

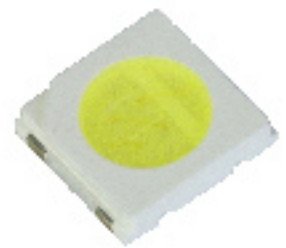
Primax[™]

Synonymous with function and performance, enter the Primax, the new era of high intensity illumination in LED. With its high flux output and high luminous intensity, Primax transcends today LED lightings technology and how we perceive it. The small package outline (3.7 x 3.5 x 0.8 mm) and high intensity make it an ideal choice for backlighting, signage, exterior automotive lighting and decorative lighting.



Features:

- > Super high brightness surface mount LED
- > 120° viewing angle.
- > Compact package outline (LxW) of 3.7 x 3.5 mm.
- > Ultra low height profile - 0.8mm.
- > Low thermal resistance.
- > Compatible to IR reflow soldering.
- > Environmental friendly; RoHS compliance.



Applications:

- > Backlighting (TFT LCD display), flash light, architectural lighting.

Optical Characteristics at Tj=25°C

Part Ordering Number	Color	Viewing Angle°	Luminous Flux @ 150mA (lm)		
			Min.	Typ.	Max.
MBWW-KSG-7T6U-1	White	120	71.8	82.0	93.4

NOTE

1. Luminous intensity is measured with an accuracy of ± 11%.
2. Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each reel.

Electrical Characteristics at Tj=25°C

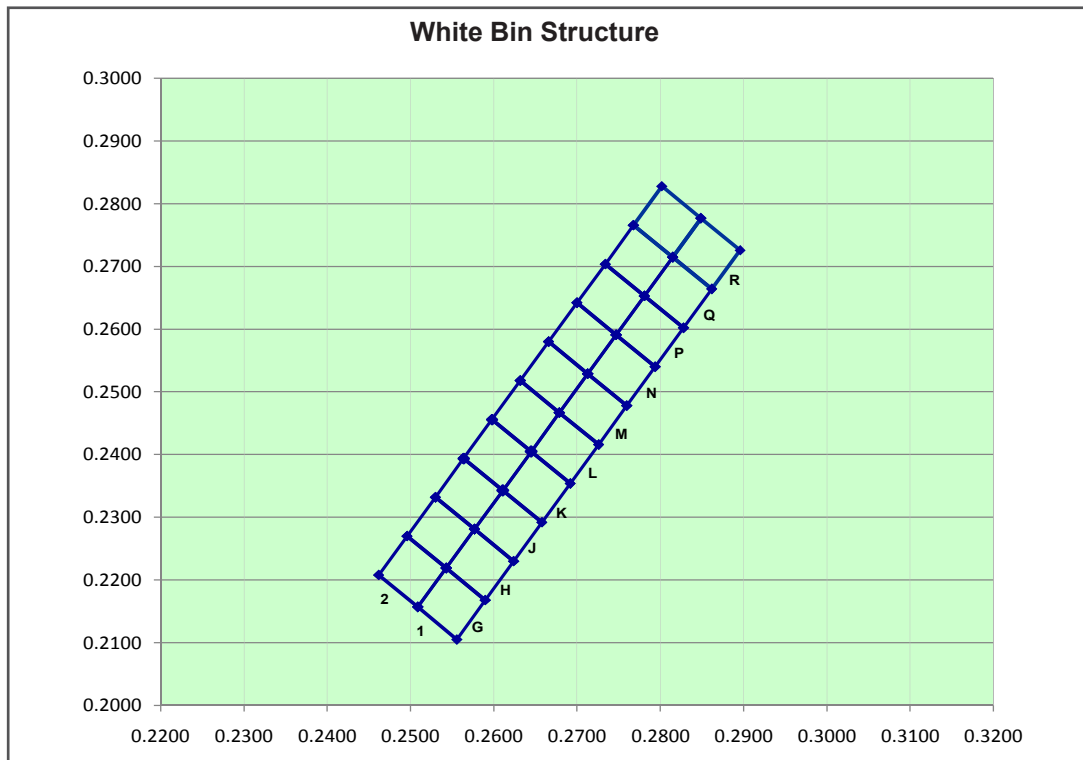
Part Number	Vf @ If = 150 mA			Vr @ Ir = 10uA
	Min. (V)	Typ. (V)	Max. (V)	Min. (V)
MBWW-KSG	6.0	6.5	7.2	5

Forward Voltages are tested using a current pulse of 1 ms and has an accuracy of ± 0.1 V.

