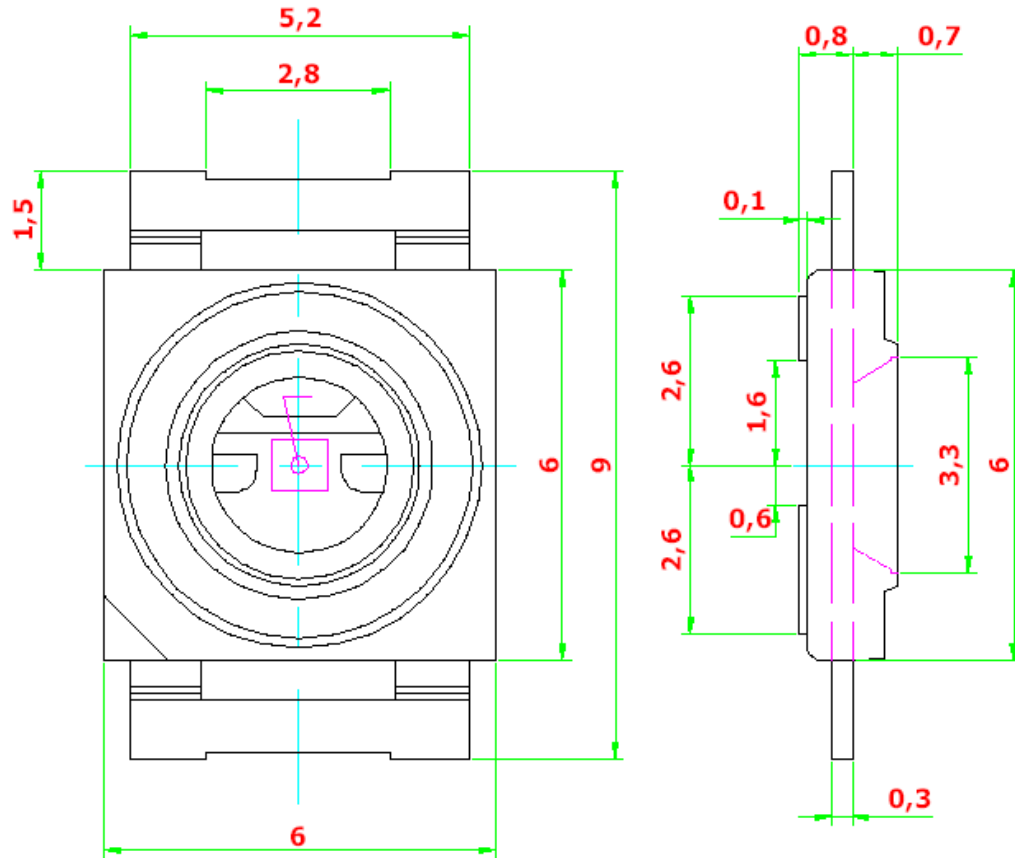


Super Nova LED 175



- Super high brightness surface mount LED.
- High flux output.
- 120° viewing angle.
- Compact package outline (LxW) of 6.0 x 6.0 mm. Ultra low height profile – 1.5 mm.
- Designed for high current drive; typically 175 mA.
- Low thermal resistance; $R_{th(j-s)} = 20 \text{ K/W}$.
- Compatible to IR reflow soldering.

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current.	175	mA
Reverse voltage.	15	V
ESD Threshold (HBM)	2000	V
LED junction temperature.	125	°C
Operating temperature.	-40 ... +100	°C
Storage temperature.	-40 ... +100	°C
Power dissipation	525	mW

Optical Characteristics at Ta=25°C, If=175mA, Rja=100K/W.

Part Number	Color	λ_{dom} (nm)	Total Flux @ If=175mA		Intensity @ If=175mA	Viewing Angle
			Min (mIm)	Typ. (mIm)	Typ.(mcd)	
NPR-SES-WX2	Red	625	3500	5000	1800	120
NPY-SES-XY2	Yellow	589	3500	5500	2000	

IV Bins	Intensity @ If=175mA (mcd)	
	Min	Max
W1	1124	1400
W2	1400	1800
X1	1800	2240
X2	2240	2850
Y1	2850	3550
Y2	3550	4500

- Luminous intensity is measured with an accuracy of $\pm 11\%$.
- Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each reel.

Wavelength Grouping.

Color	Group	Wavelength distribution (nm)
NPR; Red	Full	620 - 630
NPY; Yellow	Full	585 - 597
	W	585 - 588
	X	588 - 591
	Y	591 - 594
	Z	594 - 597

Dominant wavelength is measured with an accuracy of ± 1 nm.

