

### Lamp Type LED - 3mm

This 3mm LED offer superior light output for excellent readability in sunlight. These lamps are offering stable light output over long period of time and high-moisture-resistance performance in lighting and illumination applications due to the optical-grade epoxy.

### Features:

- > High brightness LED lamp.
- > Superior resistance to moisture
- > Suitable for TTW soldering.

### Applications:

- > Indicators
- > Outdoor displays/signs



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

Part Ordering Number	Color	Viewing Angle°	Luminous Intensity @ 5mA IV (mcd)		
			Min.	Typ.	Max.
L3W-L60E0-UV2-1	White	60	450.0	800.0	1125.0

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.

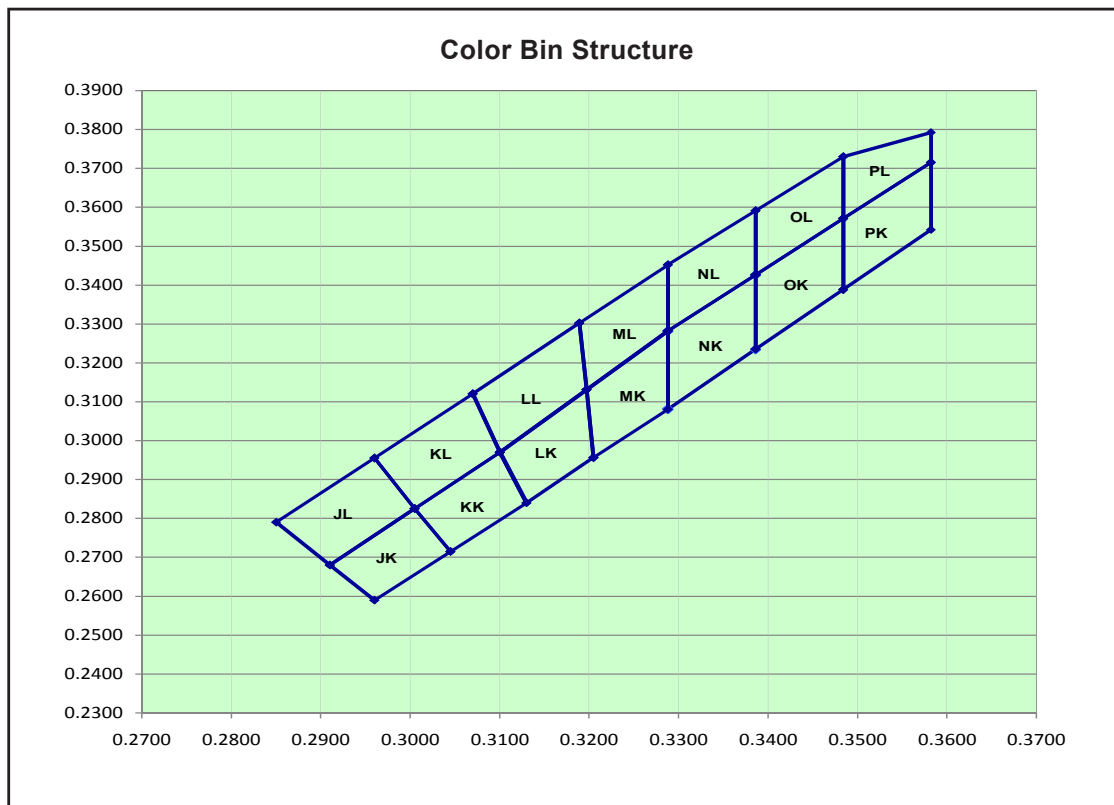
Part Number	Vf @ If = 5mA			Vr @ Ir = 10uA
	Min. (V)	Typ. (V)	Max. (V)	Min. (V)
L3W-L60E0	2.6	2.8	3.2	5

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	20	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 ... +85	°C
Storage temperature	-40 ... +85	°C
Power dissipation (at room temperature)	85	mW

**White Color Grouping**



Chromaticity coordinate groups are measured with an accuracy of  $\pm 0.01$ .

