

# 3mm × 2mm SMD White LED **multicomp**PRO

**RoHS  
Compliant**

## Absolute Maximum Ratings at TA = 25°C

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	120	mW
Reverse Voltage	Vr	5	V
D.C. Forward Current	If	30	mA
Peak Current(1/10Duty Cycle, 0.1ms Pulse Width.)	If(Peak)	100	mA
Operating Temperature Range	Topr.	-40 to +100	°C
Storage Temperature Range	Tstg.	-40 to +100	°C
Soldering Temperature	Tsld.	Reflow Soldering: 260°C for 10 Sec. Hand Soldering: 350°C for 3 Sec.	
Electric Static Discharge Threshold (HBM)	ESD	6000	V

## Electrical and Optical Characteristics

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	Iv	If=20mA	700	1150	-	mcd
Luminous Flux	Φv	If=20mA	-	1750	-	mlm
Forward Voltage V	Vf	If=20mA	-	3.2	4	V
CIE Chromaticity Coordinates : X Axis	X	If=20mA	-	0.31	-	-
CIE Chromaticity Coordinates : Y Axis	Y	If=20mA	-	0.3	-	-
Reverse Current	Ir	Vr=5V	-	-	50	μA
Viewing Angle	2θ1/2	If=20mA	-	120	-	deg

## Typical Electrical/Optical Characteristic Curves

(25 Ambient Temperature Unless Otherwise Noted)

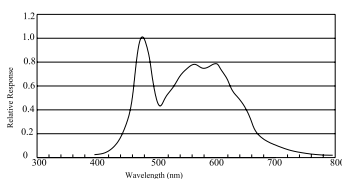
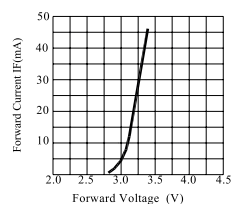
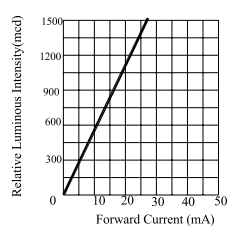


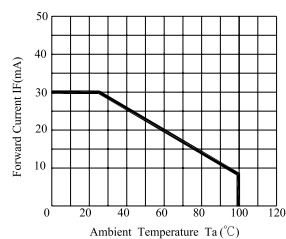
Fig.1 WHITE LED Spectrum VS. WAVE LENGTH



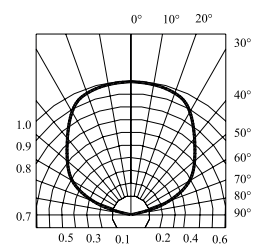
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Intensity



Ambient Temperature VS. Forward Current



Radiation Diagram

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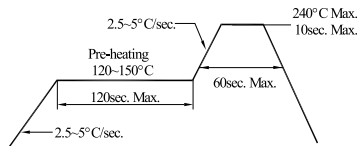
## Soldering

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

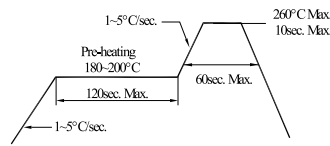
After reflow soldering rapid cooling should be avoid.

[Temperature-profile (Surface of circuit board)]  
Use the conditions shown to the under figure.

<1 : Lead Solder>

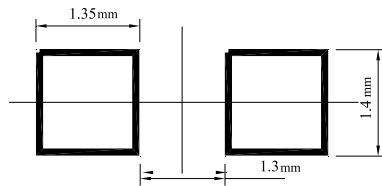


<2 : Lead-free Solder>



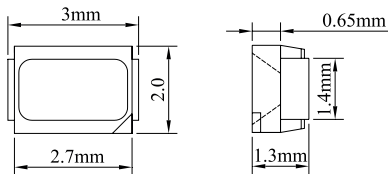
[ Recommended soldering pad design ]

Use the following conditions shown in the figure.



Material of LED Chip	Colour Coordinates of LED Chip	Lens Colour
InGaN/Sapphire	X=0.31 Y=0.3	Water Clear

## Dimensions



A ◯ ◀ ▶ ◯ K

Tolerance is ±0.25mm unless otherwise noted.

## Part Number Table

Description	Part Number
LED, 3.0 x 2.0 x 1.3mm, SMD, White	703-1050

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