

### **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.
L6R-PA4C0-XY1-1	Red; 625nm	100/40	1800.0	2675.0	3550.0
L6Y-PA4C0-X2Y-1	Yellow; 590nm	100/40	2240.0	3370.0	4500.0

NOTE

- Luminous intensity is measured with an accuracy of ± 15%.
- 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-PA4Cx	1.8	2.2	2.6	12

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	50	mA
Peak pulse current; (tp ≤ 10µs, Duty cycle = 0.10)	200	mA
Reverse voltage ; Ir (max) = 10µA.	12	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)	130	mW

**Wavelength Grouping at Tj=25°C**

Color	Group	Wavelength distribution (nm)
L6R; Red	Full	620 - 630
L6Y; Yellow	Full	582 - 594
	W	582 - 585
	X	585 - 588
	Y	588 - 591
	Z	591 - 594

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

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

Brightness Group	Luminous Intensity IV (mcd)
X1	1800.0...2240.0
X2	2240.0...2850.0
Y1	2850.0...3550.0
Y2	3550.0...4500.0

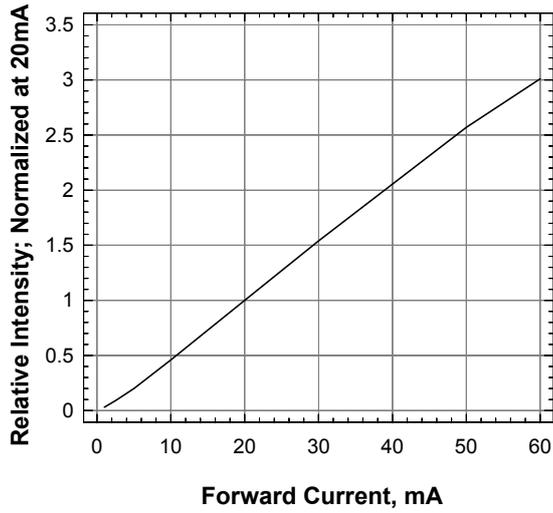
Luminous intensity is measured with an accuracy of ± 15%.

**Vf Binning (Optional)**

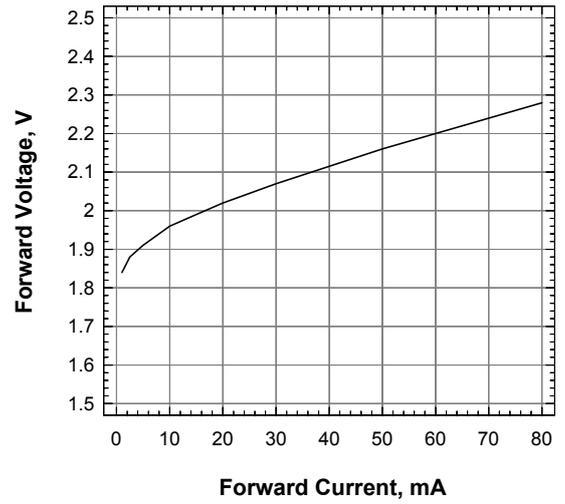
Vf Bin @ 20mA	Forward Voltage (V)
V2	1.80 ... 2.00
V3	2.00 ... 2.20
V4	2.20 ... 2.40
V5	2.40 ... 2.60

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

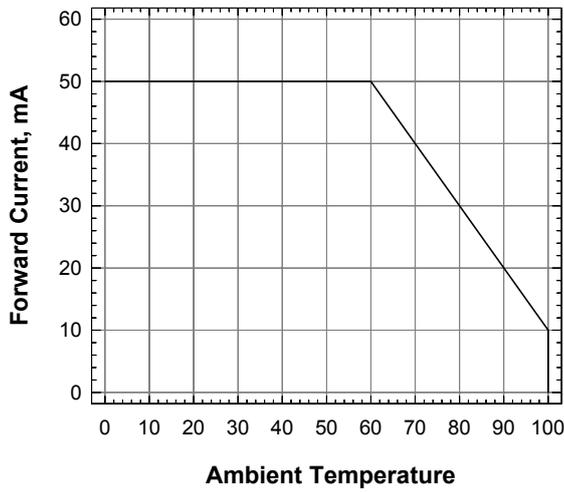
**Relative Luminous Intensity Vs Forward Current**