Bin		1	2	3	4
JK	Cx	0.2960	0.2910	0.3005	0.3045
	Cy	0.2590	0.2680	0.2825	0.2715
JL	Cx	0.291	0.2850	0.2960	0.3005
	Cy	0.2680	0.2790	0.2955	0.2825
KK	Cx	0.3045	0.3005	0.3100	0.3130
	Cy	0.2715	0.2825	0.2970	0.2840
KL	Cx	0.3005	0.2960	0.3070	0.3100
	Cy	0.2825	0.2955	0.3120	0.2970
NK	Cx	0.3288	0.3288	0.3386	0.3386
	Cy	0.3081	0.3282	0.3426	0.3235
NL	Cx	0.3288	0.3288	0.3386	0.3386
	Cy	0.3282	0.3453	0.3591	0.3426
OK	Cx	0.3386	0.3386	0.3484	0.3484
	Cy	0.3235	0.3426	0.3571	0.3388
OL	Cx	0.3386	0.3386	0.3484	0.3484
	Cy	0.3426	0.3591	0.3730	0.3571
LK	Cx	0.3100	0.3197	0.3205	0.3130
	Cy	0.2970	0.3131	0.2956	0.2840
LL	Cx	0.3070	0.3189	0.3197	0.3100
	Cy	0.3120	0.3302	0.3131	0.2970

<b>Bin</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
MK	Cx	0.3197	0.3288	0.3288	0.3205
	Cy	0.3131	0.3282	0.3081	0.2956
ML	Cx	0.3189	0.3288	0.3288	0.3197
	Cy	0.3302	0.3452	0.3282	0.3131
PK	Cx	0.3484	0.3484	0.3582	0.3582
	Cy	0.3388	0.3571	0.3715	0.3542
PL	Cx	0.3484	0.3484	0.3582	0.3582
	Cy	0.3571	0.3730	0.3792	0.3715

InGaN wavelength is very sensitive to drive current. Operating at lower current is not recommended and may yield unpredictable performance. Current pulsing should be used for dimming purposes.

**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

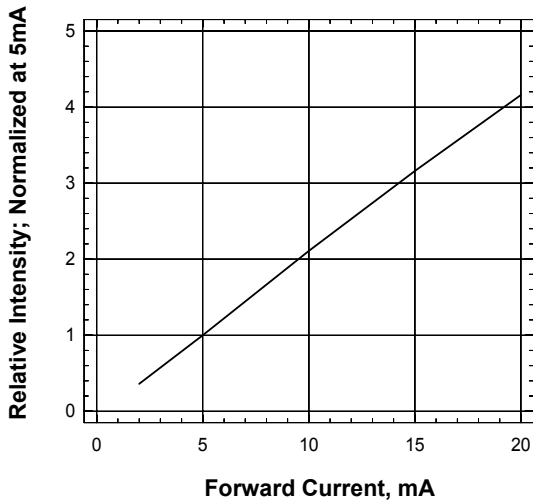
Luminous intensity is measured with an accuracy of ± 15%.

**Vf Binning (Optional)**

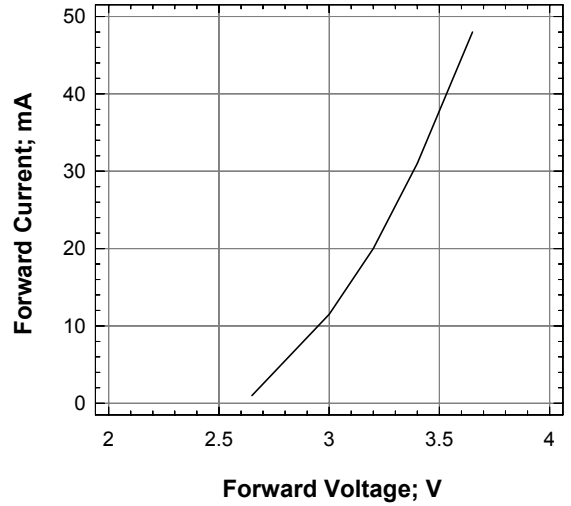
Vf Bin @ 5mA	Forward Voltage (V)
V6	2.6 ... 2.8
V7	2.8 ... 3.0
V8	3.0 ... 3.2

Forward voltage, Vf is measured with an accuracy of ± 0.1 V. Parts with the Vf binning option will be defined as L3W-Lxxxx-xxxx-x-Vx. Please consult sales and marketing for special part number to incorporate Vf binning.

