

Lamp Type LED - 4mm Oval

Synonymous with function and performance, the 4mm 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 50° 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 @ 20mA IV (mcd)		
			Min.	Typ.	Max.
L4R-TA5CS-VW2-1	Red, 625nm	100/50	715.0	950.0	1800.0
L4Y-TA5CS-VW2-1	Yellow, 588nm	100/50	715.0	950.0	1800.0

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.

Electrical Characteristics at Tj=25°C

Part Number	Min. (V)	Vf @ If = 20mA		Vr @ Ir = 10uA	
		Typ. (V)	Max. (V)	Min. (V)	
L4x-TA5	2.0	2.2	2.7	12	

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	50	mA
Peak pulse current; ($t_p \leq 10\mu s$, 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)	135	mW

Wavelength Grouping at Tj=25°C

Color	Group	Wavelength distribution (nm)
L4R; Red	Full	620 - 630
L4Y; 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)
V1	715.0...900.0
V2	900.0...1125.0
W1	1125.0...1400.0
W2	1400.0...1800.0

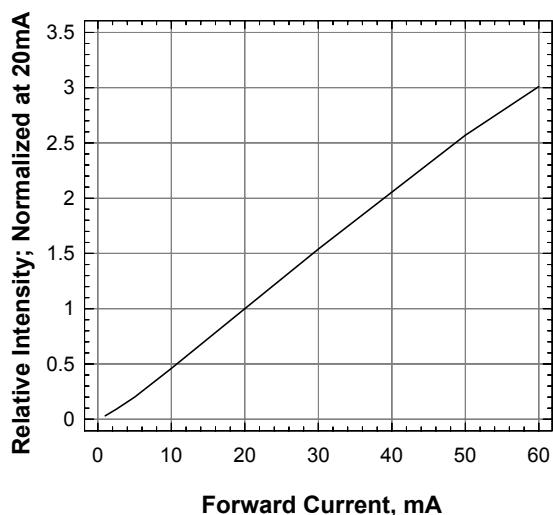
Luminous intensity is measured with an accuracy of $\pm 15\%$.

Vf Binning (Optional)

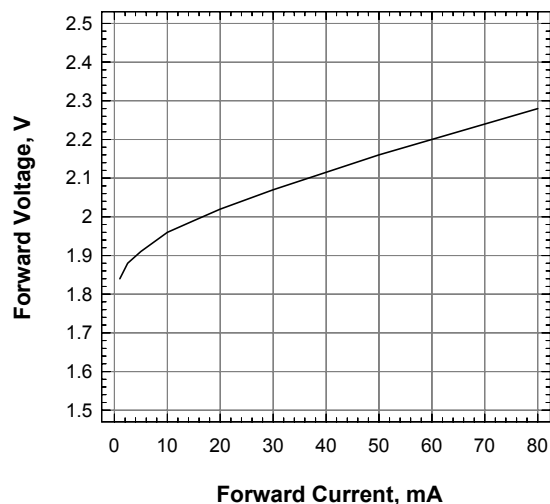
Vf Bin @ 20mA	Forward Voltage (V)
V3	2.00 ... 2.20
V4	2.20 ... 2.40
V5	2.40 ... 2.60
V6	2.60 ... 2.80

Forward voltage, Vf is measured with an accuracy of ± 0.1 V. Parts with the Vf binning option will be defined as L4x-TA5CS-xxxx-x-V. Please consult sales and marketing for special part number to incorporate Vf binning.

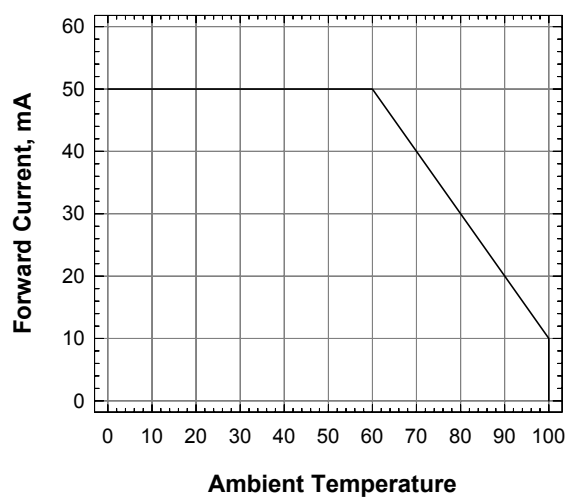
Relative Luminous Intensity Vs Forward Current