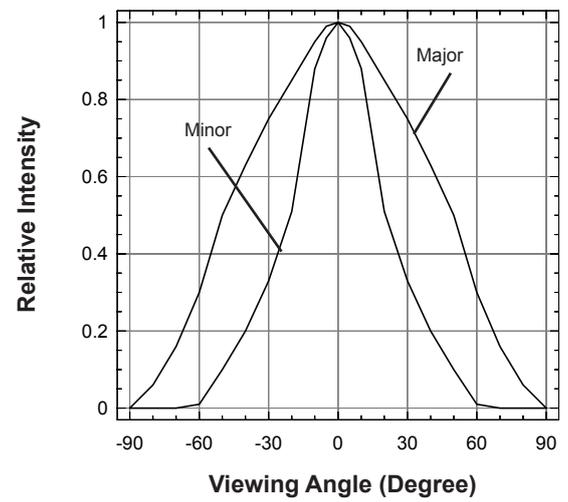
**Forward Current Vs Forward Voltage**



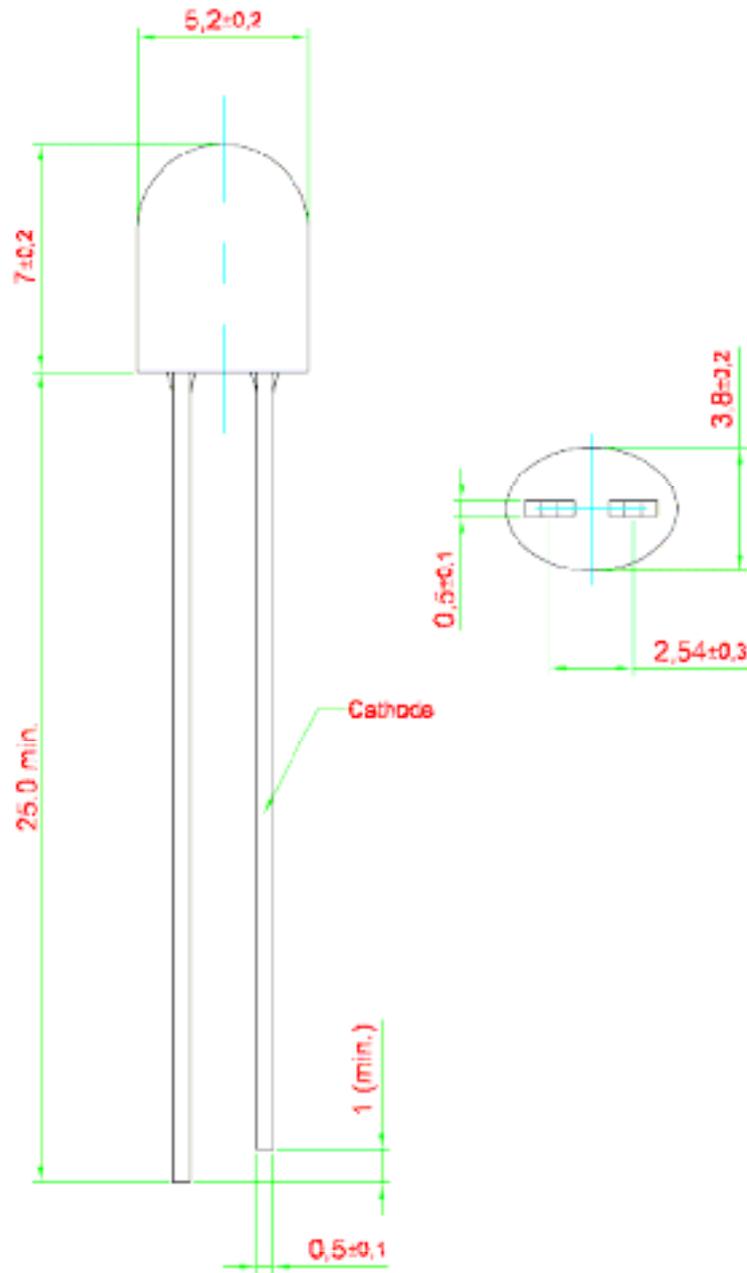
**Maximum Current Vs Temperature**



**Radiation Pattern**

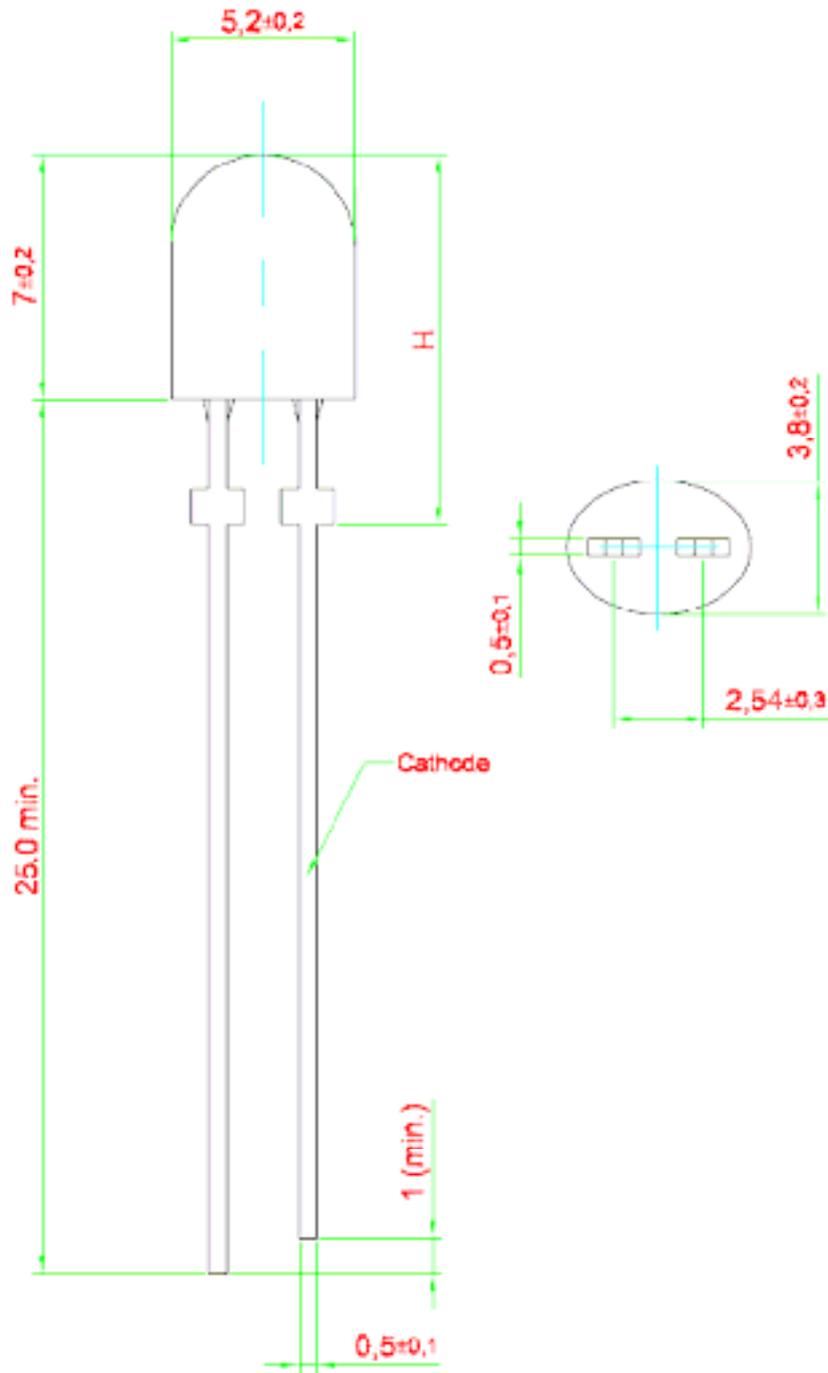


5mm Oval Lamp • AllnGaP : Package Outlines



