

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.
L3F-L60E0-UV2-1	Warm White	60	450.0	715.0	1125.0

NOTE

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

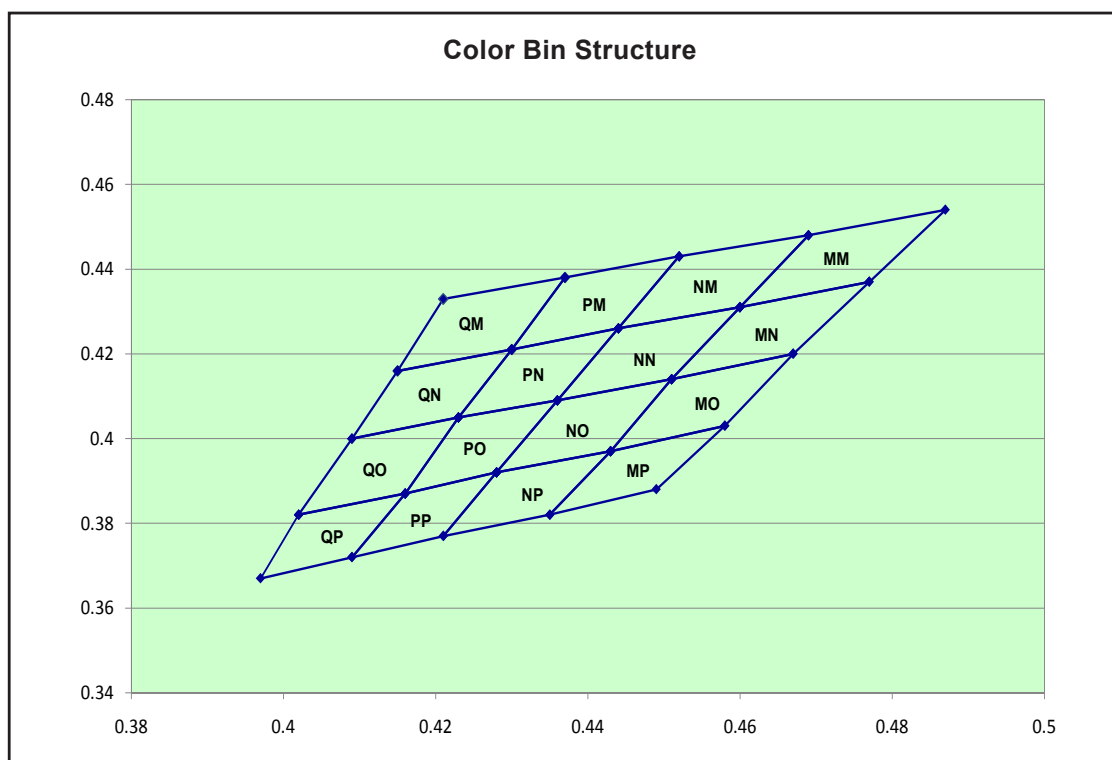
Part Number	Vf @ If = 5mA			Vr @ Ir = 10uA
	Min. (V)	Typ. (V)	Max. (V)	Min. (V)
L3F-L60E0	2.6	2.8	3.2	5

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

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	20	mA
Peak pulse current; (tp $\leq$ 100 μ s, Duty cycle = 0.10)	100	mA
Reverse voltage ; Ir (max) = 10 μ A.	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

Warm White Color Grouping



Chromaticity coordinate groups are measured with an accuracy of ± 0.01 .

Bin		1	2	3	4
QM	Cx	0.421	0.437	0.430	0.415
	Cy	0.433	0.438	0.421	0.416
QN	Cx	0.415	0.430	0.423	0.409
	Cy	0.416	0.421	0.405	0.400
QO	Cx	0.409	0.423	0.416	0.402
	Cy	0.400	0.405	0.387	0.382
QP	Cx	0.402	0.416	0.409	0.397
	Cy	0.382	0.387	0.372	0.367
PM	Cx	0.437	0.452	0.444	0.430
	Cy	0.438	0.443	0.426	0.421
PN	Cx	0.430	0.444	0.436	0.423
	Cy	0.421	0.426	0.409	0.405
PO	Cx	0.423	0.436	0.428	0.416
	Cy	0.405	0.409	0.392	0.387
PP	Cx	0.416	0.428	0.421	0.409
	Cy	0.387	0.392	0.377	0.372
NM	Cx	0.452	0.469	0.460	0.444
	Cy	0.443	0.448	0.431	0.426
NN	Cx	0.444	0.460	0.451	0.436
	Cy	0.426	0.431	0.414	0.409
NO	Cx	0.436	0.451	0.443	0.428
	Cy	0.409	0.414	0.397	0.392
NP	Cx	0.428	0.443	0.435	0.421
	Cy	0.392	0.397	0.382	0.377