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	180	mA
Peak pulse current	200	mA
Reverse voltage	5	V
ESD threshold (HBM)	1000	V
LED junction temperature	150	°C
Operating temperature	-40 ... +100	°C
Storage temperature	-40 ... +100	°C

MBWW-KSG, White Color Grouping



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

Bin		1	2	3	4
2G	Cx	0.2462	0.2509	0.2543	0.2496
	Cy	0.2208	0.2157	0.2219	0.2270
1G	Cx	0.2509	0.2556	0.2590	0.2543
	Cy	0.2157	0.2105	0.2168	0.2219
2H	Cx	0.2496	0.2543	0.2577	0.2530
	Cy	0.2270	0.2219	0.2281	0.2332
1H	Cx	0.2543	0.2590	0.2624	0.2577
	Cy	0.2219	0.2168	0.2230	0.2281
2J	Cx	0.2530	0.2577	0.2611	0.2564
	Cy	0.2332	0.2281	0.2343	0.2394
1J	Cx	0.2577	0.2624	0.2658	0.2611
	Cy	0.2281	0.2230	0.2292	0.2343
2K	Cx	0.2564	0.2611	0.2645	0.2598
	Cy	0.2394	0.2343	0.2405	0.2456
1K	Cx	0.2611	0.2658	0.2692	0.2645
	Cy	0.2343	0.2292	0.2354	0.2405
2L	Cx	0.2598	0.2645	0.2679	0.2632
	Cy	0.2456	0.2405	0.2467	0.2518
1L	Cx	0.2645	0.2692	0.2726	0.2679
	Cy	0.2405	0.2354	0.2416	0.2467

Bin		1	2	3	4
2M	Cx	0.2632	0.2679	0.2713	0.2666
	Cy	0.2518	0.2467	0.2529	0.2580
1M	Cx	0.2679	0.2726	0.2760	0.2713
	Cy	0.2467	0.2416	0.2478	0.2529
2N	Cx	0.2666	0.2713	0.2747	0.2700
	Cy	0.2580	0.2529	0.2591	0.2642
1N	Cx	0.2713	0.2760	0.2794	0.2747
	Cy	0.2529	0.2478	0.2540	0.2591
2P	Cx	0.2700	0.2747	0.2781	0.2734
	Cy	0.2642	0.2591	0.2653	0.2704
1P	Cx	0.2747	0.2794	0.2828	0.2781
	Cy	0.2591	0.2540	0.2602	0.2653
2Q	Cx	0.2734	0.2781	0.2815	0.2768
	Cy	0.2704	0.2653	0.2715	0.2766
1Q	Cx	0.2781	0.2828	0.2862	0.2815
	Cy	0.2653	0.2602	0.2664	0.2715
2R	Cx	0.2768	0.2815	0.2849	0.2802
	Cy	0.2766	0.2715	0.2777	0.2828
1R	Cx	0.2815	0.2862	0.2896	0.2849
	Cy	0.2715	0.2664	0.2726	0.2777

Dominant color coordinate is measured with an accuracy of ± 0.01 .

Luminous Intensity Group at Tj=25°C

Brightness Group	Luminous Flux @ IV (lm)
7T	71.8 ... 76.5
8T	76.5 ... 81.9
9T	81.9 ... 87.4
6U	87.4 ... 93.4

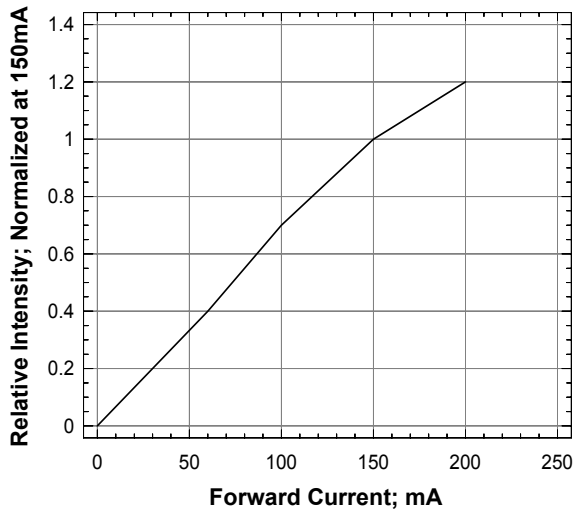
Luminous intensity is measured with an accuracy of ± 11%.