Electrical Characteristics at Ta=25°C.

		Vf @ If=175mA		Vr @ Ir=100uA
Part Number	Color	Typ. (V)	Max. (V)	Min.(V)
NPR	Red	2.2	2.8	15
NPY	Yellow	2.2	2.8	15

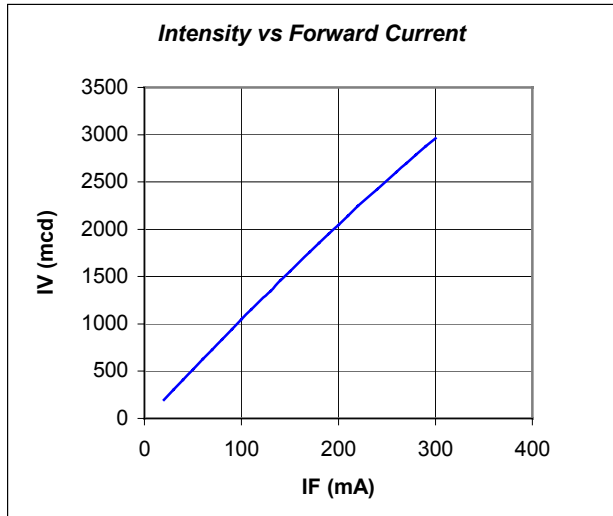
1. An optional Vf binning is also available upon request. Binning scheme is as per following table.

Vf Binning (Optional).

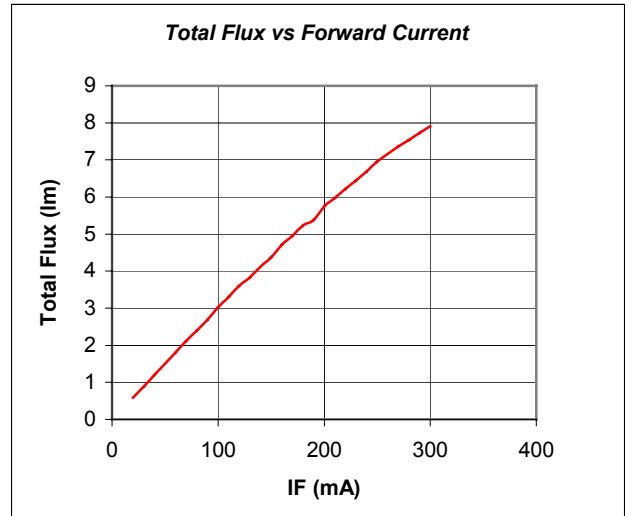
Vf Bin @ 175mA	Forward voltage (V)
Standard	1.9 ... 2.8
01	1.9 ... 2.2
02	2.2 ... 2.5
03	2.5 ... 2.8

Forward voltage, Vf is measured with an accuracy of ± 0.1 V.