Bin		1	2	3	4
MM	Cx	0.469	0.487	0.477	0.460
	Cy	0.448	0.454	0.437	0.431
MN	Cx	0.460	0.477	0.467	0.451
	Cy	0.431	0.437	0.420	0.414
MO	Cx	0.451	0.467	0.458	0.443
	Cy	0.414	0.420	0.403	0.397
MP	Cx	0.443	0.458	0.449	0.435
	Cy	0.397	0.403	0.388	0.382

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

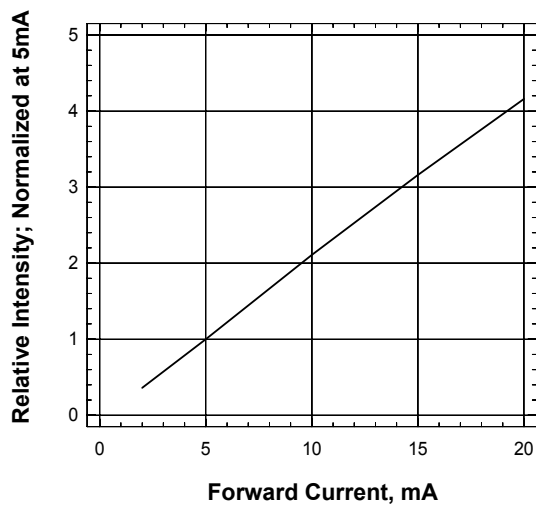
Luminous intensity is measured with an accuracy of $\pm 15\%$.

Vf Binning (Optional)

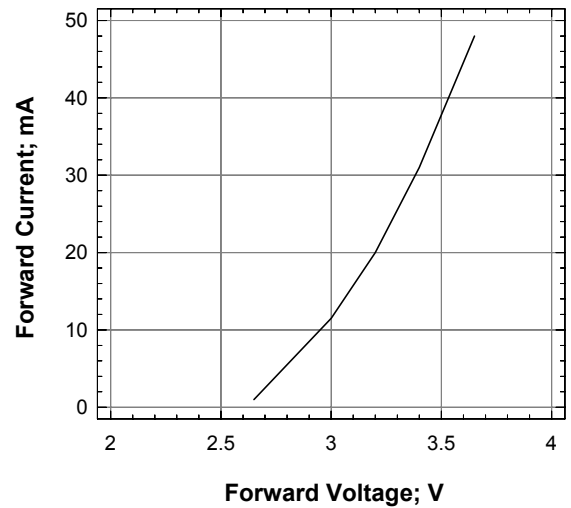
Vf Bin @ 5mA	Forward Voltage (V)
V6	2.6 ... 2.8
V7	2.8 ... 3.0
V8	3.0 ... 3.2

Forward voltage, Vf is measured with an accuracy of ± 0.1 V. Parts with the Vf binning option will be defined as L3F-Lxxxx-xxxx-x-Vx. Please consult sales and marketing for special part number to incorporate Vf binning.