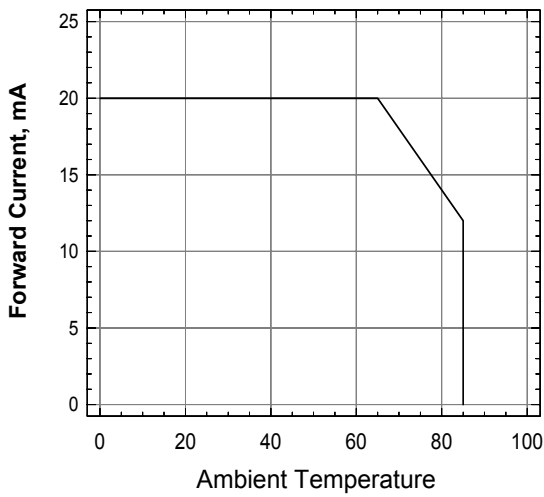
**Relative Intensity vs Forward Current**



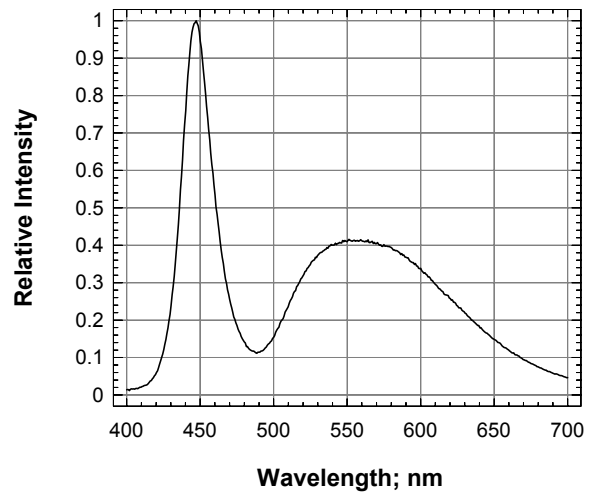
**Forward Current Vs Forward Voltage**



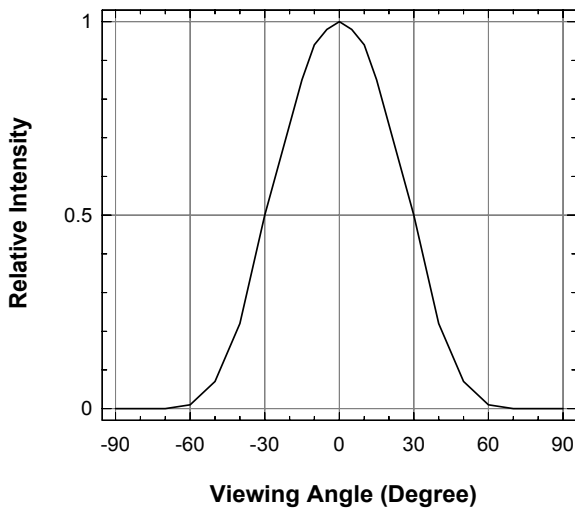
**Forward Current Vs Ambient Temperature**