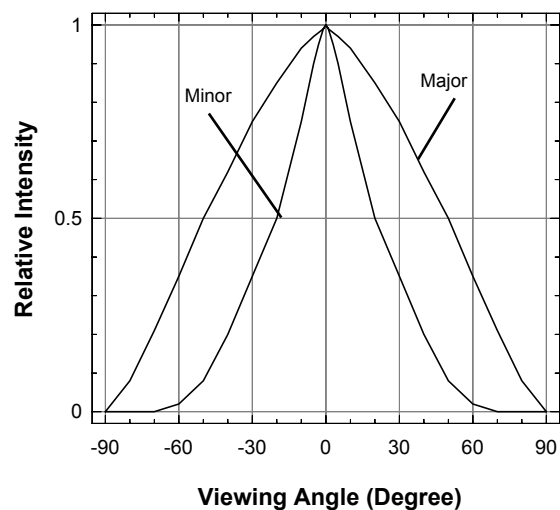
Forward Current Vs Forward Voltage



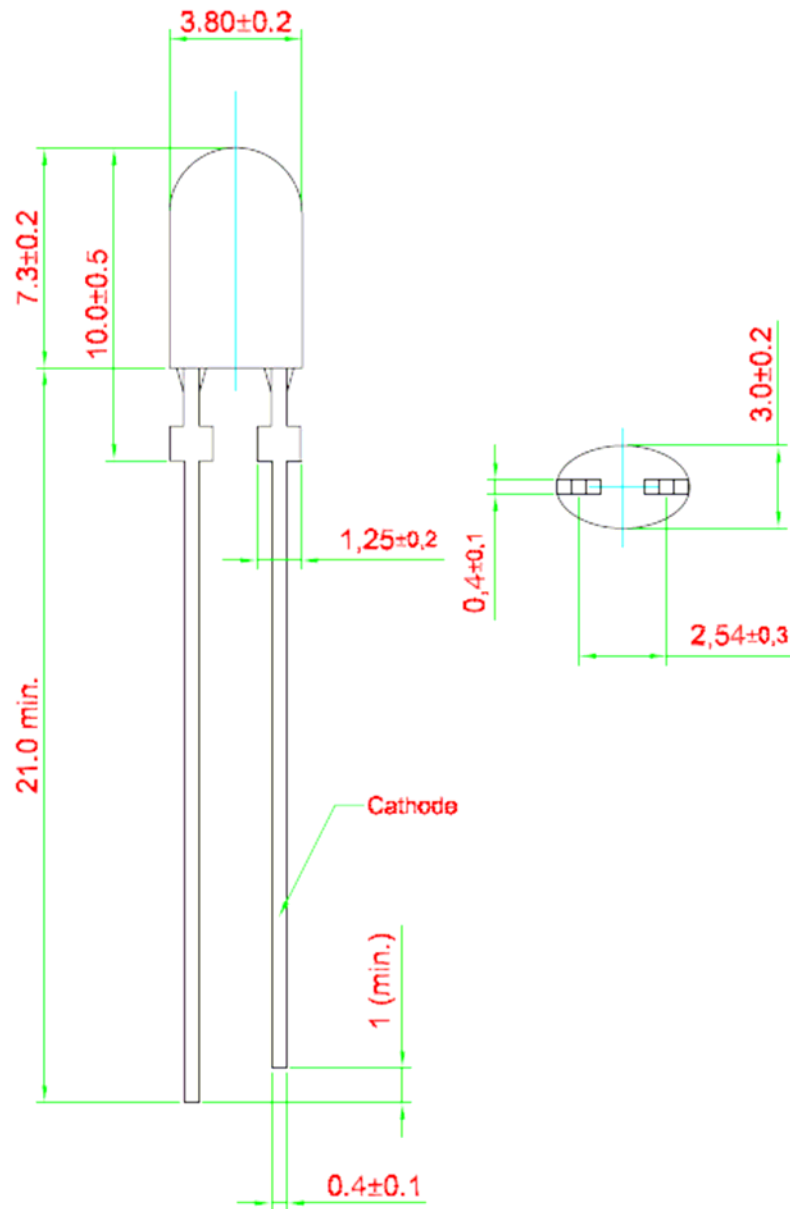
