DOMINANT™
Opto Technologies
Innovating Illumination

DATA SHEET :

PrimaxPlus

350 InGaN Yellow : MAZY-YZHG

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.
- Superior corrosion robustness.



Applications:

- Automotive: Exterior application: eg: Signal Lighting, Rear Combination Lights (RCLs), .
- Industrial: White goods (eg: Oven, Microwave), Light bar, Illuminated advertising.

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Optical Characteristics at Tj=25^{0}C

Part Ordering Number	Color	Viewing Angle°	Luminous Flux @ 350mA (lm)		
			Min.	Typ.	Max.
MAZY-YZHG-TU2-1	InGaN Yellow	120	67.2	87.4	99.4

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^{0}C

Part Number	Vf @ If = 350 mA		
	Min. (V)	Typ. (V)	Max. (V)
MAZY-YZHG	2.9	3.2	3.4

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

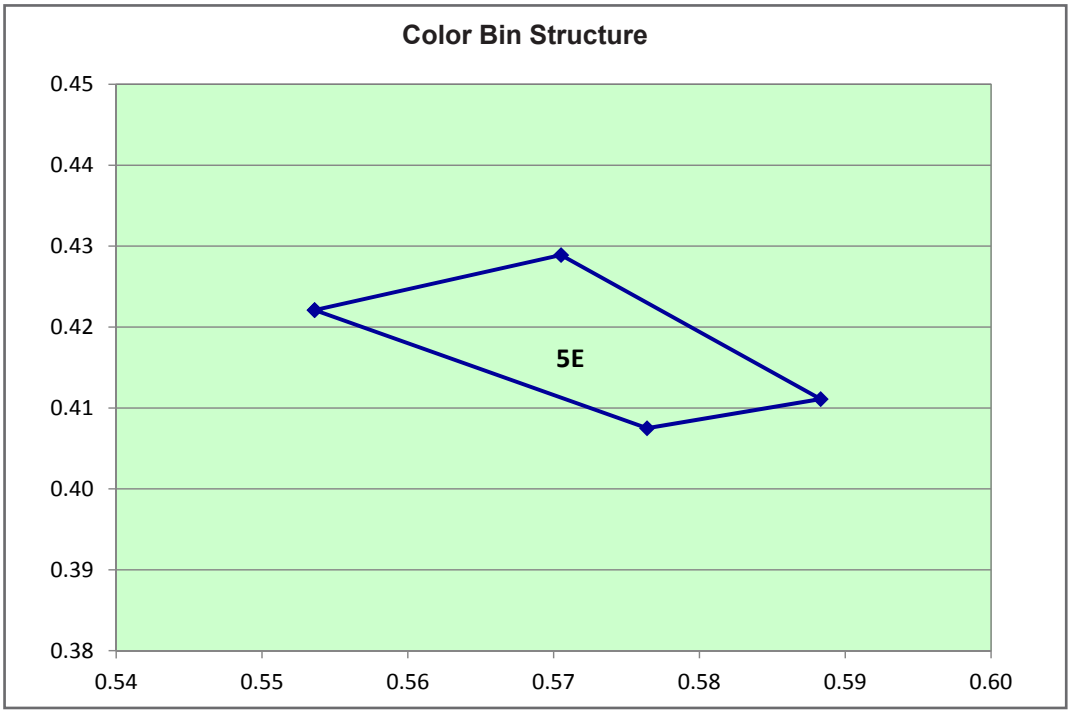
Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	500	mA
Peak pulse current (tp<=10µs, Duty cycle=0.005)	750	mA
Reverse voltage	Not designed for reverse bias	V
ESD threshold (HBM)	4000	V
LED junction temperature	150	˚C
Operating temperature	-40 … +125	˚C
Storage temperature	-40 … +125	˚C
Thermal resistance - Junction / solder point, $R_{th\ JS}$ (Mounting on DOMINANT standard PCB)	25	K/W