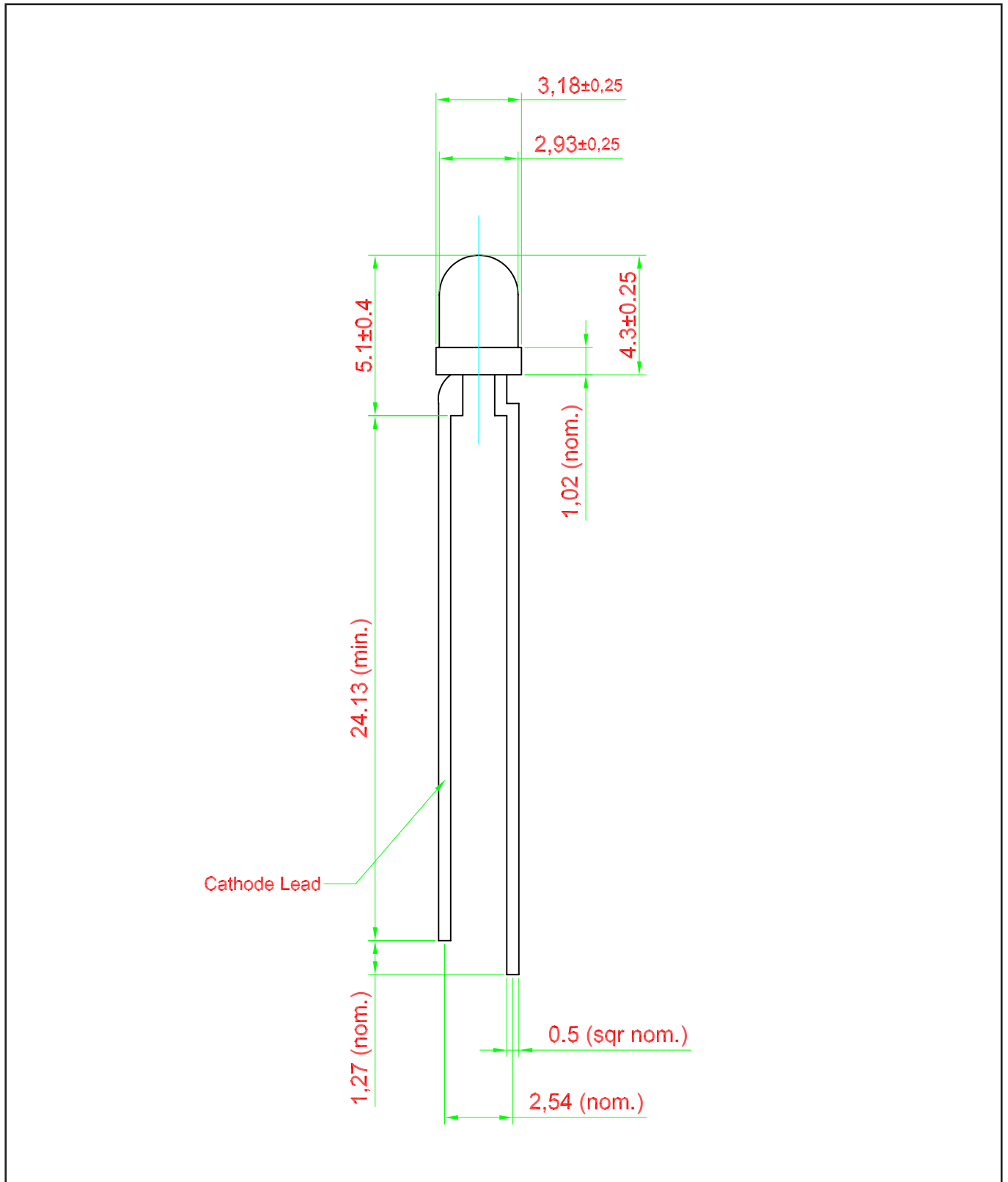
**Relative Intensity Vs Wavelength**



**Radiation Pattern (2Θ=60°)**



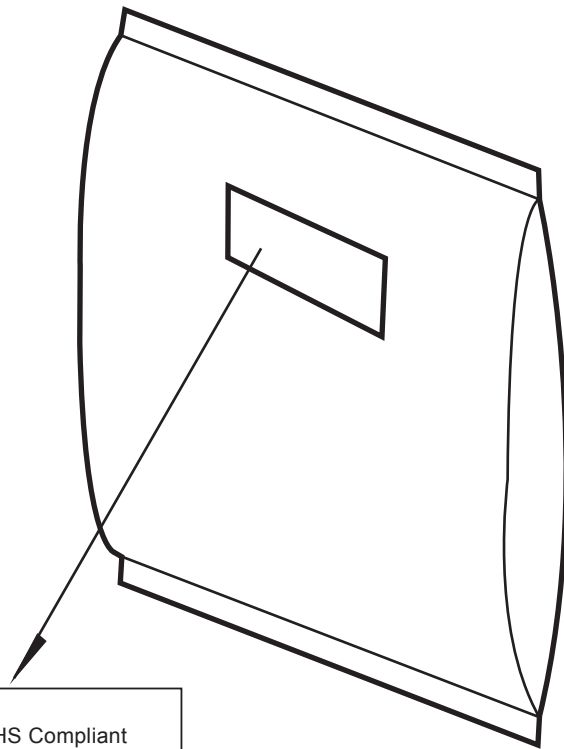
### 3mm Lamp • InGaN White: Package Outlines