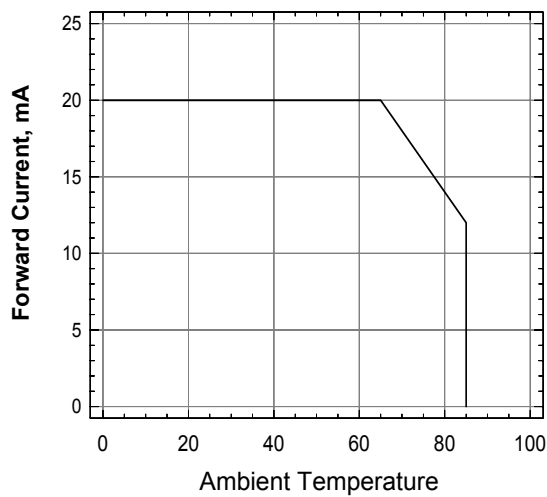
Relative Intensity vs Forward Current



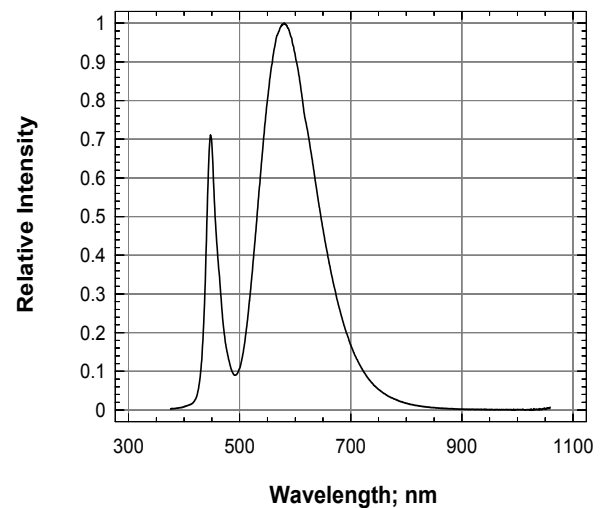
Forward Current Vs Forward Voltage



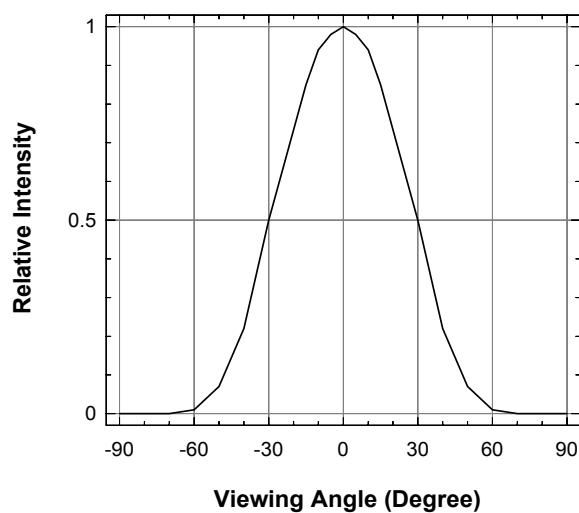
Forward Current Vs Ambient Temperature