Characteristics

	Symbol	Part Number	Value	Unit
Temperature coefficient of V_F (typ) I_F = 350mA; 0 ˚C <= T <= 100˚C	TC_V	MAZY-YZHG	-2.2	mV / K
Temperature coefficient of I_V (typ) I_F = 350mA; 0 ˚C <= T <= 100 ˚C	TC_{IV}	MAZY-YZHG	-0.20	% / K
Temperature coefficient of Cx (typ) I_F = 350mA; 0 ˚C <= T <= 100 ˚C	TC_{Cx}	MAZY-YZHG	0.00001	
Temperature coefficient of Cy (typ) I_F = 350mA; 0 ˚C <= T <= 100 ˚C	TC_{Cy}	MAZY-YZHG	-0.00001	

MAZY-YZHG, Color Grouping



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

Bin		1	2	3	4
5E	Cx	0.5536	0.5705	0.5883	0.5764
	Cy	0.4221	0.4289	0.4111	0.4075

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

Luminous Intensity Group at Tj=25^{0}C

Brightness Group	Luminous Flux IV (lm)
T2	67.2 ... 76.5
T3	76.5 ... 87.4
U2	87.4 ... 99.4

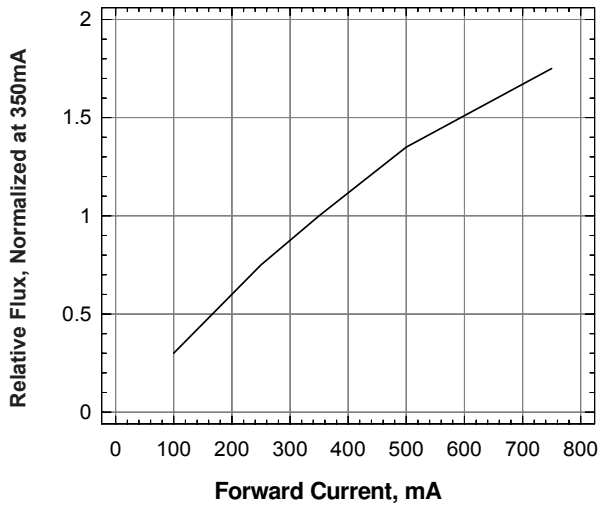
Luminous intensity is measured with an accuracy of ± 11%.

Vf Binning (Optional)

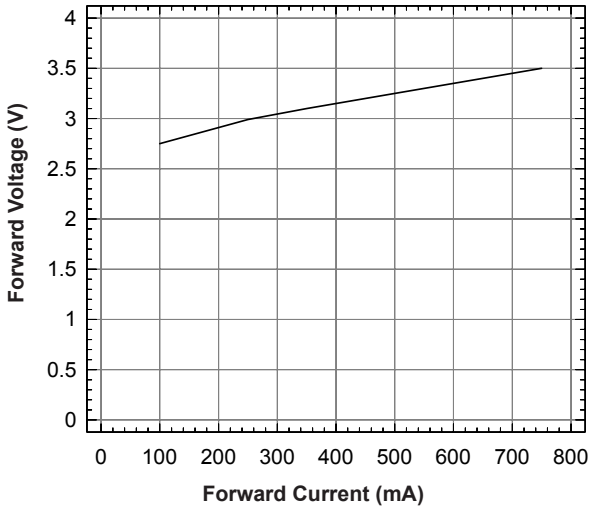
Vf Bin @ 350mA	Forward Voltage (V)
V1	2.80 ... 3.10
V2	3.10 ... 3.40

Forward voltage, Vf is measured with an accuracy of ± 0.1 V.
Please consult sales and marketing for special part number to incorporate Vf binning.

