

### **Lamp Type LED - 5mm Oval**

Synonymous with function and performance, the 5mm Oval LED has superior performance in outdoor applications due to its well-defined radiation pattern and wide viewing angle. These lamps are made with an advanced optical grade epoxy, offering superior high temperature and high moisture resistance performance in outdoor signal and sign applications

### **Features:**

- > High brightness LED lamp.
- > 100° x 40° viewing angle
- > Superior resistance to moisture.
- > Suitable for TTW soldering.

### **Applications:**

- > Full color signs
- > Outdoor displays/signs



**Optical Characteristics at Tj=25°C**

Part Ordering Number	Color	Viewing Angle°	Luminous Intensity @ IF = 20mA IV (mcd)		
			Min.	Typ.	Max.
L6B-HA4C0-UV2-1	Blue, 470nm	100/40	450.0	600.0	1125.0
L6T-HA4C0-YZ2-1	True Green, 530nm	100/40	2850.0	3500.0	7150.0

NOTE

1. Luminous intensity is measured with an accuracy of ± 15%.
2. Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each pack.

**Electrical Characteristics at Tj=25°C**

Part Number	Vf @ If = 20mA			Vr @ Ir = 10uA
	Min. (V)	Typ. (V)	Max. (V)	Min. (V)
L6x-HA4xx	2.8	3.2	3.8	5

Forward voltages are measure using a current pulse of 1 ms and with an accuracy of ± 0.1V.

**Absolute Maximum Ratings**

	Maximum Value	Unit
DC forward current	25	mA
Peak pulse current; (tp ≤ 100µs, Duty cycle = 0.10)	100	mA
Reverse voltage ; Ir (max) = 10µA.	5	V
ESD threshold (HBM)	2000	V
LED junction temperature	120	°C
Operating temperature	-40 ... +100	°C
Storage temperature	-40 ... +100	°C
Power dissipation (at room temperature)	95	mW

### Wavelength Grouping at Tj=25°C

Color	Group	Wavelength distribution (nm)
L6B; Blue	Full	465 - 475
	A	465 - 470
	B	470 - 475
L6T; True Green	Full	520 - 535
	A	520 - 525
	B	525 - 530
	C	530 - 535

Dominant wavelength is measured with an accuracy of  $\pm 1$  nm.

### Luminous Intensity Group at Tj=25°C

Brightness Group	Luminous Intensity @ IV (mcd)
U1	450.0...560.0
U2	560.0...715.0
V1	715.0...900.0
V2	900.0...1125.0
Y1	2850.0...3550.0
Y2	3550.0...4500.0
Z1	4500.0...5600.0
Z2	5600.0...7150.0

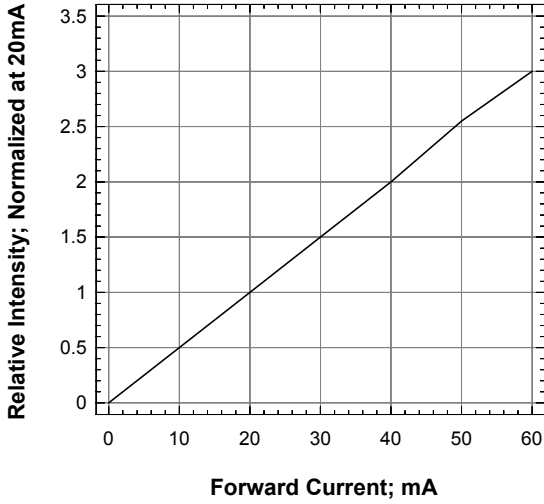
Luminous intensity is measured with an accuracy of  $\pm 15\%$ .

### Vf Binning (Optional)

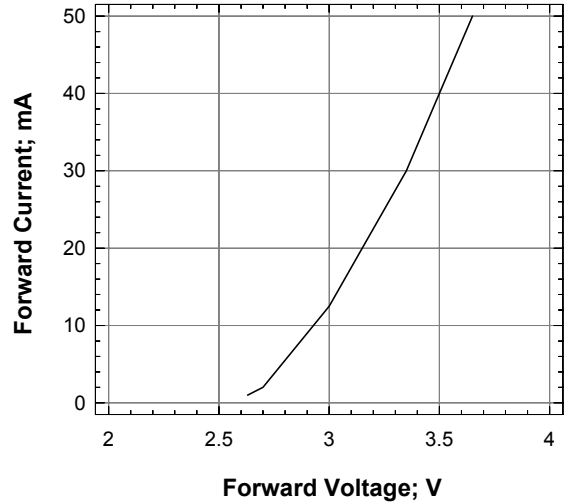
Vf Bin @ 20mA	Forward Voltage (V)
V7	2.80 ... 3.00
V8	3.00 ... 3.20
V9	3.20 ... 3.40
V10	3.40 ... 3.60
V11	3.60 ... 3.80

Forward voltage, Vf is measured with an accuracy of  $\pm 0.1$  V. Parts with the Vf binning option will be defined as L6x-HA4xx-xxxx-x-Vx. Please consult sales and marketing for special part number to incorporate Vf binning.