Vf Binning

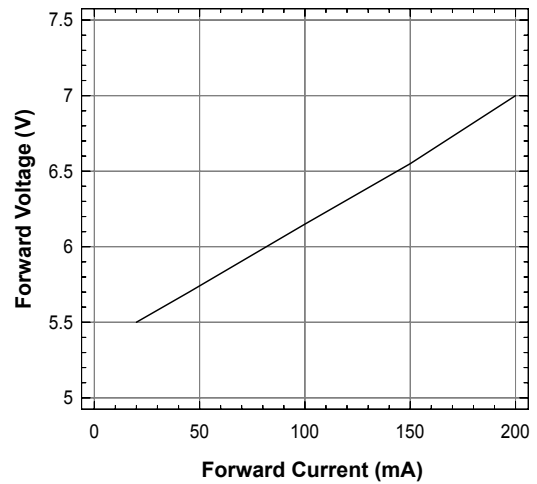
Vf Bin @ 150mA	Forward Voltage (V)
V1	6.00 ... 6.20
V2	6.20 ... 6.40
V3	6.40 ... 6.60
V4	6.60 ... 6.80
V5	6.80 ... 7.00
V6	7.00 ... 7.20

Forward voltage, Vf is measured with an accuracy of ± 0.1 V.

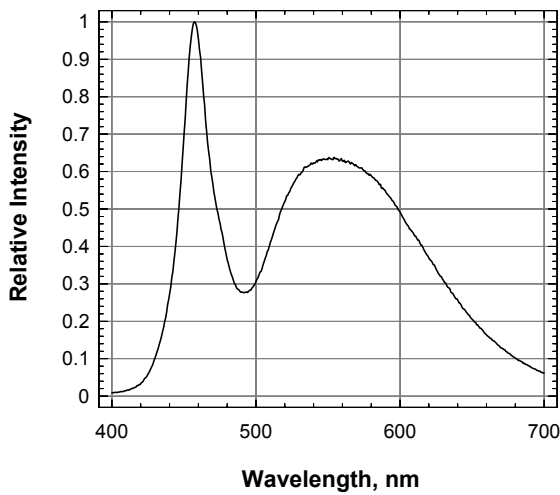