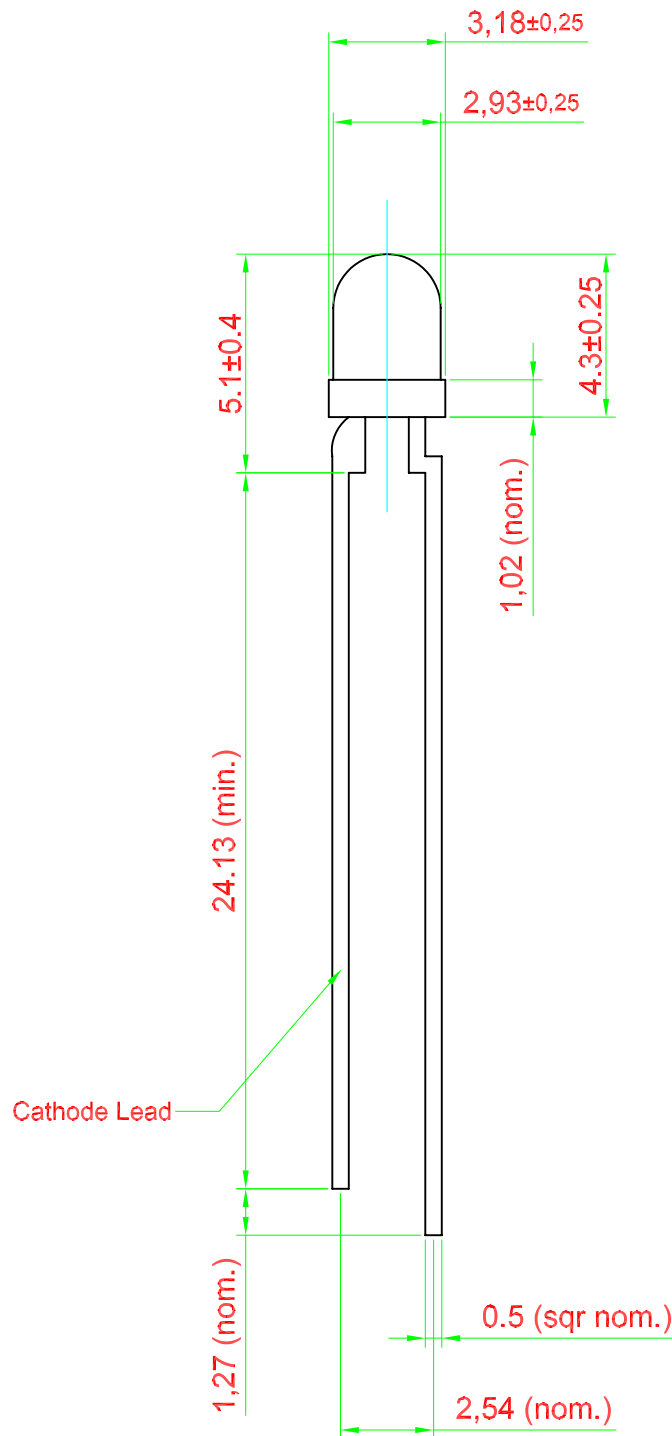
Relative Intensity Vs Wavelength



Radiation Pattern ($2\theta=60^\circ$)



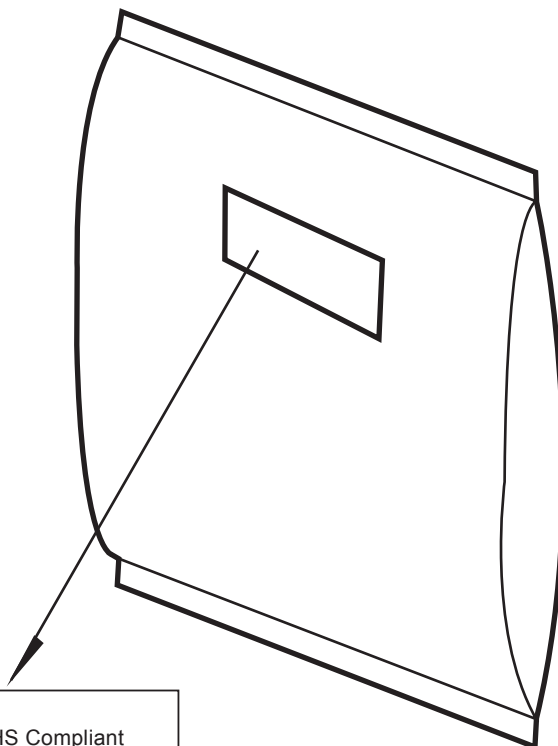
3mm Lamp • InGaN Warm White: Package Outlines