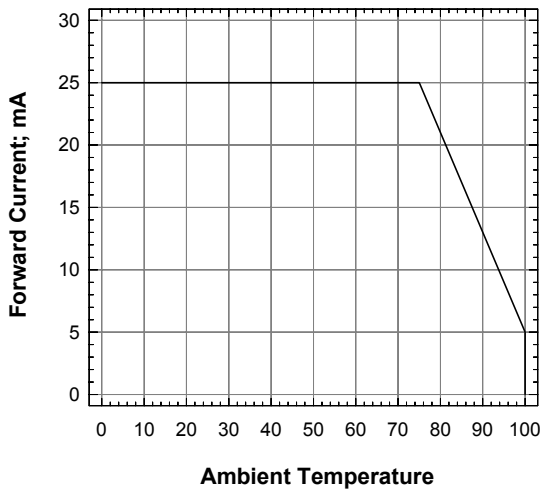
**Relative Intensity vs Forward Current**



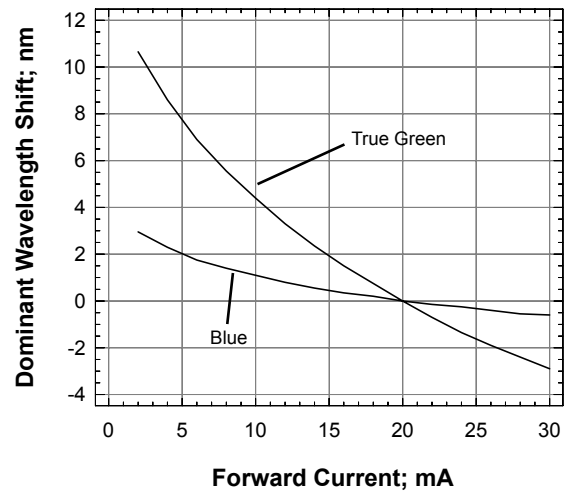
**Forward Current Vs Forward Voltage**



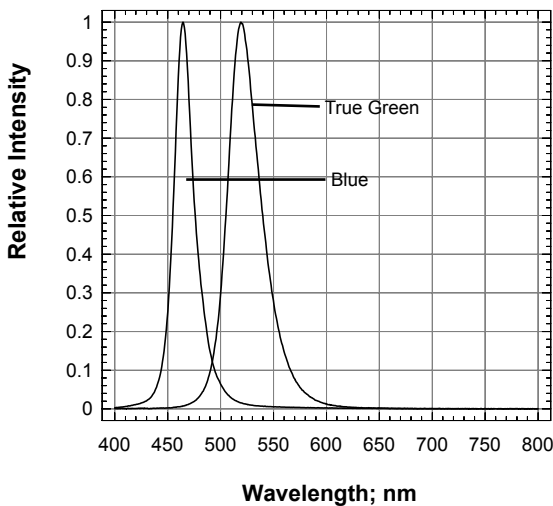
**Maximum Current Vs Ambient Temperature**