Epoxy meniscus may extend 1.5mm max. down the LED

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

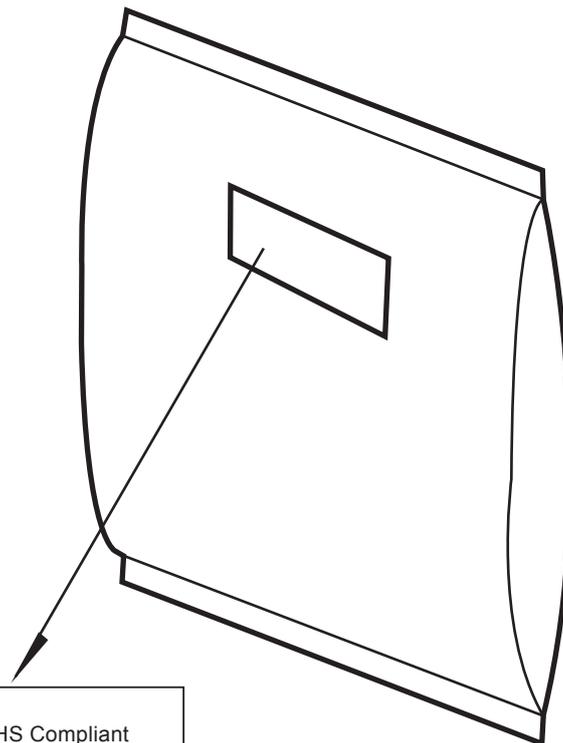


Parts with the stand-off option will be defined as L6x-PA4CS-xxxx-1  
Option with stand-off -  $H = 10.6\text{mm} \pm 0.5\text{mm}$

