

# SMT470

High Performance Blue color TOP LED

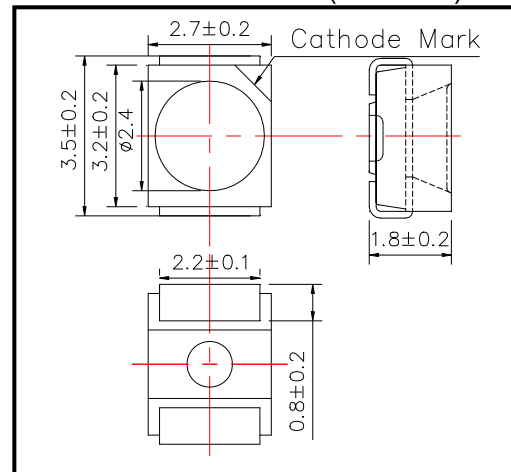
SMT470 consists of an InGaN LED mounted on the lead frame as TOP LED package and is 400mcd typical of Brightness.

It emits a spectral band of radiation at 465nm.

### ◆ Specifications

1) Product Name	TOP LED
2) Type No.	SMT470
3) Chip	
(1) Chip Material	InGaN
(2) Peak Wavelength	465nm typ.
4) Package	
(1) Lead Frame Die	Silver Plated
(2) Package Resin	PPA Resin
(3) Lens	Epoxy Resin

### ◆ Outer dimension (Unit: mm)



### ◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	$P_D$	180	mW	$T_a=25^\circ\text{C}$
Forward Current	$I_F$	50	mA	$T_a=25^\circ\text{C}$
Reverse Voltage	$V_R$	5	V	$T_a=25^\circ\text{C}$
Thermal Resistance	$R_{thja}$	250	K/W	
Junction Temperature	$T_j$	100	$^\circ\text{C}$	
Operating Temperature	$T_{OPR}$	-20 ~ +80	$^\circ\text{C}$	
Storage Temperature	$T_{STG}$	-30 ~ +80	$^\circ\text{C}$	
Soldering Temperature	$T_{SOL}$	250	$^\circ\text{C}$	

‡Soldering condition: Soldering condition must be completed within 5 seconds at  $250^\circ\text{C}$

### ◆ Electro-Optical Characteristics [ $T_a=25^\circ\text{C}$ ]

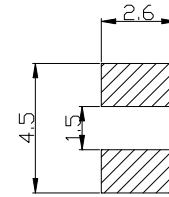
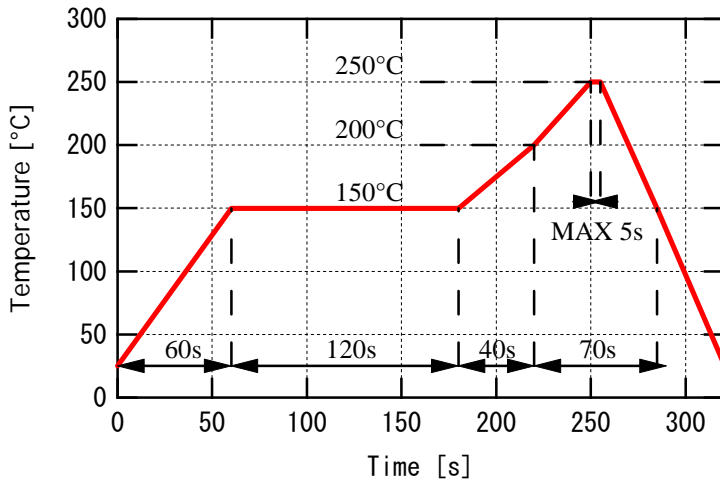
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	$V_F$	$I_F=20\text{mA}$		3.3	4.0	V
Reverse Current	$I_R$	$V_R=5\text{V}$			10	$\mu\text{A}$
Total Radiated Power	$P_O$	$I_F=20\text{mA}$		12		mW
Brightness	$I_V$	$I_F=20\text{mA}$	200	400		mcd
Wavelength	Peak	$I_F=20\text{mA}$	455	465	475	nm
	Dominant			470		
Half Width	$\Delta\lambda$	$I_F=20\text{mA}$		28		nm
Viewing Half Angle	$\theta_{1/2}$	$I_F=20\text{mA}$		$\pm 64$		deg.

‡Total Radiated Power is measured by S3584-08

‡Brightness is measured by Tektronix J-16.

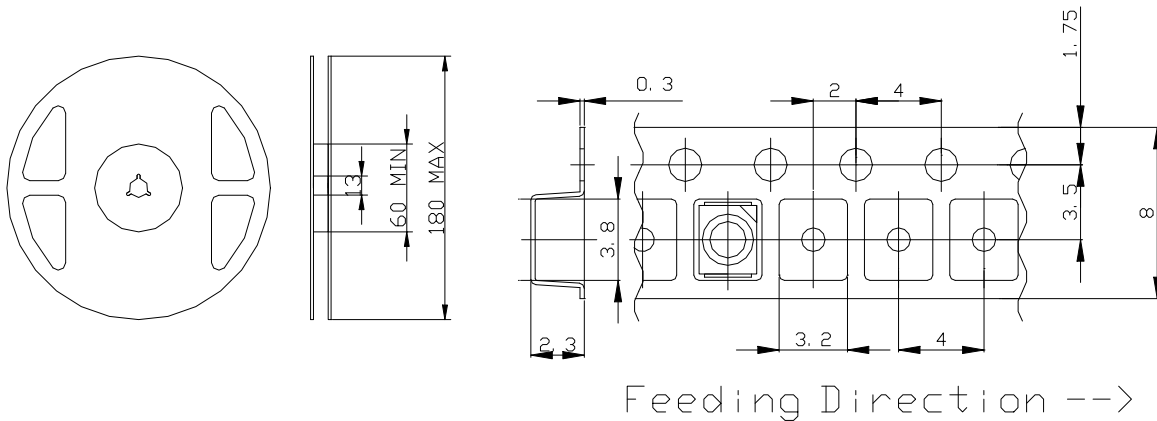
◆ SMD Application  
IR-Reflow Soldering Profile for lead free soldering

Recommended Land Layout (Unit: mm)



Don't put stress on SMD and a circuit board after soldering.

◆ SMD Packing  
Tape and Reel Dimensions (Unit: mm)



◆ Wrapping  
Moisture barrier bag aluminum laminated film with a desiccant to keep out the moisture absorption during the transportation and storage.