Packaging Specification

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

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

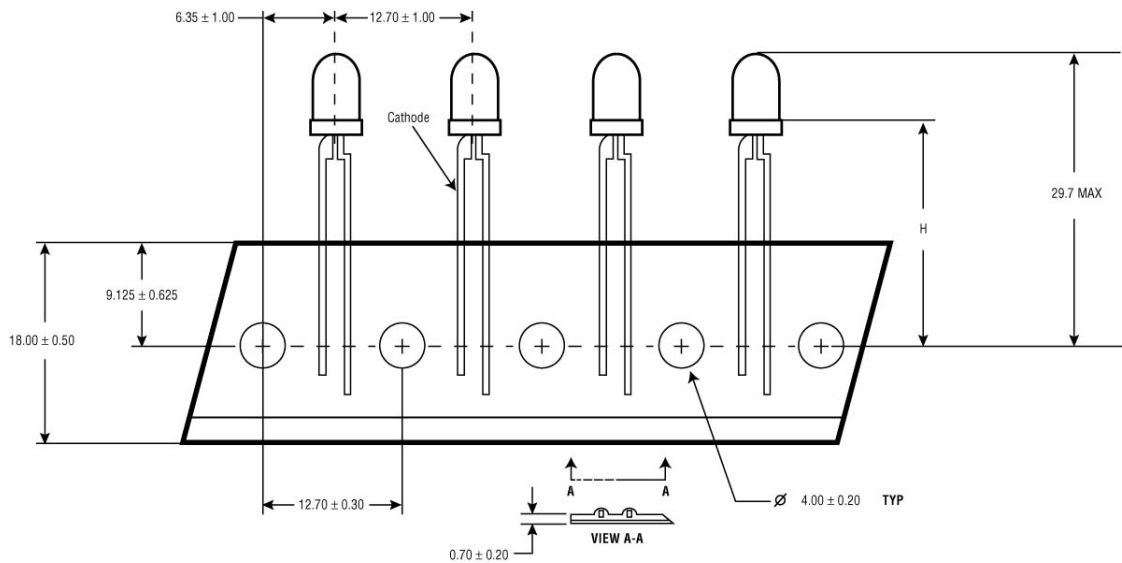


Barcode label

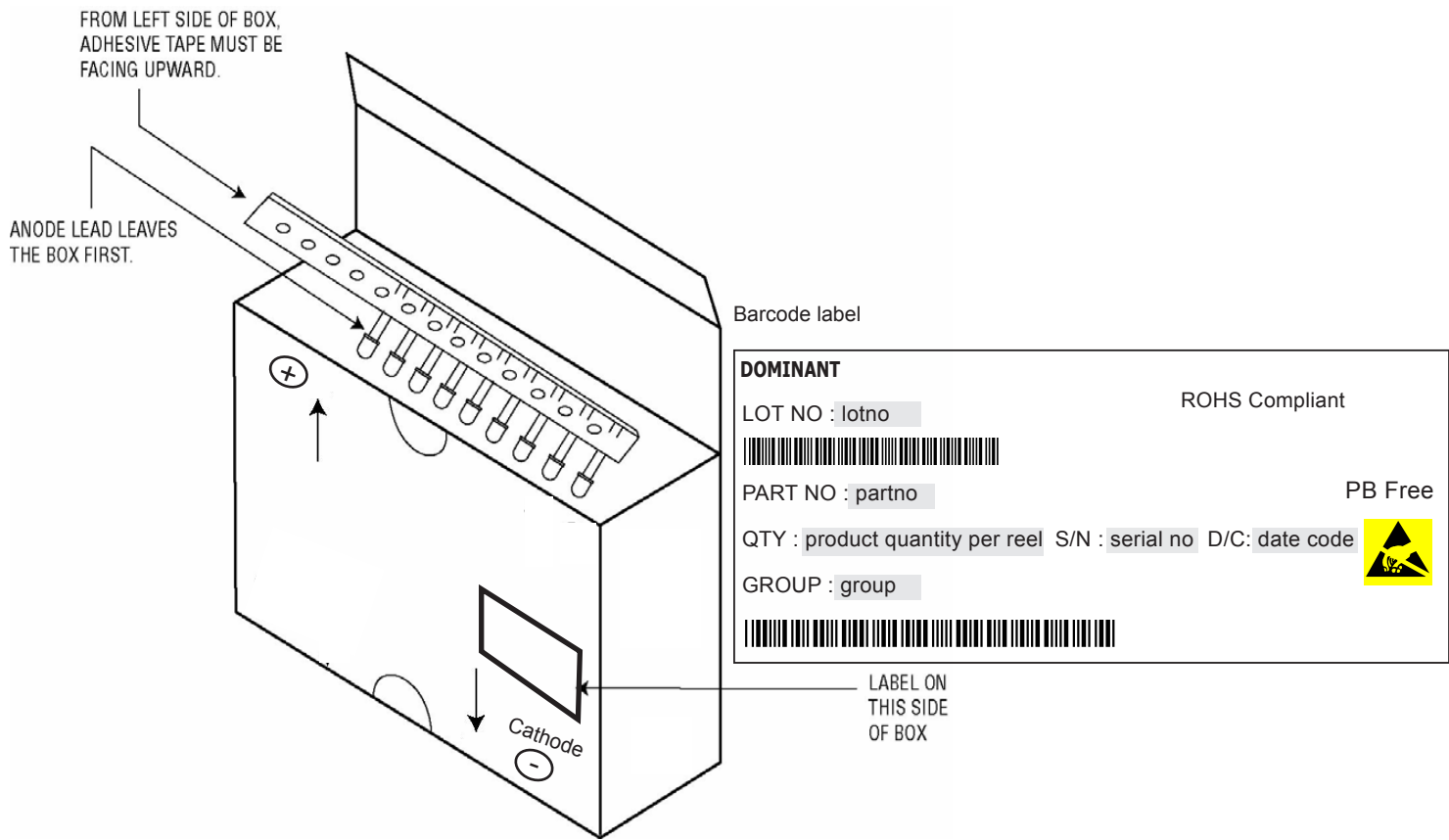
DOMINANT		ROHS Compliant
LOT NO : lotno		
		
PART NO : partno	PB Free	
QTY : product quantity per reel	S/N : serial no	D/C: date code
GROUP : group		
		