Maximum Current Vs Temperature



Radiation Pattern



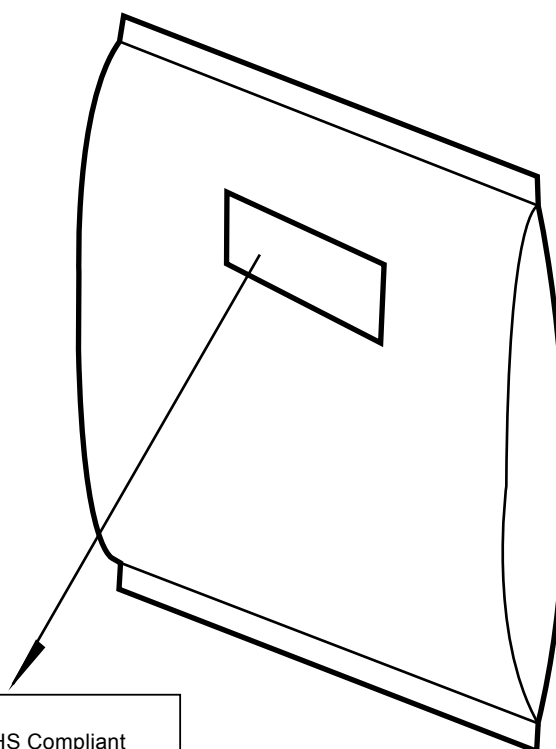
4mm Oval Lamp • TS AlInGaP : Package Outlines