**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

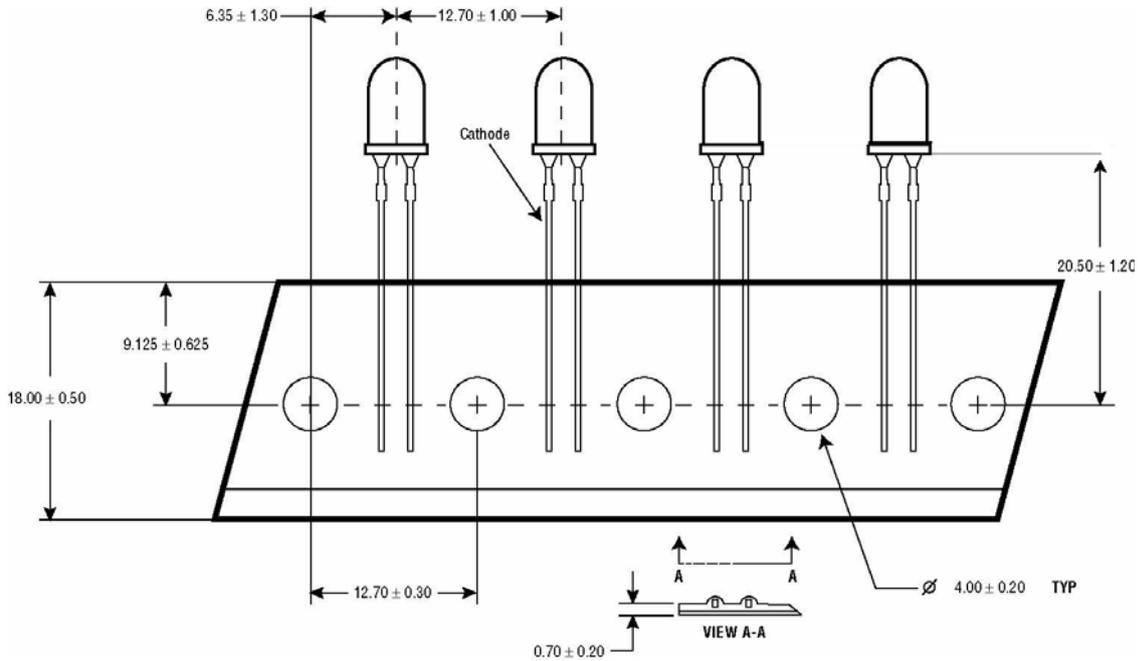


Barcode label

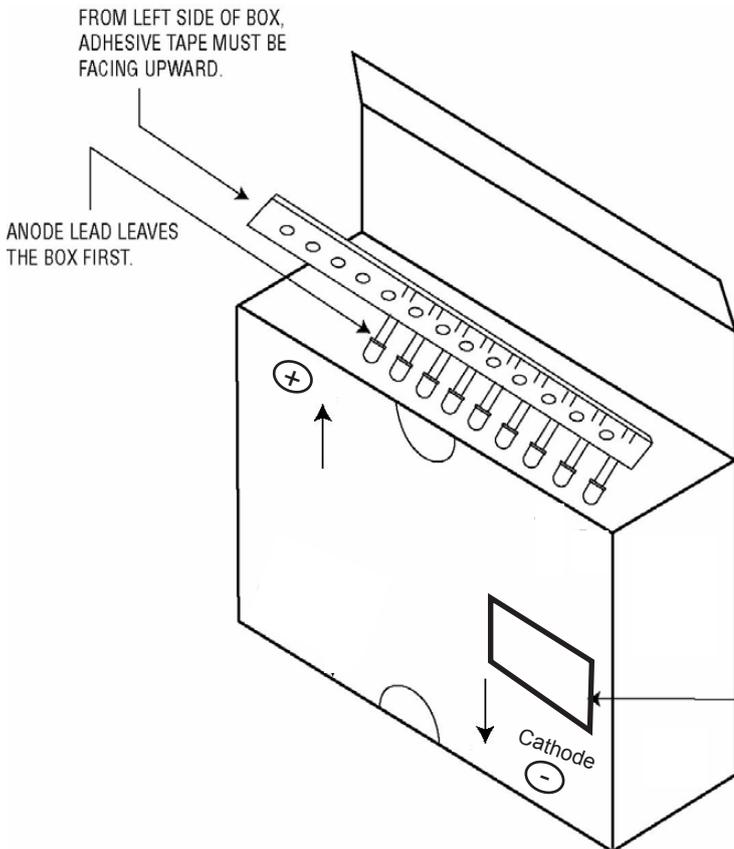
<b>DOMINANT</b>		ROHS Compliant
LOT NO : lotno		
		
PART NO : partno		PB Free
QTY : product quantity per reel	S/N : serial no	D/C: date code
GROUP : group		
		