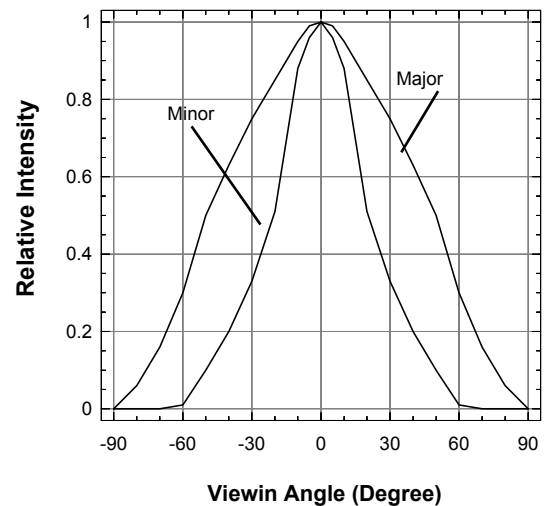
**Wavelength Shift vs Forward Current**



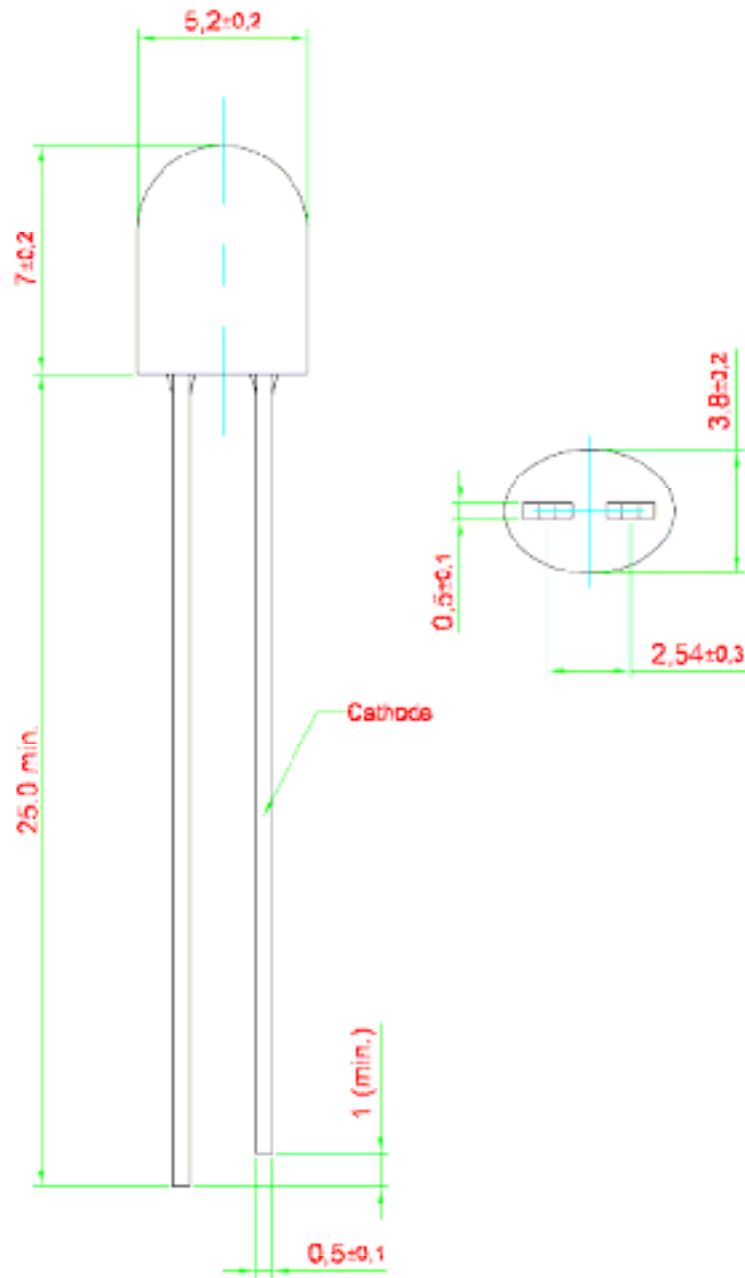
**Relative Intensity Vs Wavelength**



**Radiation Pattern**

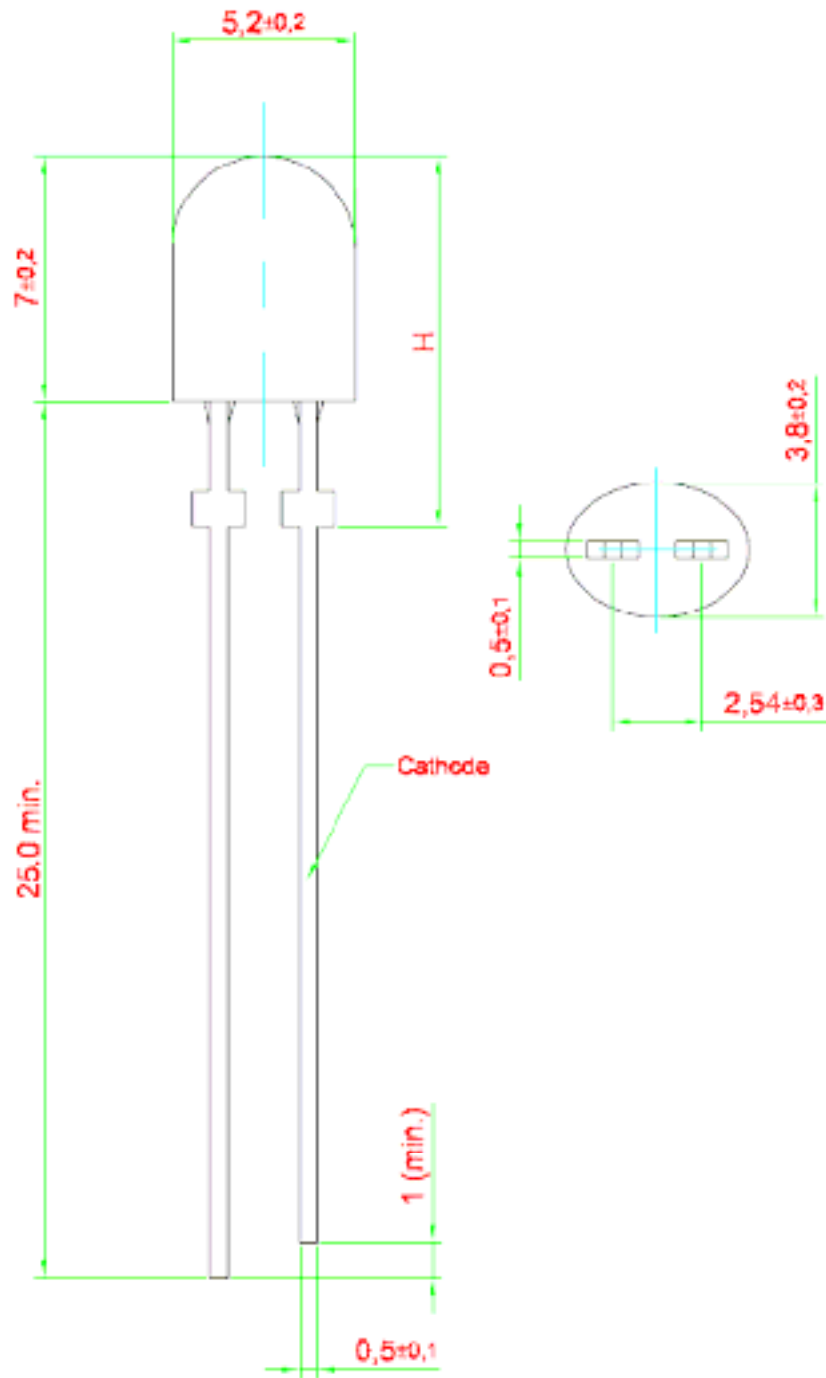


**5mm Oval Lamp • InGaN: Package Outlines**