**Packaging Specification**

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

	Average 1pc 3mm Lamp	1 completed pack (500pcs)
<b>Weight (gram)</b>	0.12	70 ± 10

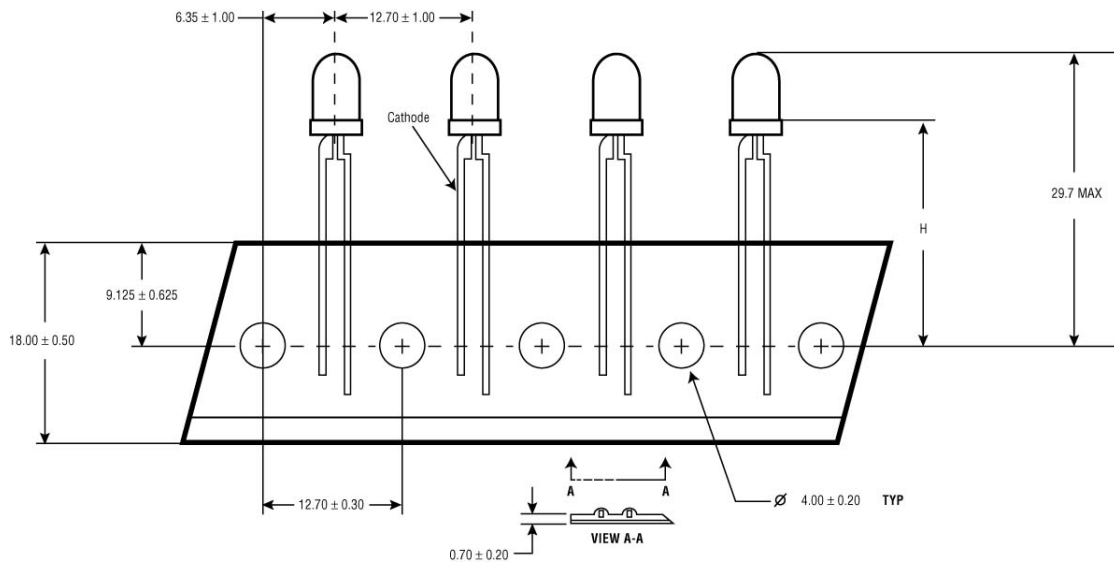