Relative Intensity Vs Forward Current



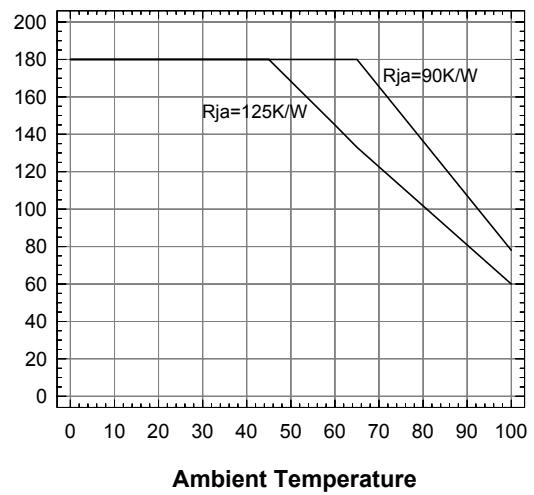
Forward Voltage Vs Forward Current



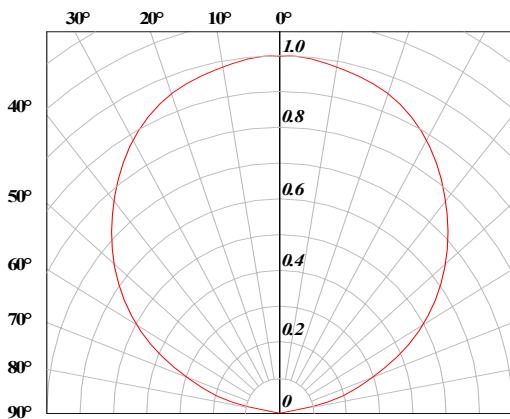
Relative Intensity Vs Wavelength



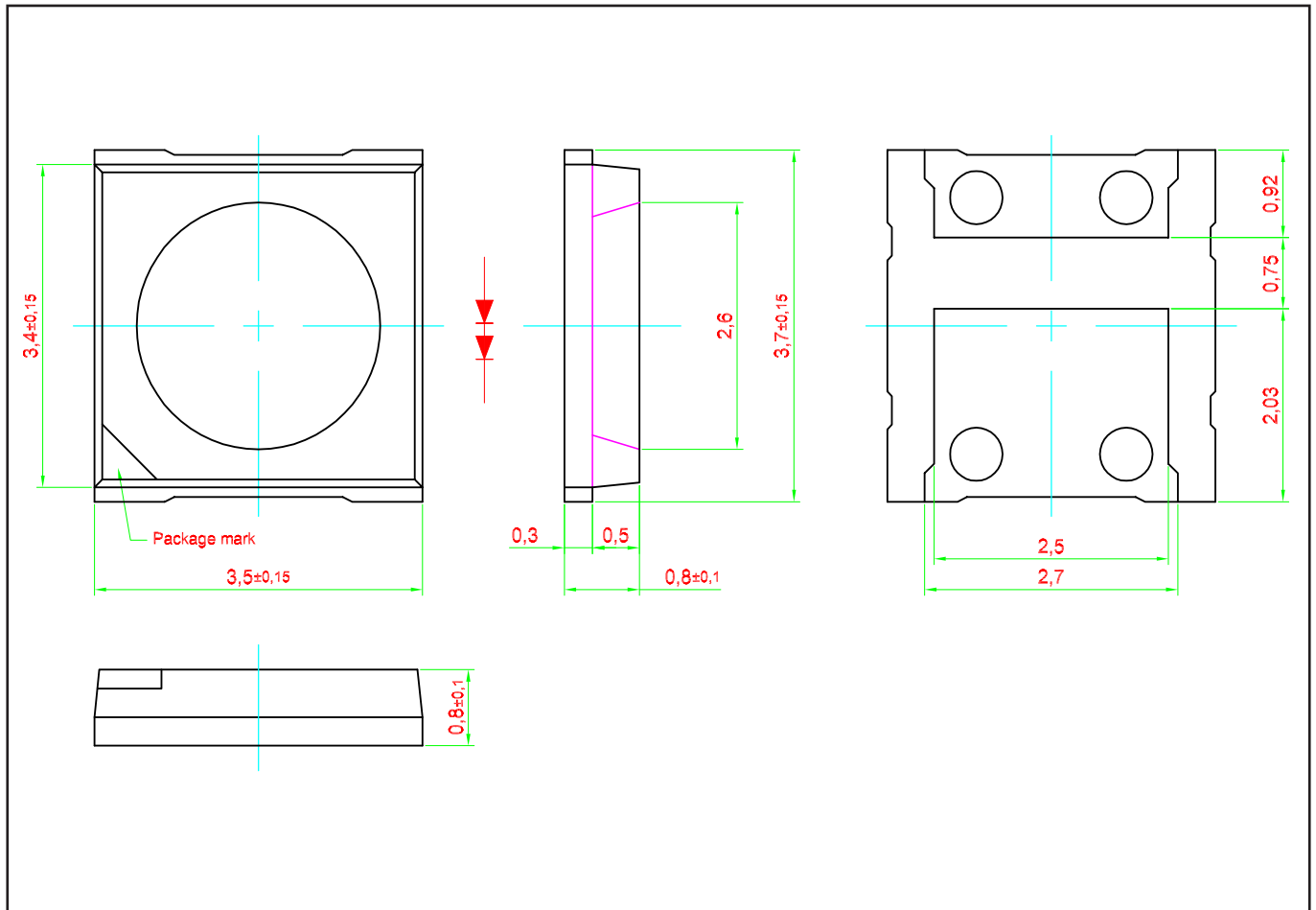
Forward Current Vs Ambient Temperature