Epoxy meniscus may extend 1.5mm max. down the LED

**5mm Oval Lamp • InGaN : Package Outlines**

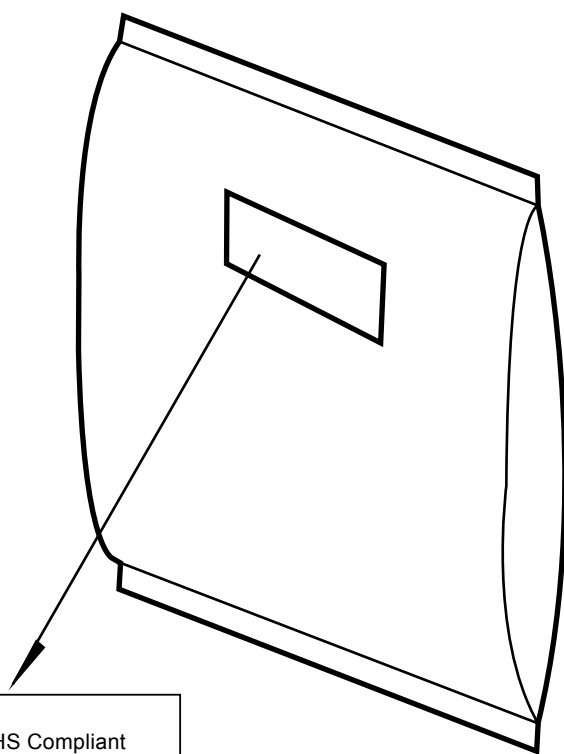


Parts with the stand-off option will be defined as L6x-HA4CS-xxxx-1  
Option with stand-off -  $H = 10.8\text{mm} \pm 0.5\text{mm}$