**Packaging Specification**

**2. Ammpack: 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



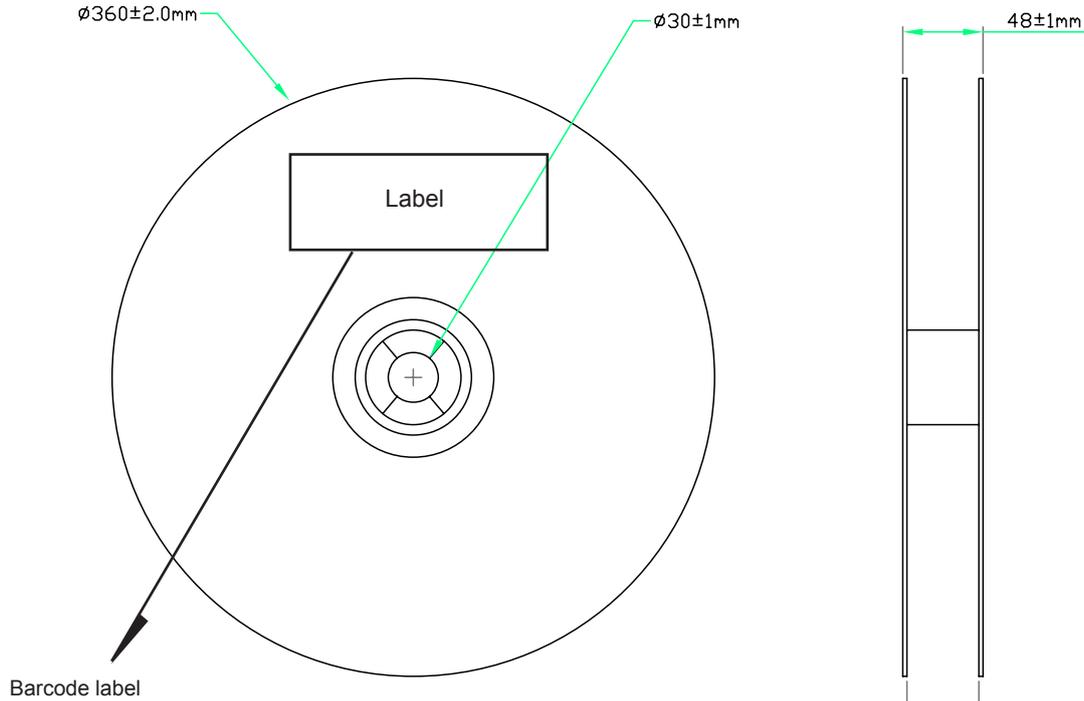
Barcode label

<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**

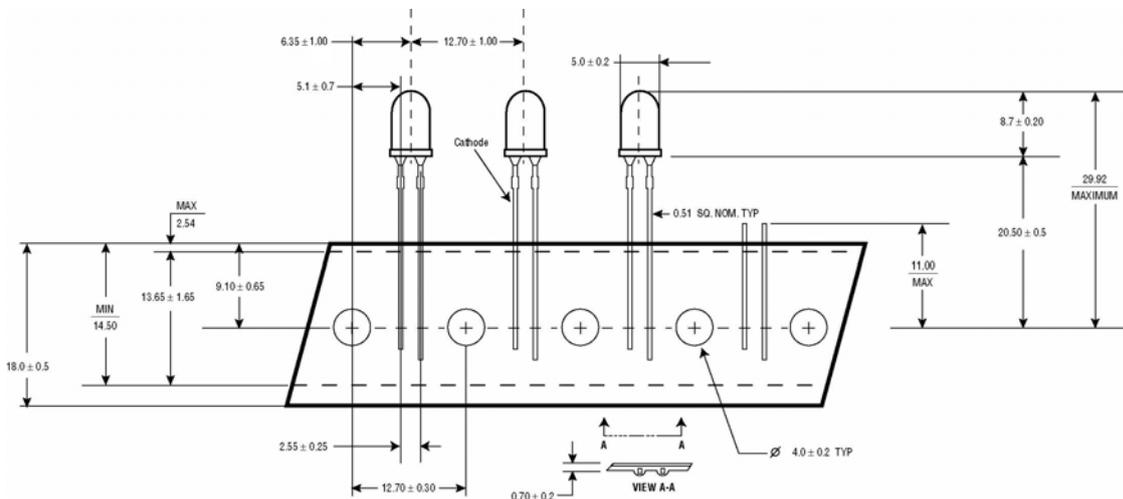
**3. Reel: Lxx-xxxxx-xxxx-x-x-T**



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		