Radiation Pattern



Primax™ • 150 InGaN White: MBWW-KSG Package Outlines

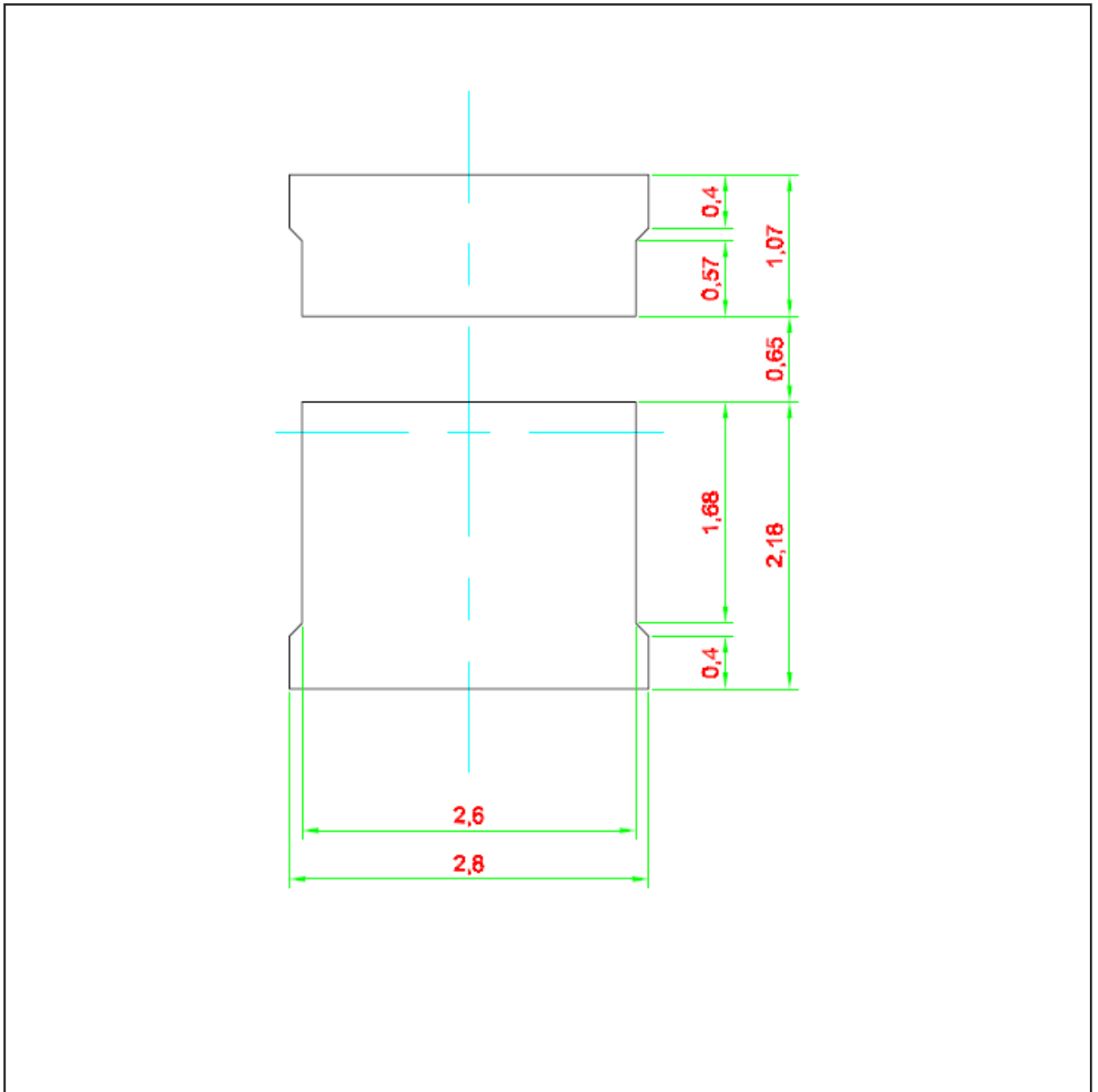


Material

Material	
Lead-frame	Cu Alloy With Ag Plating
Package	High Temperature Resistant Plastic, PPA
Encapsulant	Silicone Resin
Soldering Leads	Ag Plating

