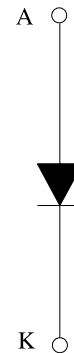
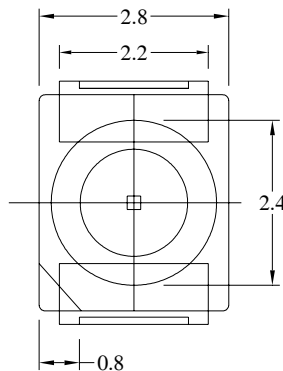
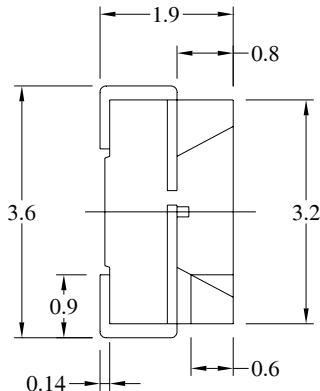


3.2mm × 2.8mm 0.06W SMD Type



Package Dimensions:



All dimensions are in mm
Tolerance: ± 0.25 mm

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

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	$^\circ\text{C}$
Storage Temperature Range	$T_{stg.}$	-40 to +100	$^\circ\text{C}$
Soldering Temperature	$T_{sld.}$	Reflow Soldering: 260°C for 10sec. Hand Soldering: 350°C for 3sec.	
Electric Static Discharge Threshold (HBM)	ESD	6,000	V

Electrical & Optical Characteristics: Hyper Red

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	I_v	$I_f = 20\text{mA}$	1,000	2,098	-	mcd
Luminous Flux	Φ_v	$I_f = 20\text{mA}$	-	5,100	-	mlm
Forward Voltage	V_f	$I_f = 20\text{mA}$	-	3.2	4	V
Correlated Colour Temperature	WA	$I_f = 20\text{mA}$	5,000	-	5,250	K
	WB		5,250	-	5,500	
	WC		5,500	-	5,750	
	WD		5,750	-	6,000	
Colour Rendering Index (Ra)	CRI	$I_f = 20\text{mA}$	-	64	-	Ra
Reverse Current	I_r	$V_r = 5\text{V}$	-	-	50	μA
Viewing Angle	$2\theta_{1/2}$	$I_f = 20\text{mA}$	-	120	-	deg

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

3.2mm × 2.8mm 0.06W SMD Type



Typical Electrical & Optical Characteristics Curves:

(25°C Ambient temperature unless otherwise noted)

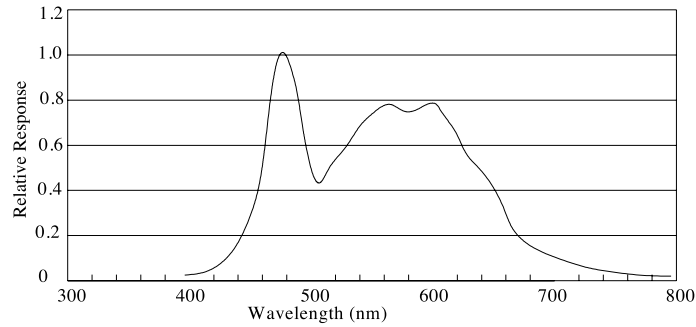
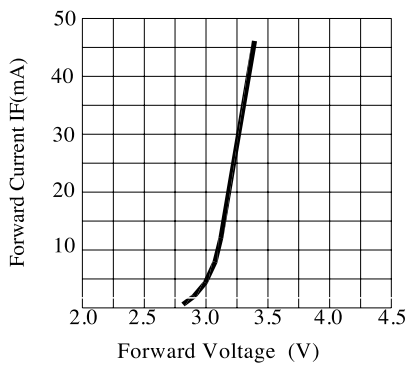
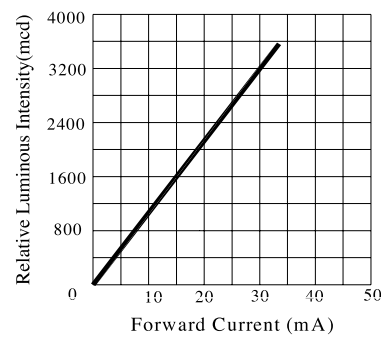


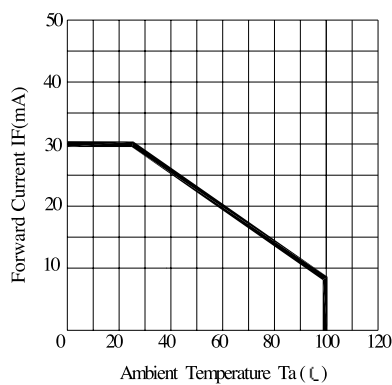
Fig.1 WHITE LED Spectrum VS. WAVELENGTH



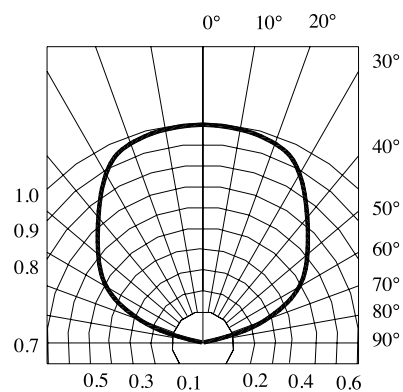
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Intensity



Ambient Temperature VS. Forward Current



Radiation Diagram

3.2mm × 2.8mm 0.06W 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

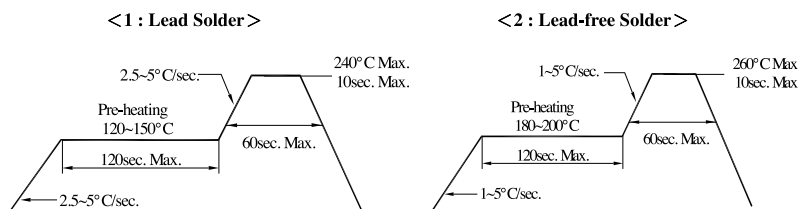
Soldering

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.

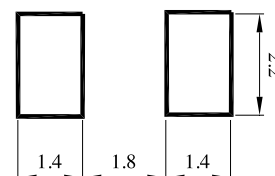
Temperature-profile (surface of circuit board)

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	White	Yellow diffused	703-1026

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