**Packaging Specification**

**1. Loose pack of 500pcs/pack: Lxx-xxxxx-xxxx-x-x-0**

	Average 1pc 5mm Lamp	1 completed pack (500pcs)
Weight (gram)	0.29	155 ± 10

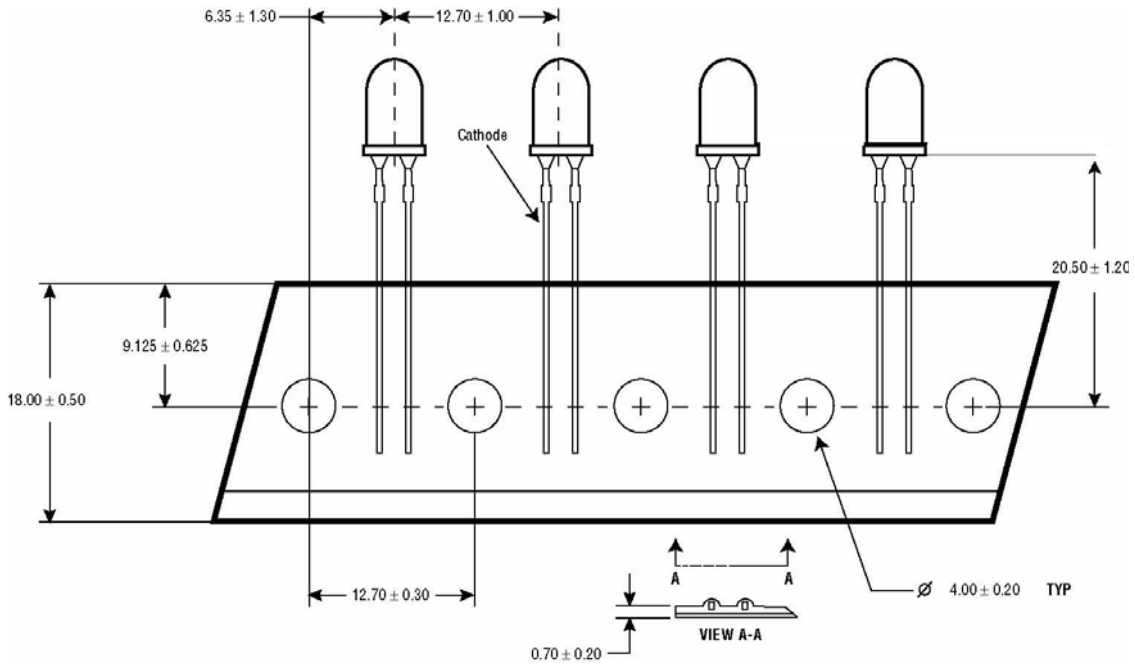


Barcode label

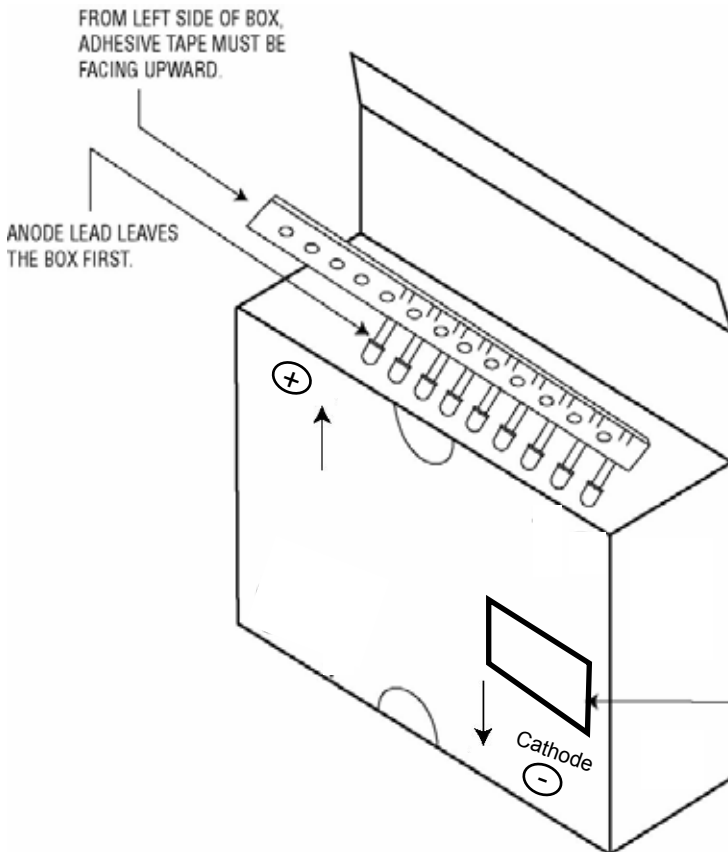
<b>DOMINANT</b>	ROHS Compliant
LOT NO : lotno	
	
PART NO : partno	PB Free
QTY : product quantity per reel	S/N : serial no
GROUP : group	D/C: date code
	
	

**Packaging Specification**

**2. Ammopack: Lxx-xxxxx-xxxx-x-x-A**



Average 1pc 5mm Lamp (g)	Box Dimensions (mm)	Empty Box Weight (kg)	Quantity / Box (pcs)	1 Completed Box With Units (kg)
0.29	335 x 235 x 48	0.14	2,000	0.95 ± 10