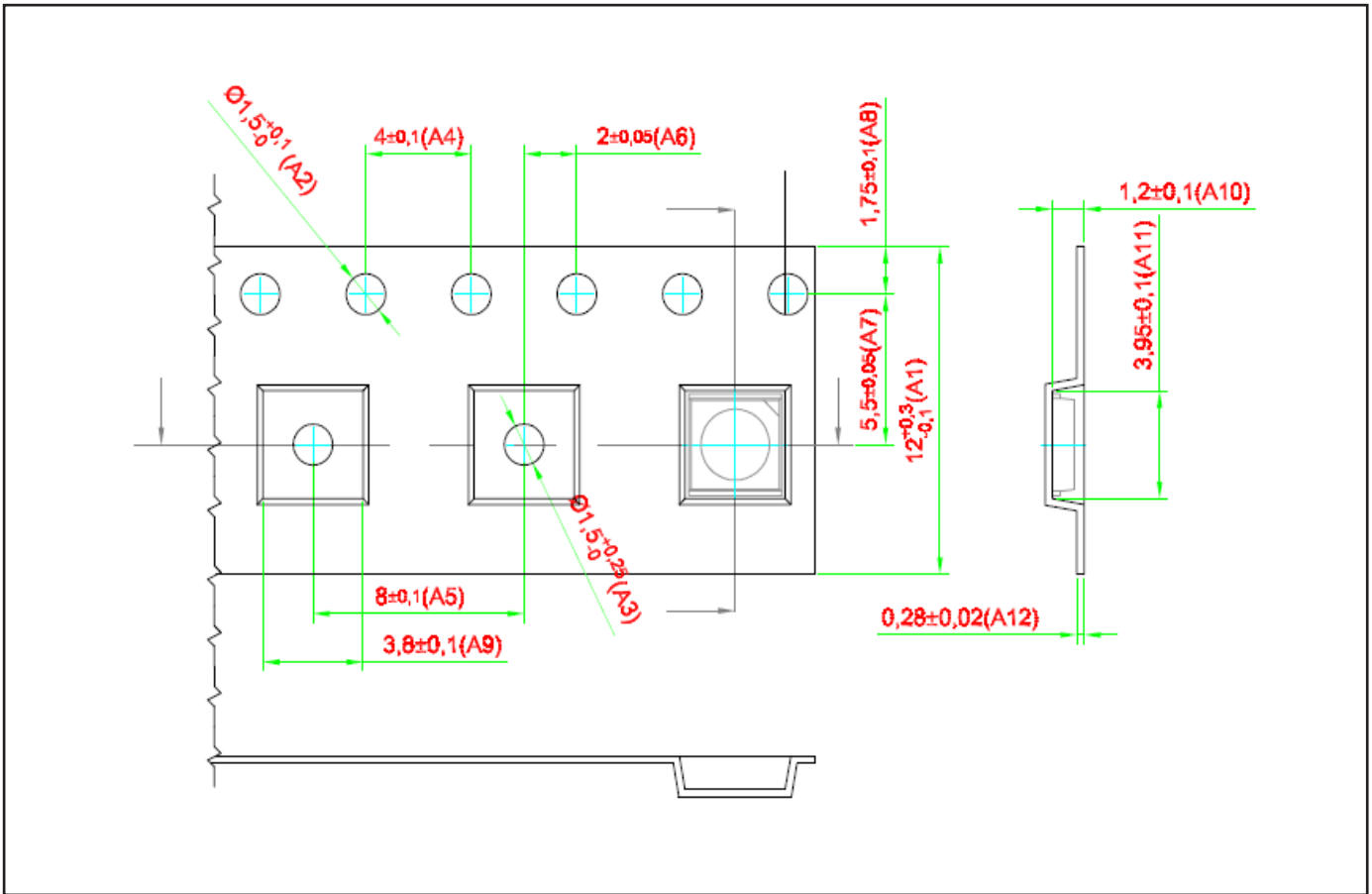
Note: This product is Pb free

Recommended Solder Pad

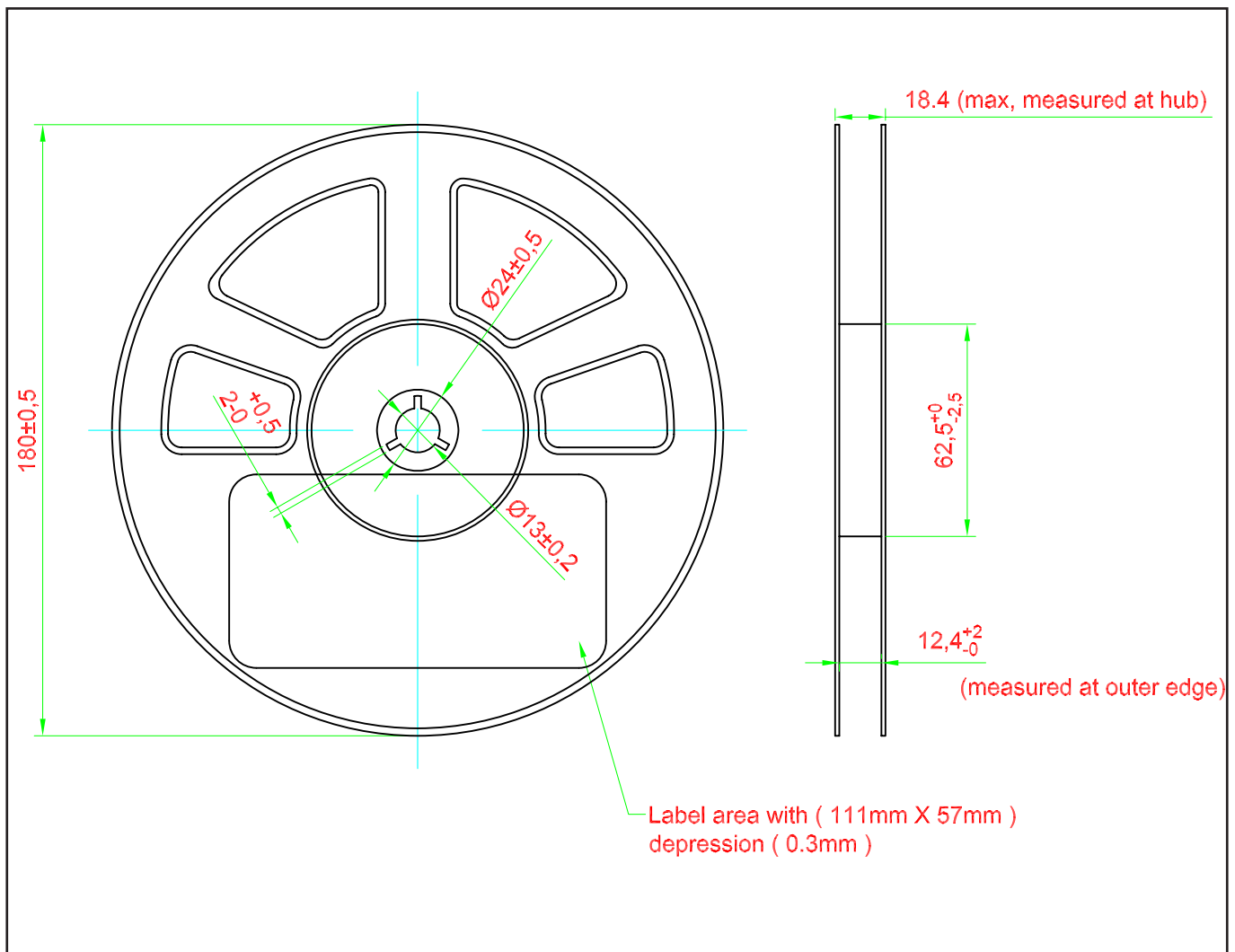