Packaging Specification

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

	Average 1pc 4mm Lamp	1 completed pack (500pcs)
Weight (gram)	0.29	155 ± 10

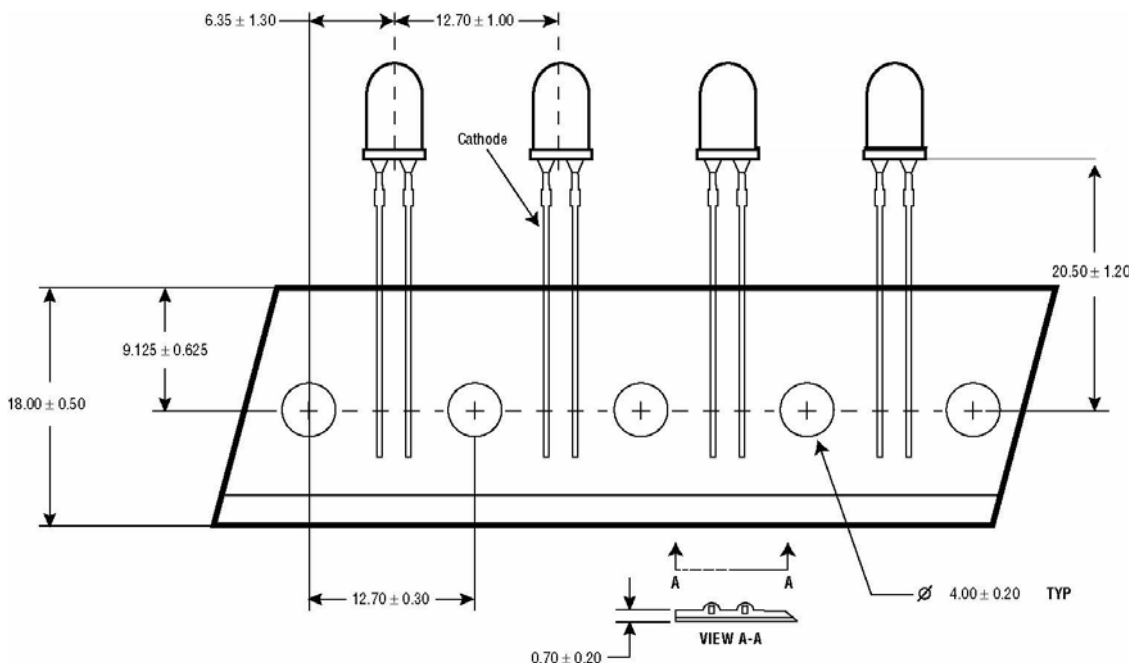


Barcode label

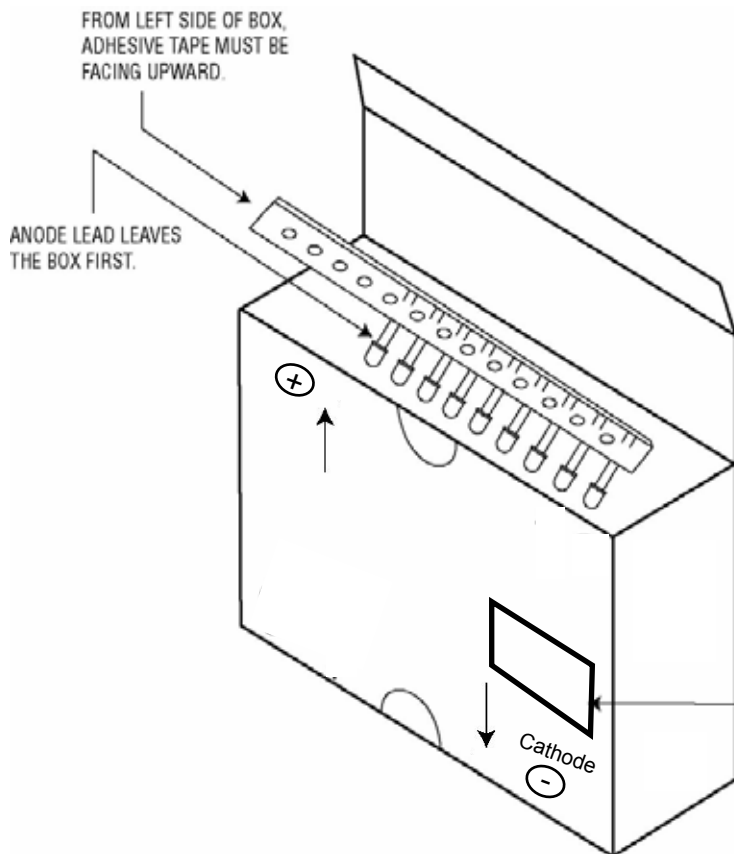
DOMINANT		ROHS Compliant
LOT NO : lotno		
		
PART NO : partno		PB Free
QTY : product quantity per reel	S/N : serial no	D/C: date code
GROUP : group		
		