Barcode label

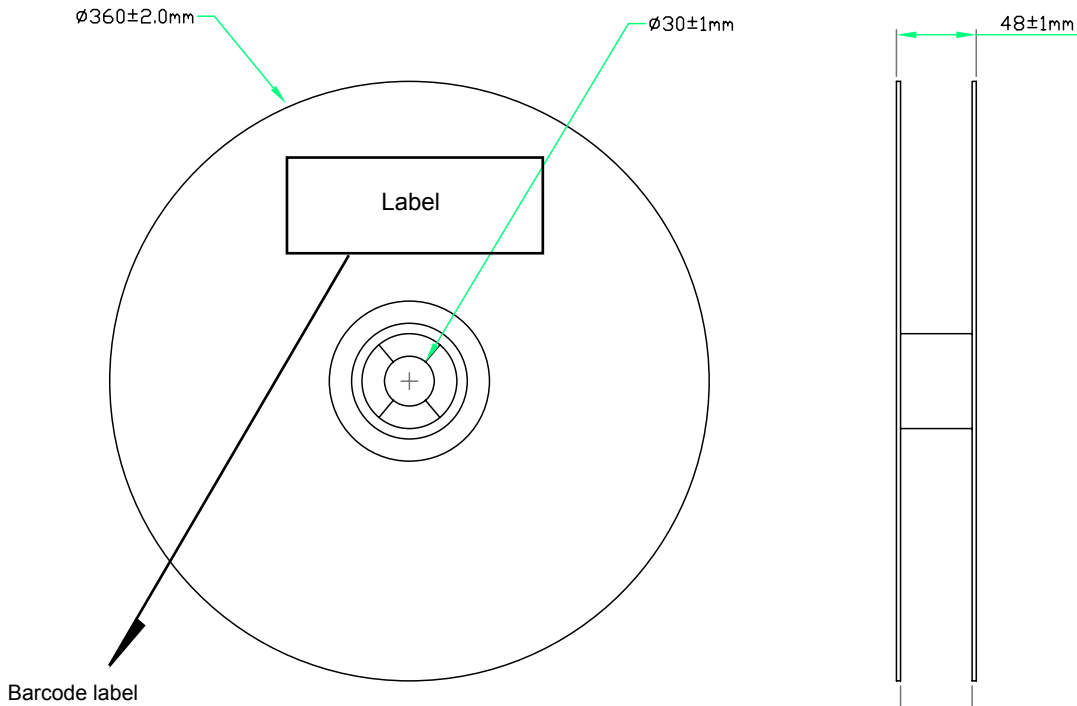
<b>DOMINANT</b>		ROHS Compliant
LOT NO : lotno		
PART NO : partno	PB Free	
QTY : product quantity per reel	S/N : serial no	D/C: date code
GROUP : group		