Barcode label

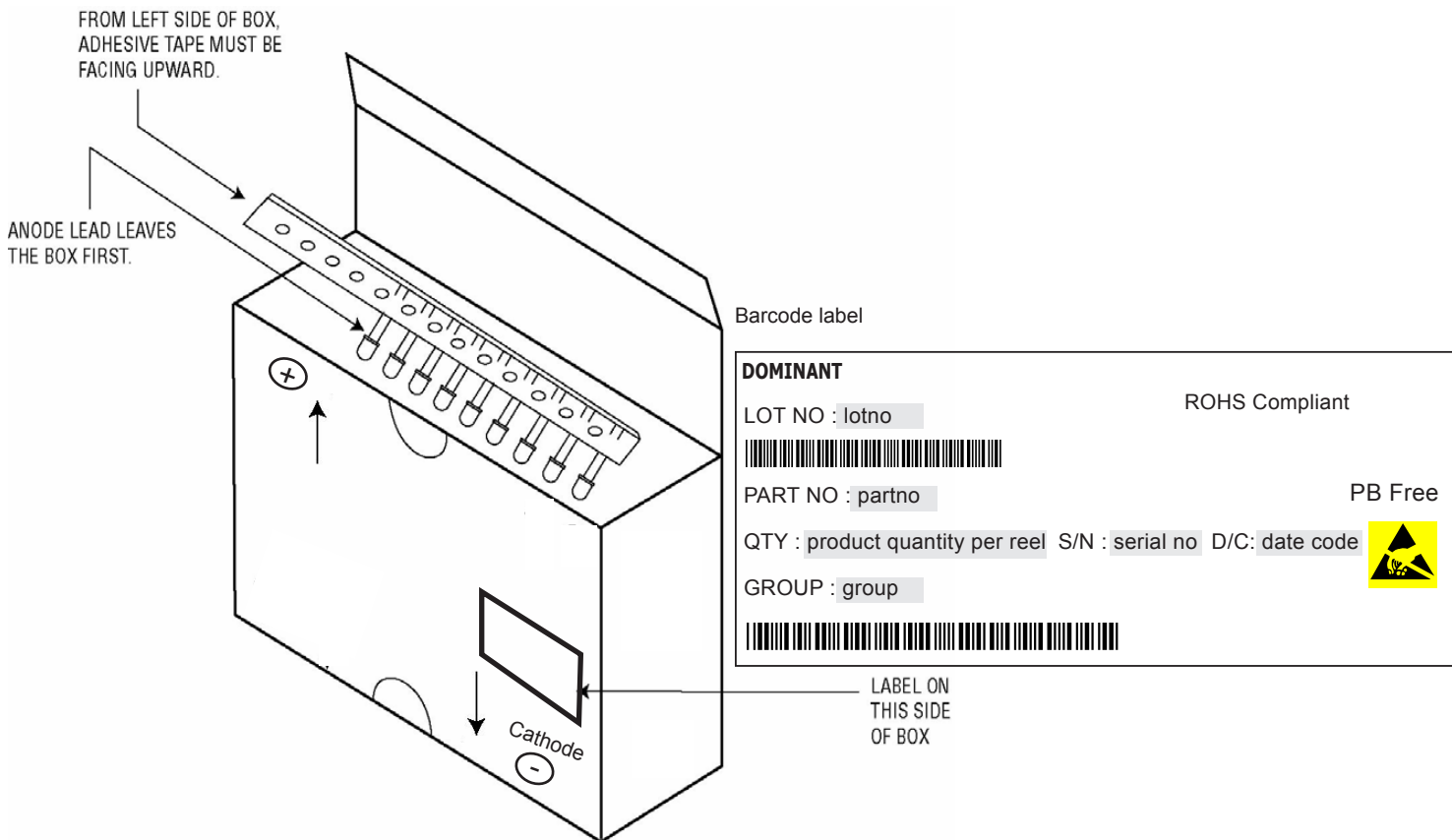
<b>DOMINANT</b>		ROHS Compliant
LOT NO : lotno		
		
PART NO : partno		PB Free
QTY : product quantity per reel		S/N : serial no
		D/C: date code
GROUP : group		
		