Packaging Specification

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



Average 1pc 4mm 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



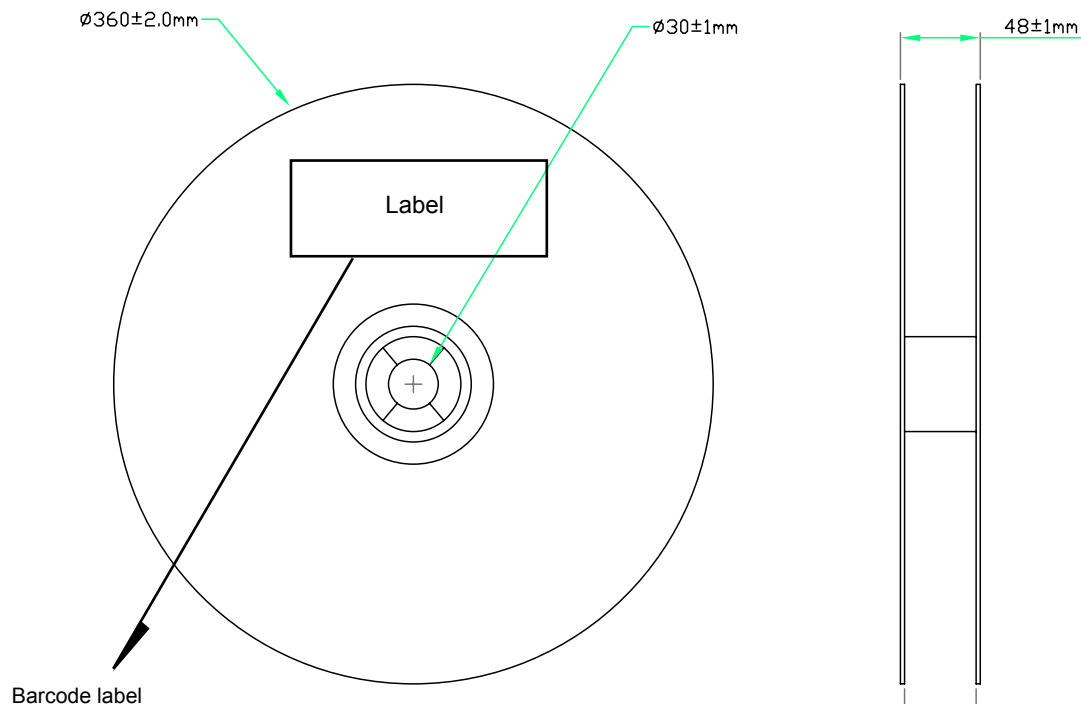
Barcode label

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	

LABEL ON THIS SIDE OF BOX

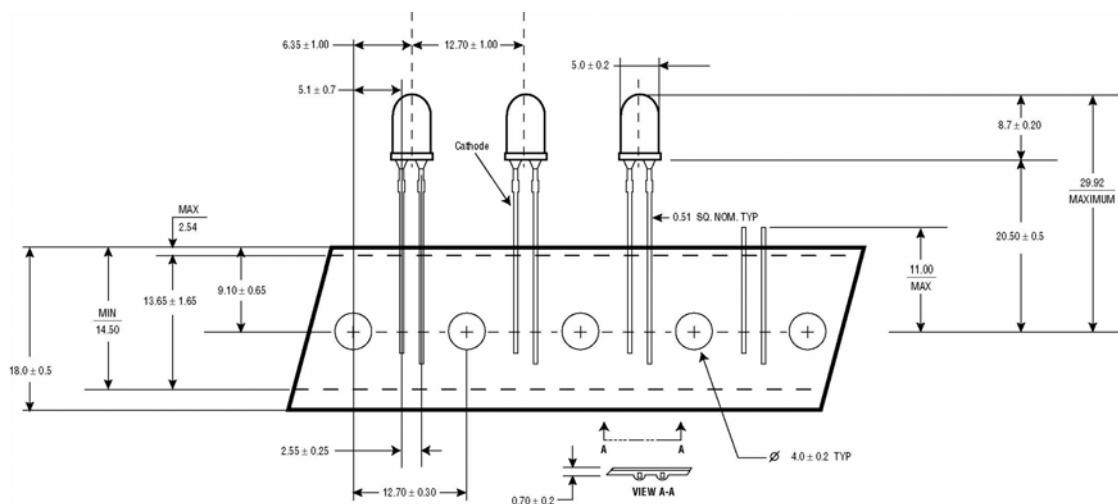
Packaging Specification

3. Reel: Lxx-xxxxxx-xxxx-x-x-T



DOMINANT	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

Average 1pc 4mm Lamp (g)	Empty Reel Weight (kg)	Quantity / Reel (pcs)	1 Completed Reel (kg)
0.29	0.39	1,300	0.95 ± 10