Taping and orientation

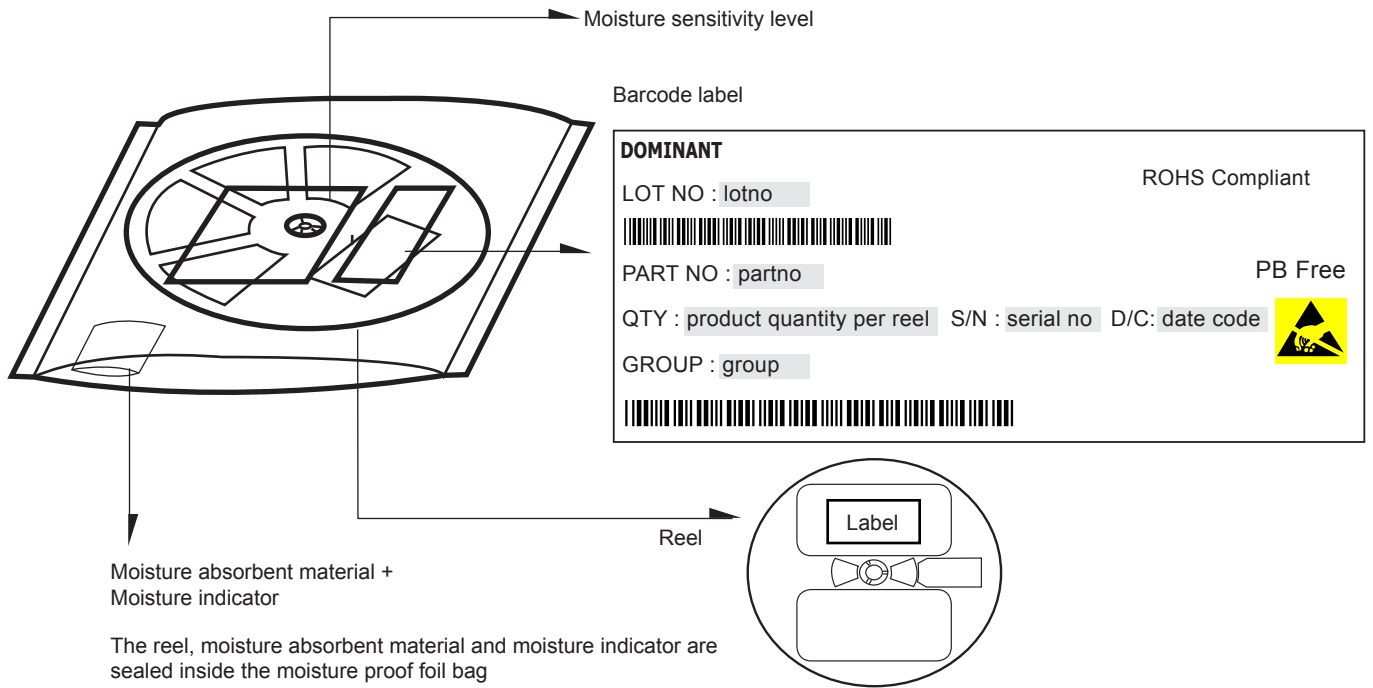
- Reels come in quantity of 1000 units.
- Reel diameter is 180 mm.