LABEL ON THIS SIDE OF BOX



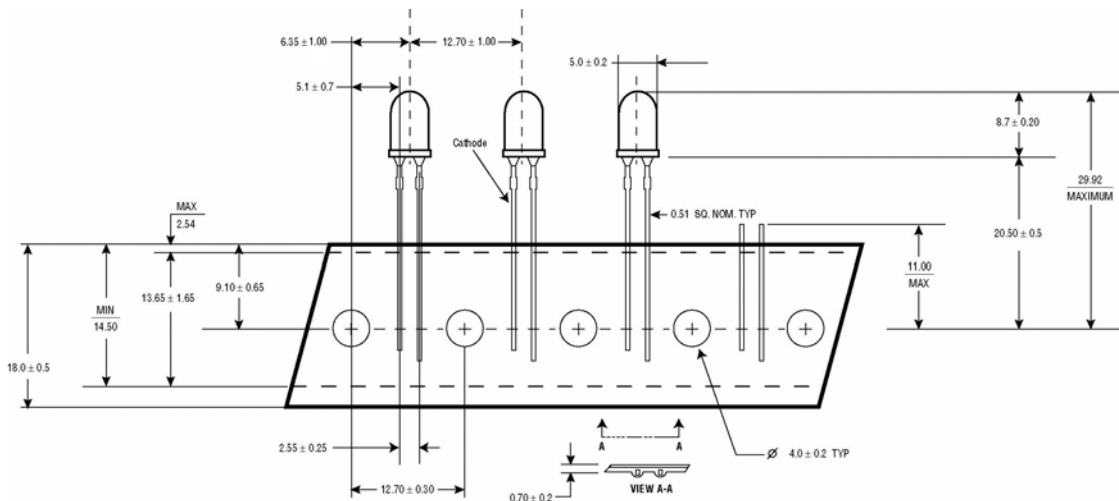
**Packaging Specification**

**3. Reel: Lxx-xxxxx-xxxx-x-x-T**

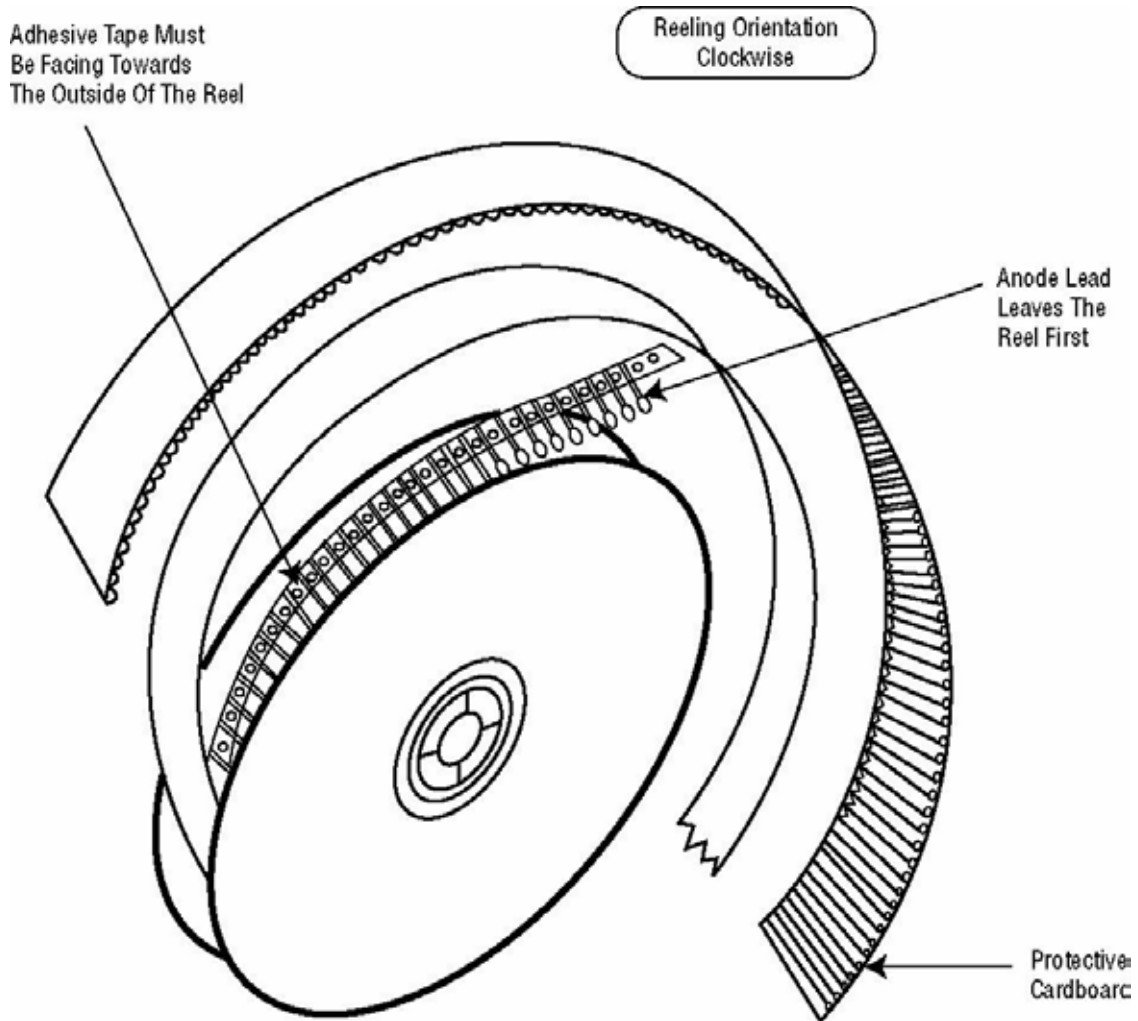


<b>DOMINANT</b>		ROHS Compliant
LOT NO : lotno		
PART NO : partno		PB Free
QTY : product quantity per reel	S/N : serial no	D/C: date code
GROUP : group		