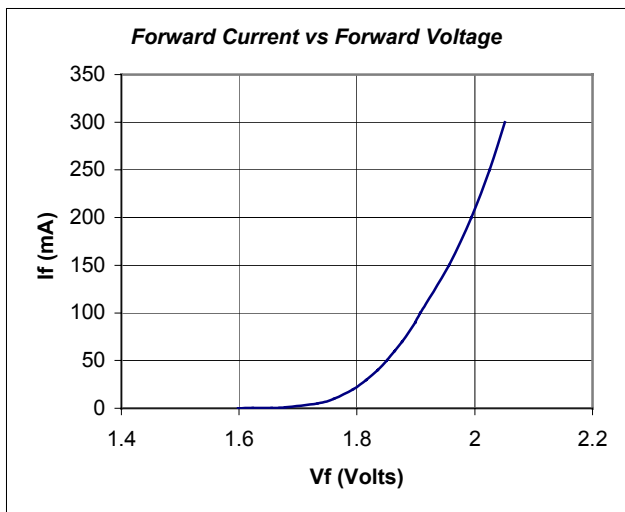
Intensity vs. Forward Current



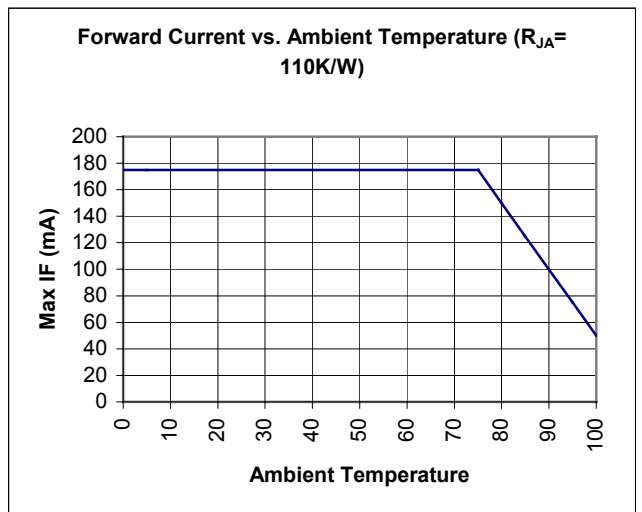
Flux vs. Forward Current



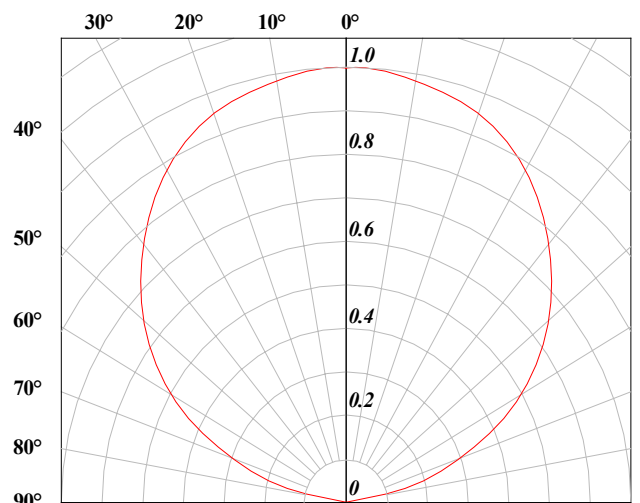
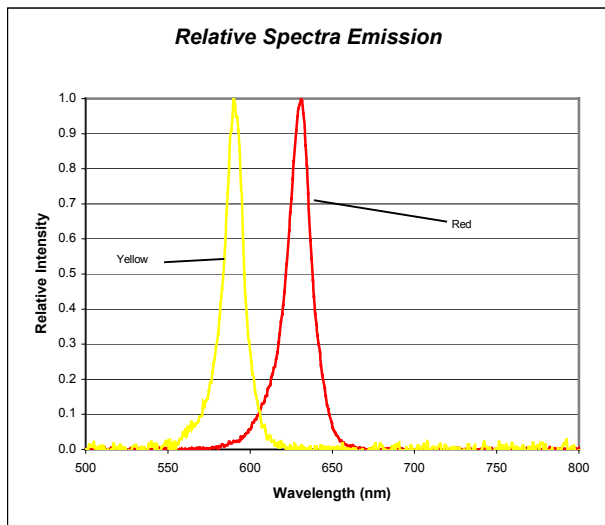
Forward Current vs Forward Voltage



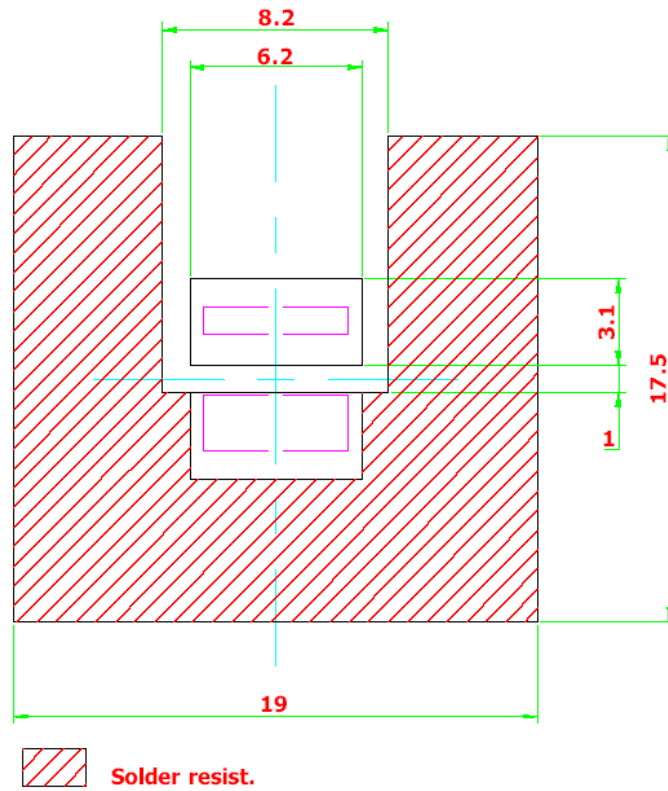
Max Forward Current vs. Ambient Temperature.