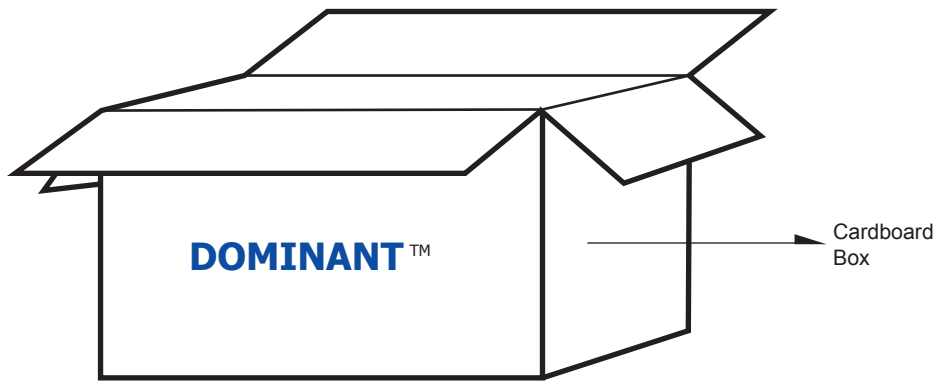
Packaging Specification



Packaging Specification



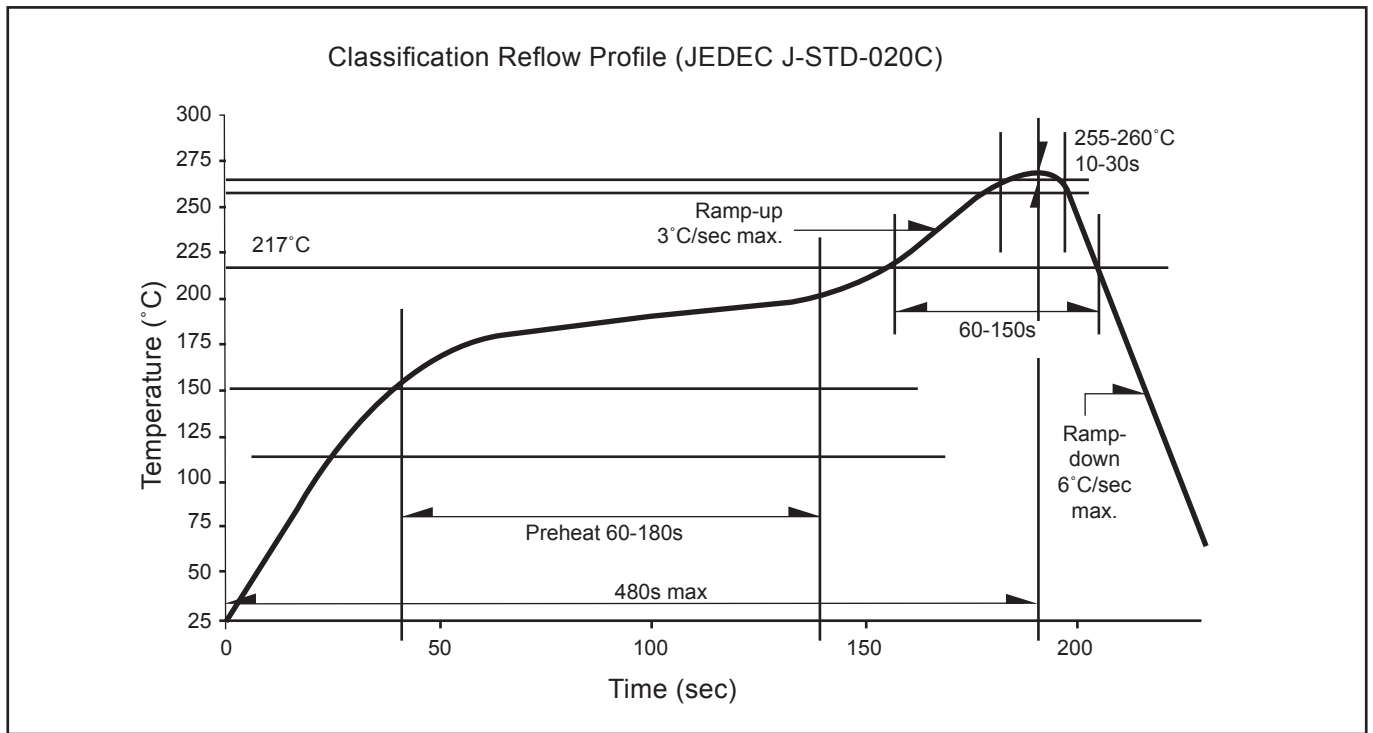
	Average 1pc Primax	1 completed bag (1000pcs)
Weight (gram)	0.041	160 ± 10



For Primax™

Cardboard Box Size	Dimensions (mm)	Empty Box Weight (kg)	Reel / Box	Quantity / Box (pcs)
Small	300 x 250 x 250	0.58	15 reels MAX	15,000 MAX
Large	416 x 516 x 476	1.74	96 reels MAX	96,000 MAX

Recommended Pb-free Soldering Profile



Revision History

Page	Subjects	Date of Modification
-	Initial Release	05 Oct 2012
6	Update graph: Relatvie Intensity Vs Forward Current	31 May 2013
9	Update Carrier Tape	14 Nov 2013

NOTE

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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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