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



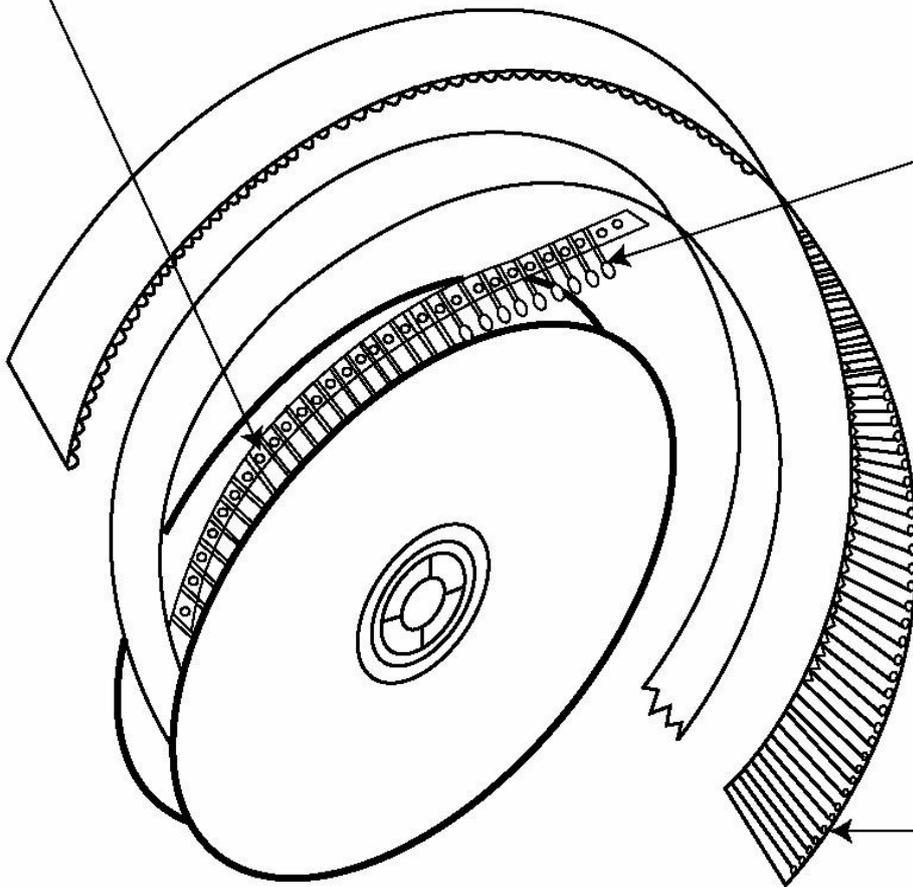
**Packaging Specification**

Adhesive Tape Must  
Be Facing Towards  
The Outside Of The Reel

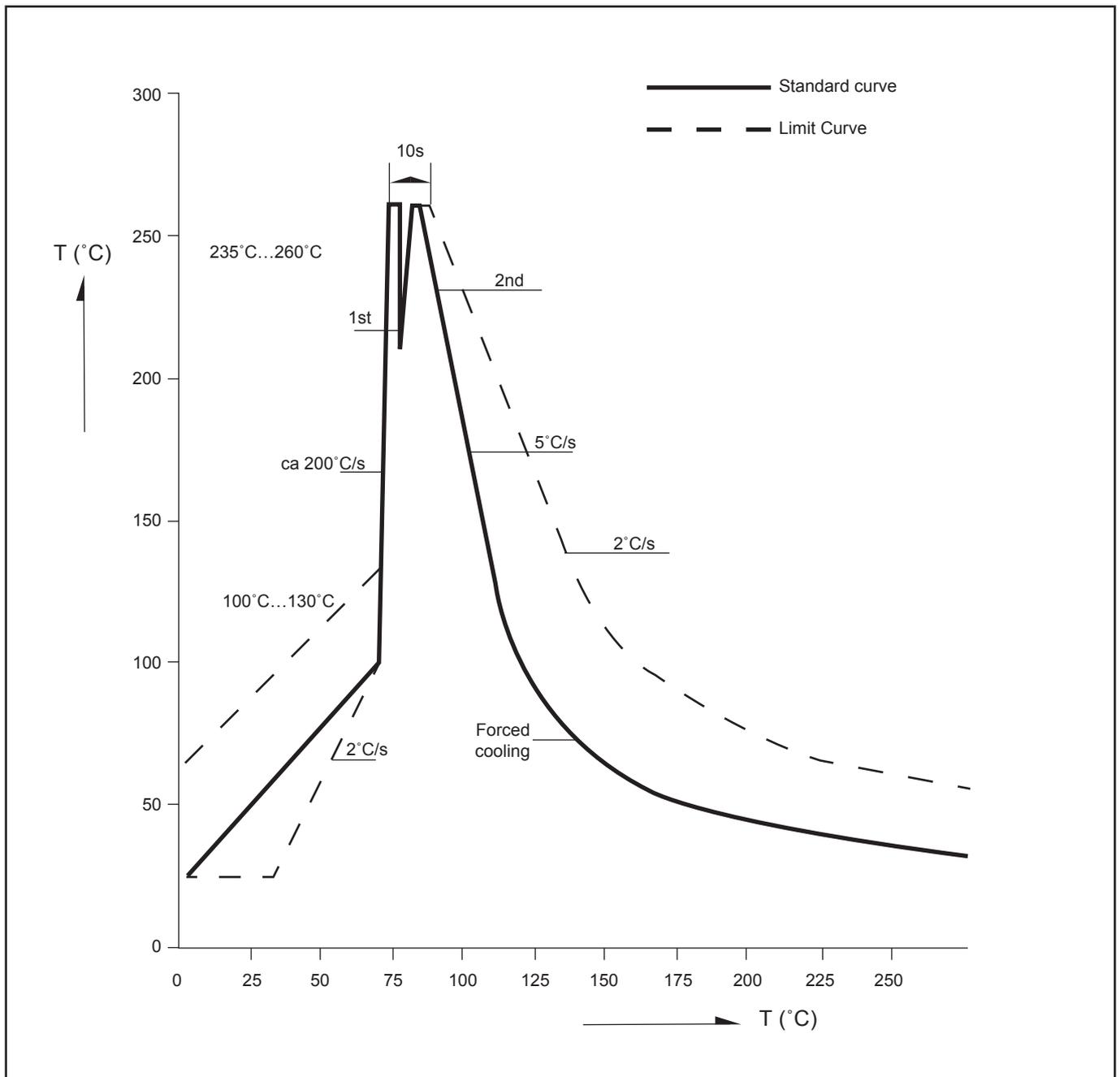
Reeling Orientation  
Clockwise

Anode Lead  
Leaves The  
Reel First

Protective  
Cardboard



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



**Revision History**

Page	Subjects	Date of Modification
-	Initial Release	10 Feb 2014

**NOTE**

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**Please contact us for more information:**

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