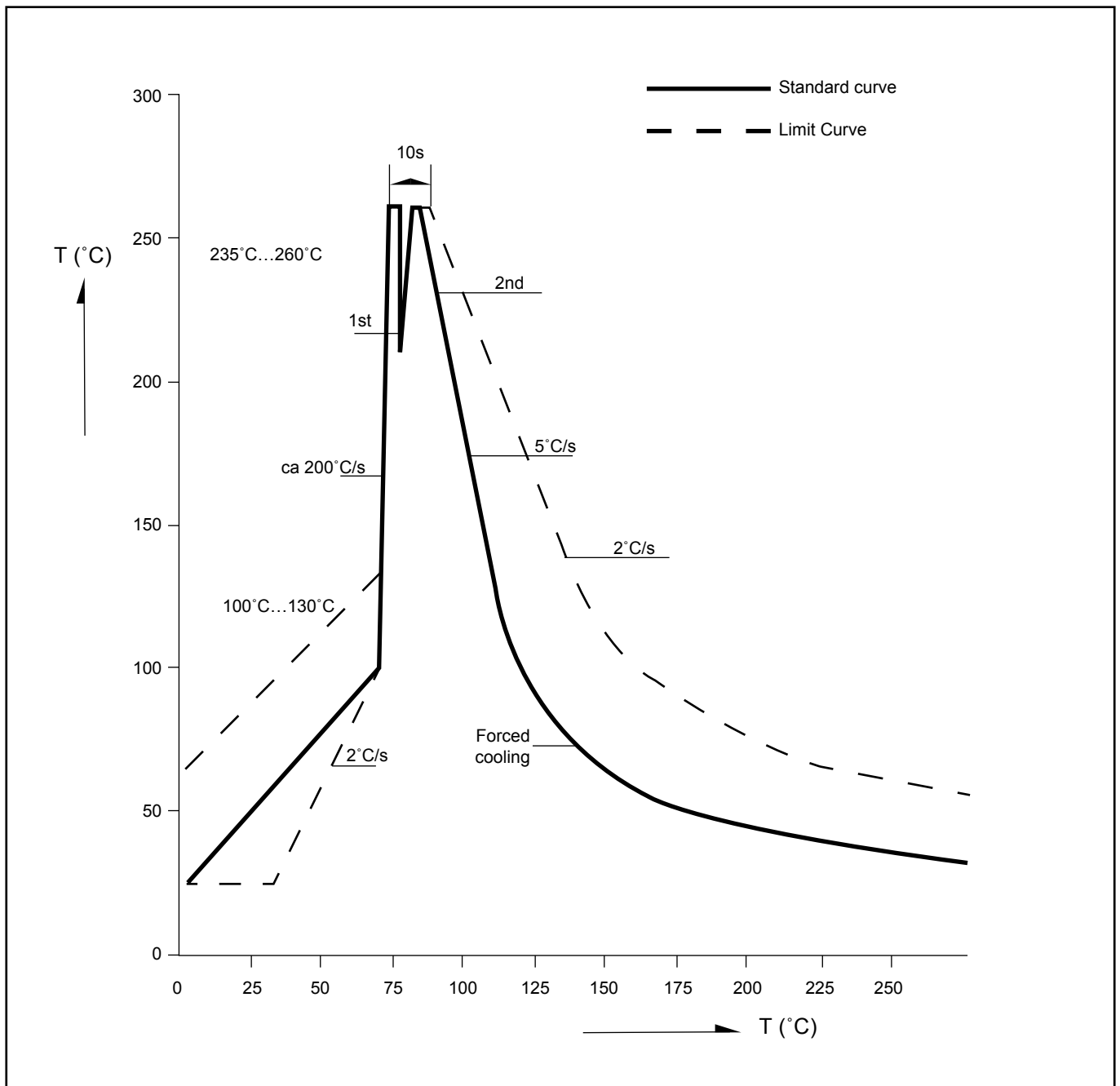
Average 1pc 5mm Lamp (g)	Empty Reel Weight (kg)	Quantity / Reel (pcs)	1 Completed Reel (kg)
0.29	0.39	1,300	0.95 ± 10



**Packaging Specification**



**Recommended TTW Soldering Profile (acc. to CECC 00802)**





## About Us

DOMINANT Opto Technologies is a dynamic Malaysian Corporation that is among the world's leading SMT LED Manufacturers. An excellence – driven organization, it offers a comprehensive product range for diverse industries and applications. Featuring an internationally certified quality assurance acclaim, DOMINANT's extra bright LEDs are perfectly suited for various lighting applications in the automotive, consumer and communications as well as industrial sectors. With extensive industry experience and relentless pursuit of innovation, DOMINANT's state-of-art manufacturing, research and testing capabilities have become a trusted and reliable brand across the globe. More information about DOMINANT Opto Technologies can be found on the Internet at <http://www.dominant-semi.com>.

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