



## SMC405



### TECHNICAL DATA

**Violet LED, SMD**

**InGaN**

SMC405 are InGaN LEDs mounted on a ceramic SMD package and sealed with silicone resin for damp proof. On forward bias, it emits a radiation of typical 4 mW at a peak wavelength of 405 nm.

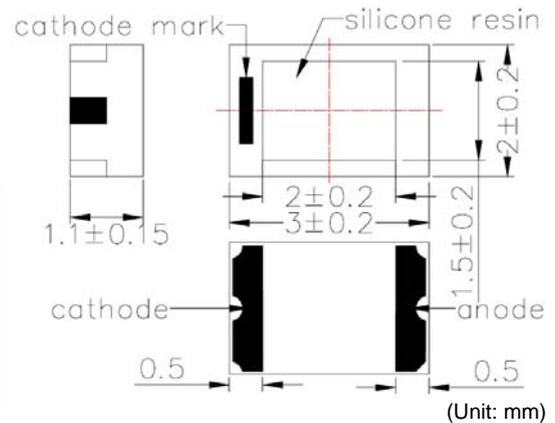
#### Specifications

- Structure: InGaN
- Peak Wavelength: typ. 405 nm
- Optical Output Power: typ. 4 mW
- Package: Ceramic SMD, silicon resin

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

Item	Symbol	Value	Unit
Power Dissipation	$P_D$	120	mW
Forward Current	$I_F$	30	mA
Reverse Voltage	$V_R$	5	V
Operating Temperature	$T_{opr}$	-20 ... +80	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-30 ... +80	$^\circ\text{C}$
Soldering Temperature *	$T_{sol}$	240	$^\circ\text{C}$

\* must be completed within 5 seconds



#### Electro-Optical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F = 20 \text{ mA}$	-	3.8	4.8	V
Reverse Current	$I_R$	$V_R = 5 \text{ V}$	-	-	10	$\mu\text{A}$
Total Radiated Power	$P_O$	$I_F = 20 \text{ mA}$	-	4	-	mW
Brightness	$I_V$	$I_F = 20 \text{ mA}$	-	-	-	mcd
Peak Wavelength	$\lambda_P$	$I_F = 20 \text{ mA}$	395	405	415	nm
Half Width	$\Delta\lambda$	$I_F = 20 \text{ mA}$	-	15	-	nm
Viewing Half Angle	$\Theta_{1/2}$	$I_F = 20 \text{ mA}$	-	$\pm 55$	-	deg.

Brightness is measured by Tektronix J-16

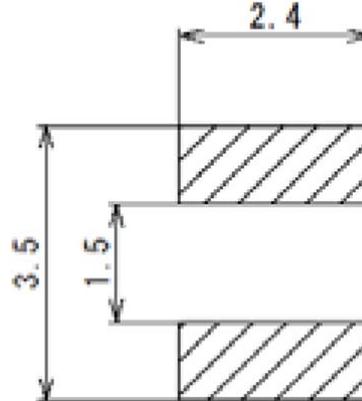
Total Radiated Power is measured by Ando Optical Multi Meter AQ2140 & AQ2741

#### Notes

- Do not view directly into the emitting area of the LED during operation!
- The above specifications are for reference purpose only and subjected to change without prior notice.



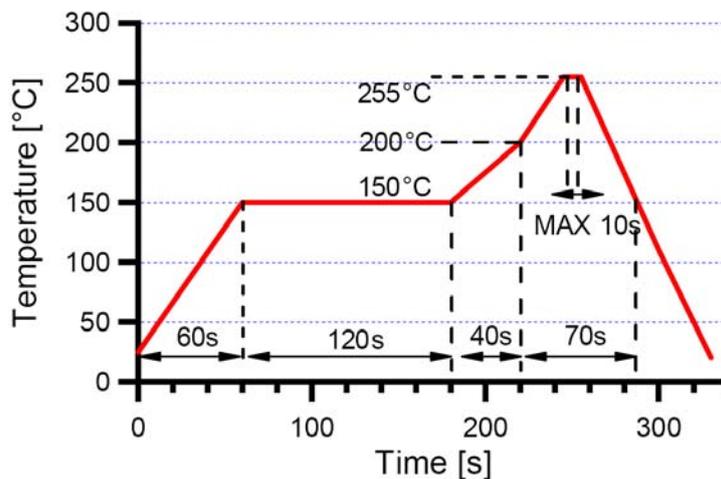
## Recommended Land Layout (Unit: mm)



### 1. Soldering Conditions

- DO NOT apply any stress to the lead particularly when heat.
- After soldering the LEDs should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.

### Soldering Conditions



### 2. Static Electricity

- The LEDs are very sensitive to Static Electricity and surge voltage. So it is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.
- All devices, equipment and machinery must be grounded properly. It is recommended that precautions should be taken against surge voltage to the equipment that mounts the LEDs.