**Packaging Specification**

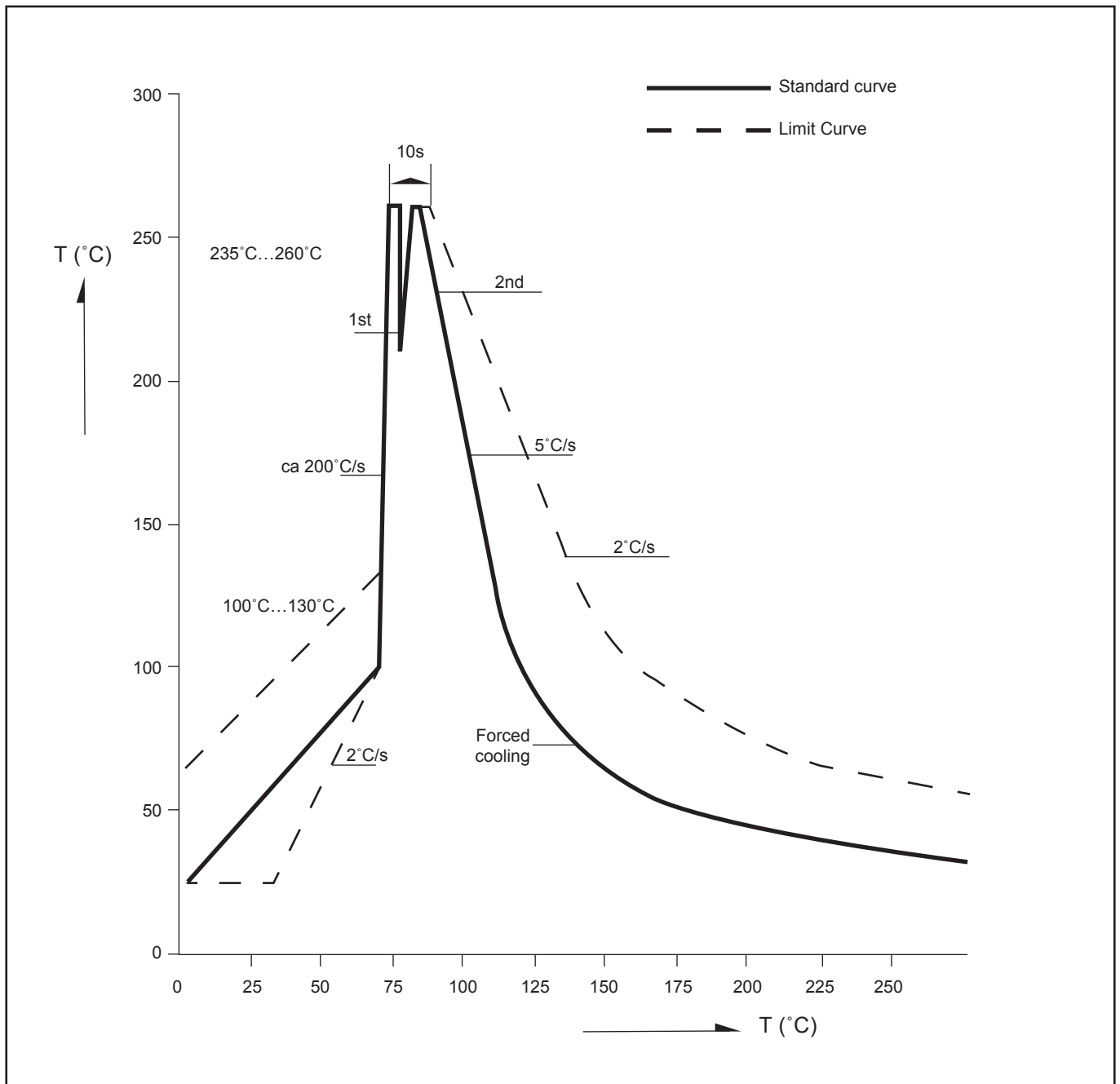
**2. Ammpack: Lxx-xxxxx-xxxx-x-x-A**



Average 1pc 3mm Lamp (g)	Box Dimensions (mm)	Empty Box Weight (kg)	Quantity / Box (pcs)	1 Completed Box With Units (kg)
0.12	335 x 135 x 48	0.14	1800	0.40 ± 0.10



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



**Revision History**

Page	Subjects	Date of Modification
-	Initial Release	06 Apr 2012

**NOTE**

All the information contained in this document is considered to be reliable at the time of publishing. However, DOMINANT Opto Technologies does not assume any liability arising out of the application or use of any product described herein.

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DOMINANT Opto Technologies products are not authorized for use as critical components in life support devices or systems without the express written approval from the Managing Director of DOMINANT Opto Technologies.

## 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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