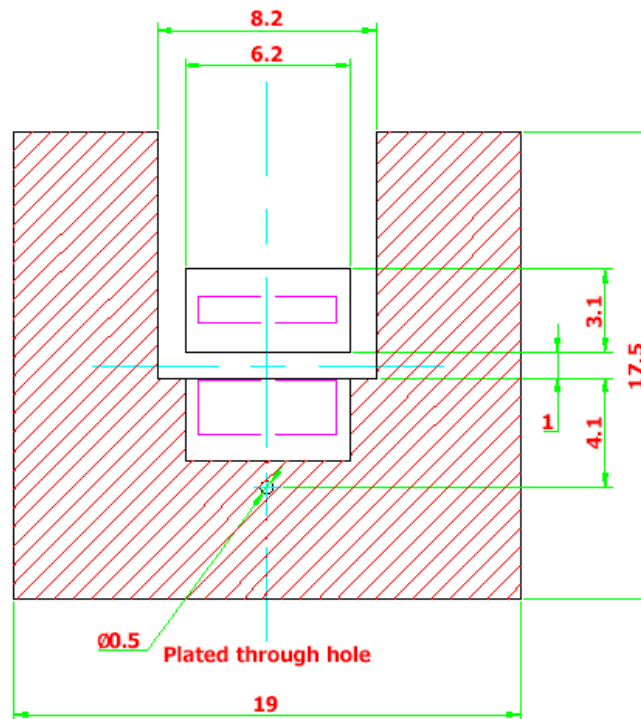
Radiation Pattern.



Solder Pad Design.



Recommended Solder Pad Design For Better Heat Dissipation.

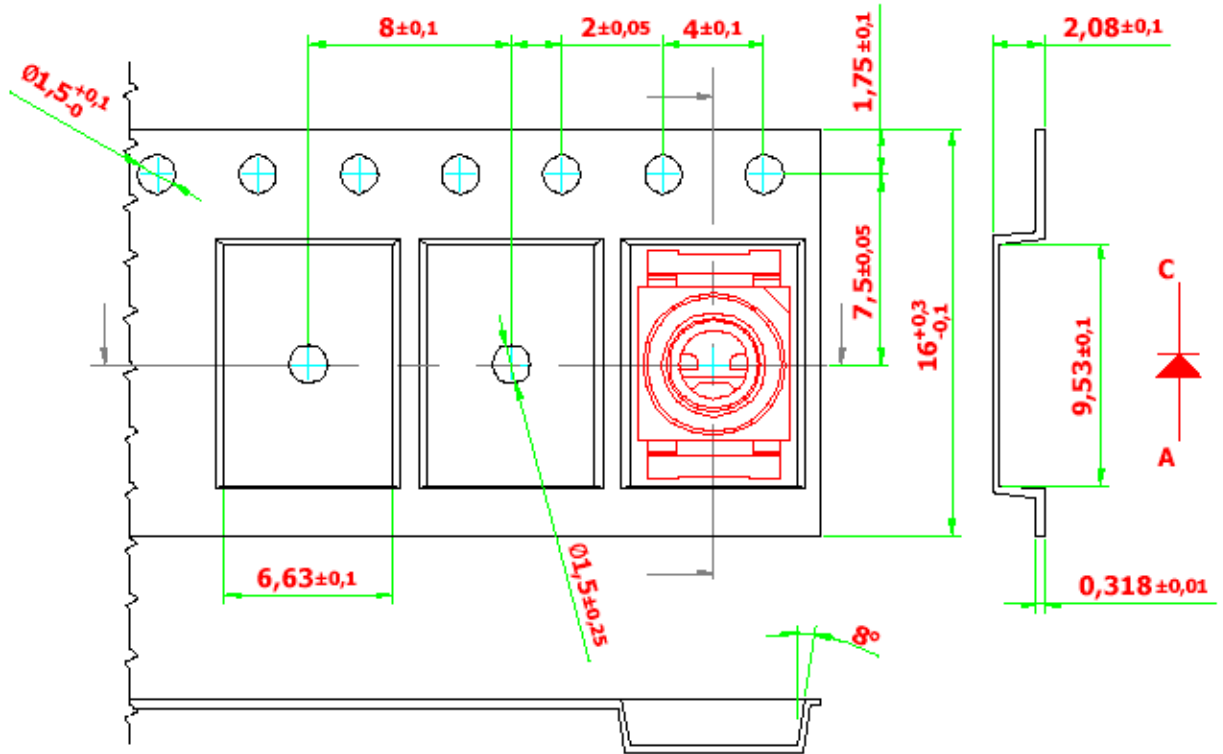


NOTE.
Double-sided, full Cu plate 19x17.5 mm on reverse side.