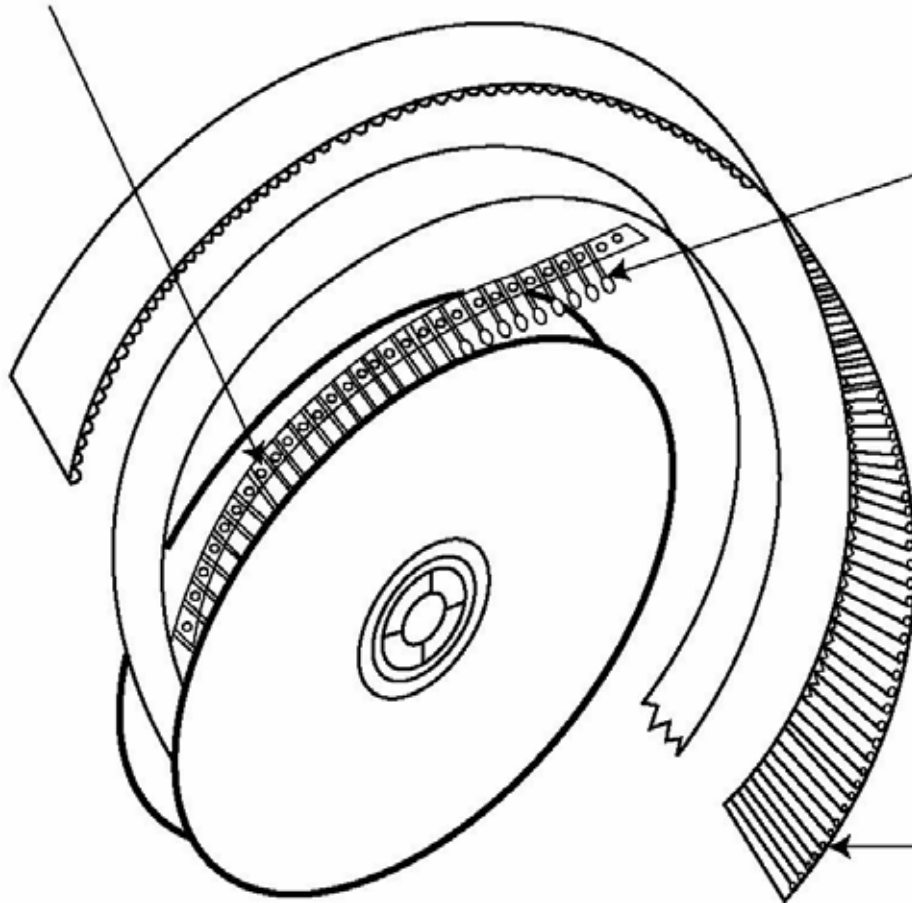
Packaging Specification

Adhesive Tape Must
Be Facing Towards
The Outside Of The Reel

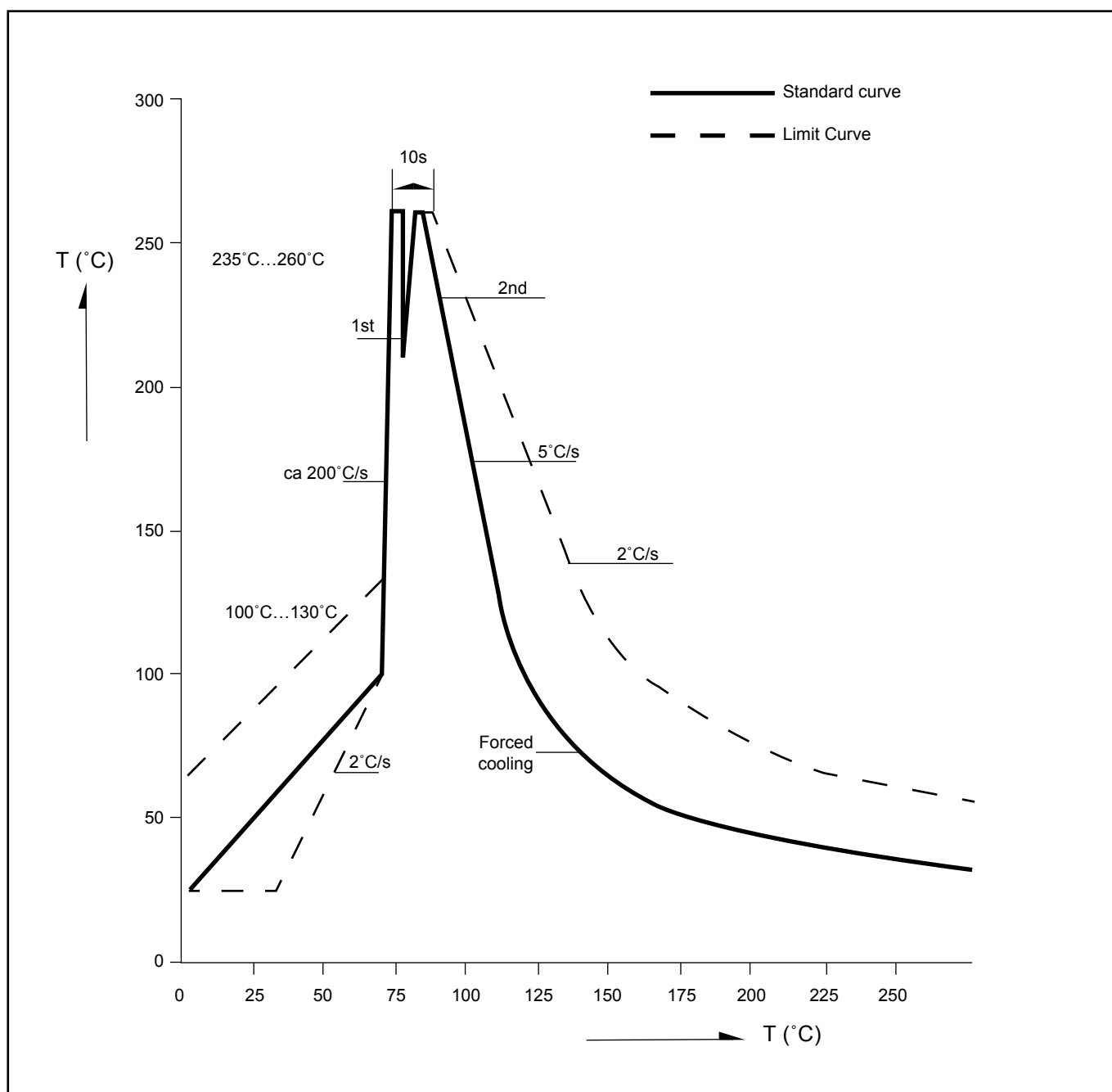
Reeling Orientation
Clockwise

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	09 Apr 2009
3	Add Vf Binning Option	07 May 2009
-	Update company name	01 Jul 2010

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.

DOMINANT Opto Technologies reserves the right to make changes at any time without prior notice to any products in order to improve reliability, function or design.

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>.

Please contact us for more information:

Head Quarter

DOMINANT Opto Technologies Sdn. Bhd.
Lot 6, Batu Berendam, FTZ Phase III, 75350 Melaka, Malaysia
Tel: (606) 283 3566 Fax: (606) 283 0566
E-mail: sales@dominant-semi.com

DOMINANT Semiconductors Malaysia Sdn. Bhd. Shanghai Representative Office

DOMINANT Semiconductors (Shenzhen) Co. Ltd.
Rm 1007, DaZhong Building, No. 1515 Zhong Shan (W) Rd, Shanghai, China 200235