Packaging Specification

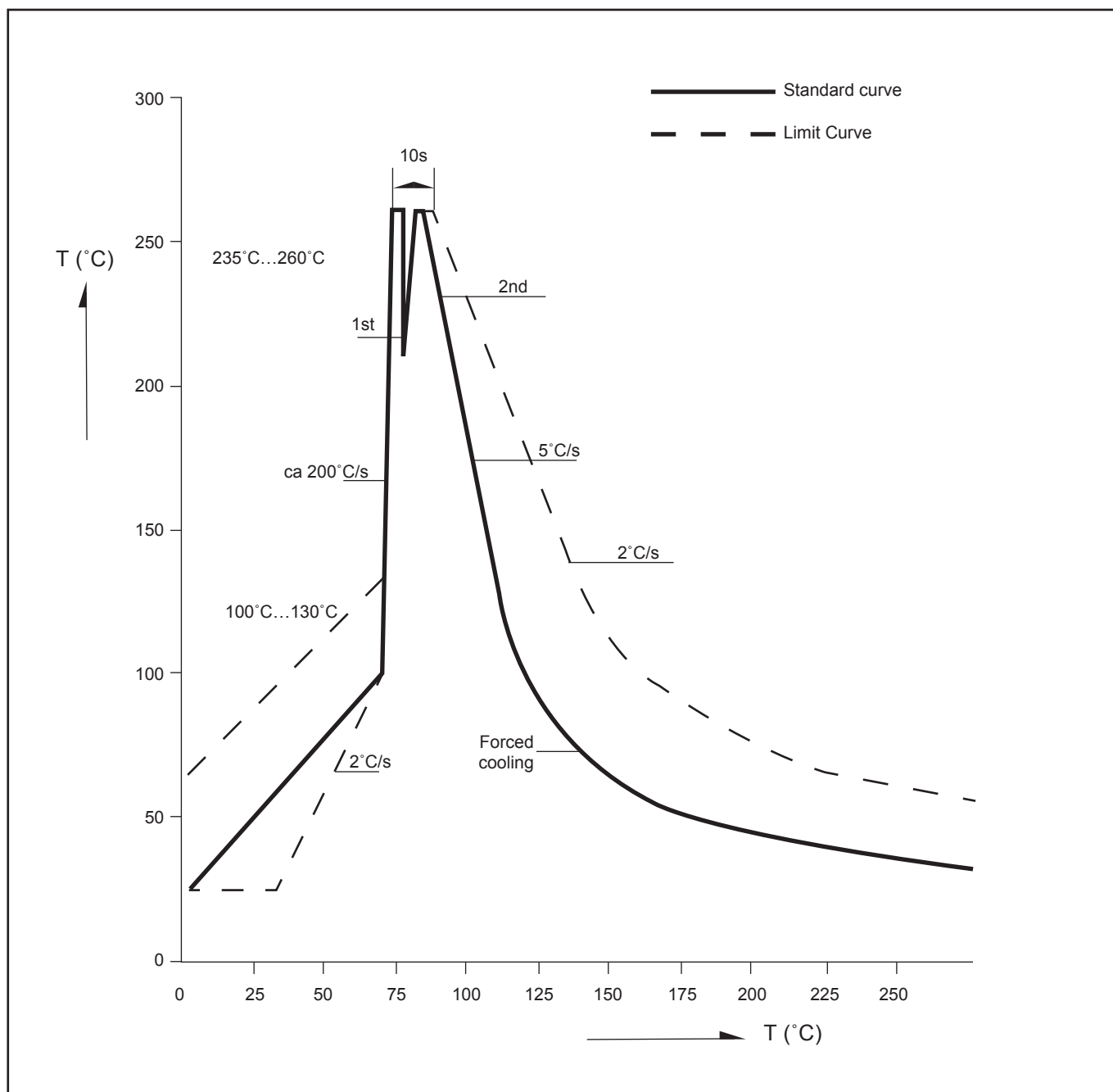
2. Ammopack: Lxx-xxxxx-xxxx-x-x-A



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

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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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