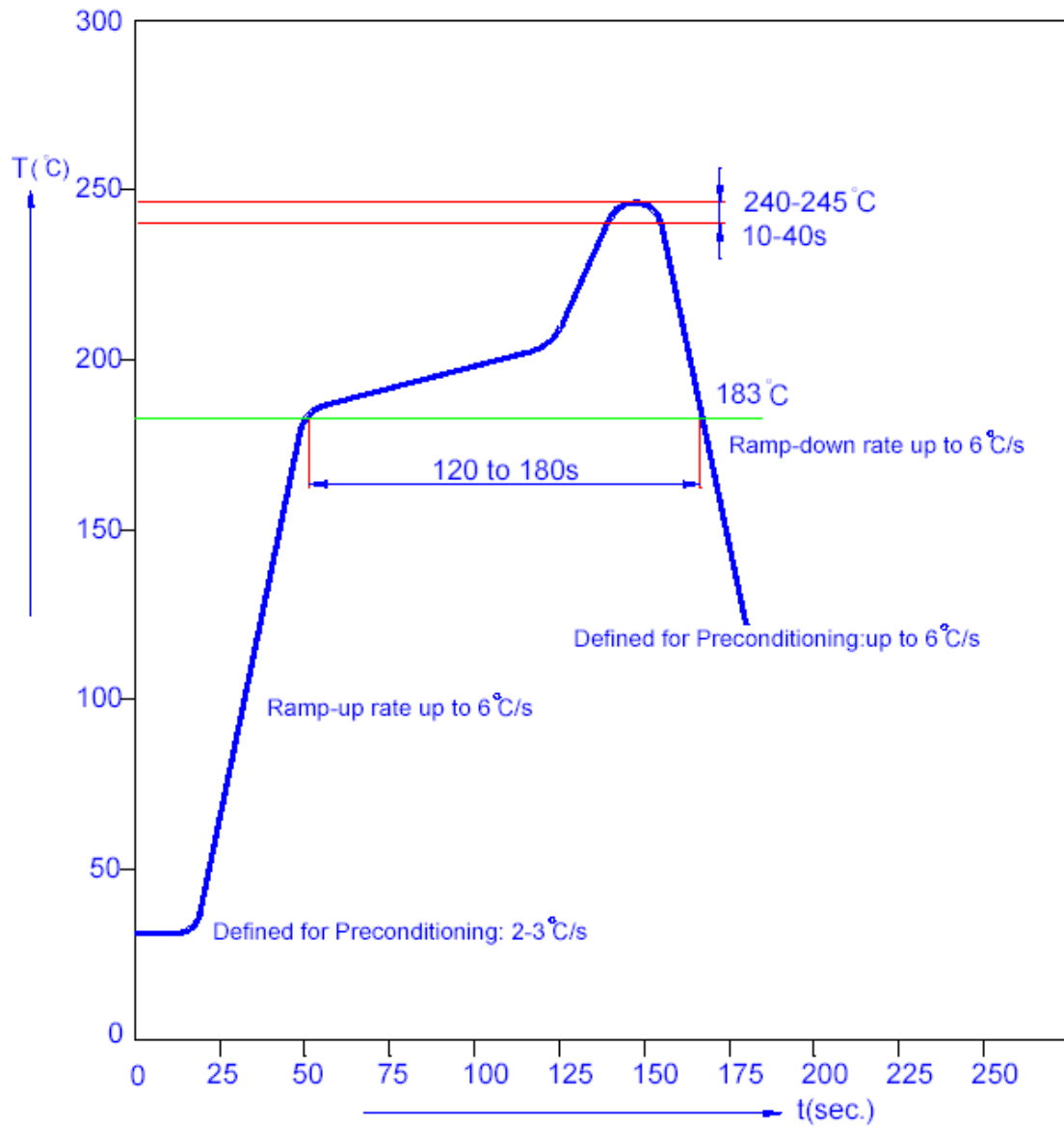
Taping And Orientation.

Reels come in quantity of 1000 units.

Reel diameters are 330 mm.



Recommended IR-Reflow Soldering Profile (acc. To IPC 9501).



NOTE.

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