Tel: +86 21 6428 6428 Fax: +86 21 6428 6880
E-mail: sales_china@dominant-semi.com

DOMINANT Korea Sales Office

DOMINANT Semiconductors Korea Inc.
RM 211 SUNTEAK CITY APT. 513-15 Sangdaewon-dong, Jungwon-gu, Seongnam-si, Gyeonggi-do, 462-725, Korea
Tel: +82-31-701-5203 Fax: +82-31-701-5204
E-mail: sales_korea@dominant-semi.com

DOMINANT U.S.A Sales Office

25 Rockaway Road, 08833 Lebanon, New Jersey, USA
Tel: (908) 439-9930 Cell: (908) 343-5810 Fax: (908) 439-9929
E-mail: don.wendel@dominant-semi.com

DOMINANT Europe Sales Office

DOMINANT Semiconductors Europe GmbH
Raiffeisenstr. 38, 74906 Bad Rappenau Germany
Tel: +49 (0) 7264-89010-10 / +49 (0) 7264-89010-11 Cell: +49 173-6907370 / +49 173-6907751
Fax: +49 (0) 7264-89010-29
E-mail: gerd.wachno@dominant-semi.eu; hartmut.wettengl@dominant-semi.eu

DOMINANT India Sales Office

C-11, Vasanth Business Centre #86, TTK Road, Alwarpet Chennai - 600 018, INDIA
Tel: 91-44-42030616 / 516 Cell: 91-9444920537 Fax: 91-9444920616
E-mail: pravat.behera@dominant-semi.com