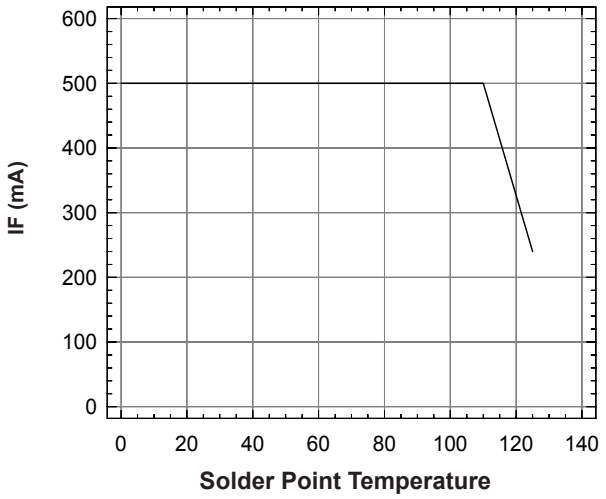
Relative Flux Vs Forward Current



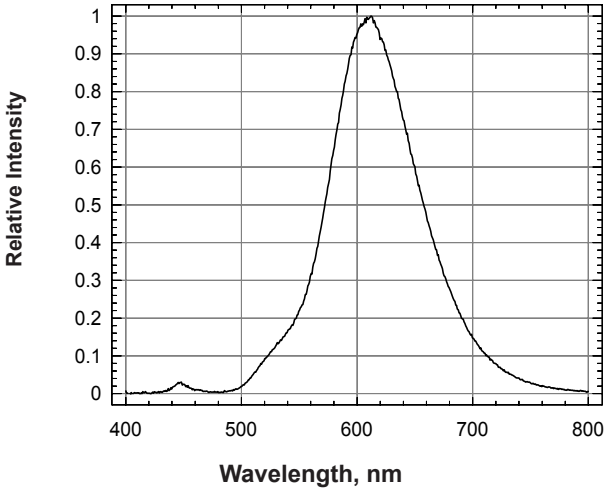
Forward Voltage Vs Forward Current



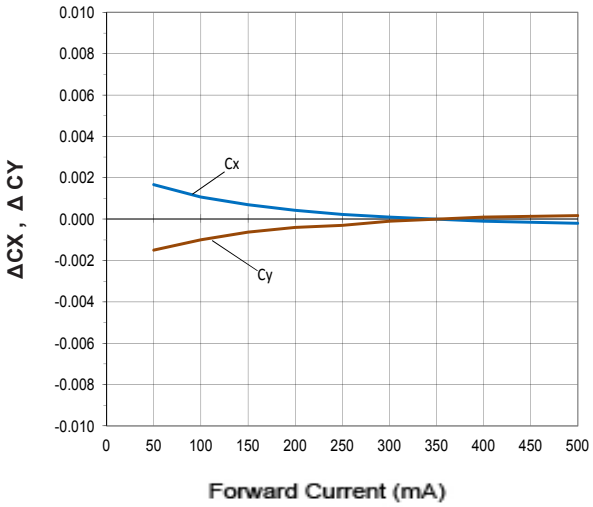
Maximum Current Vs Solder Point Temperature



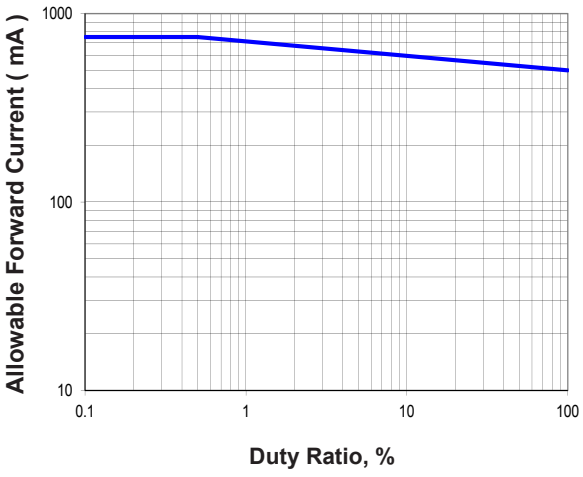
Relative Intensity Vs Wavelength



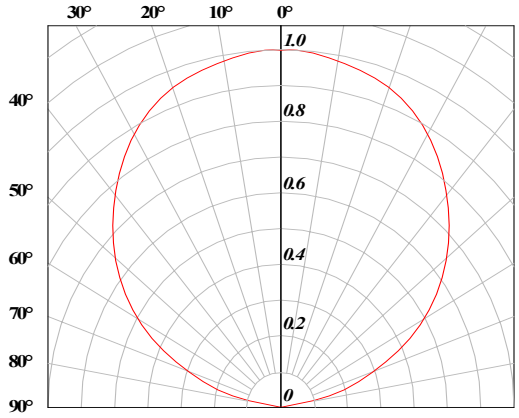
Chromaticity Coordinate Shift



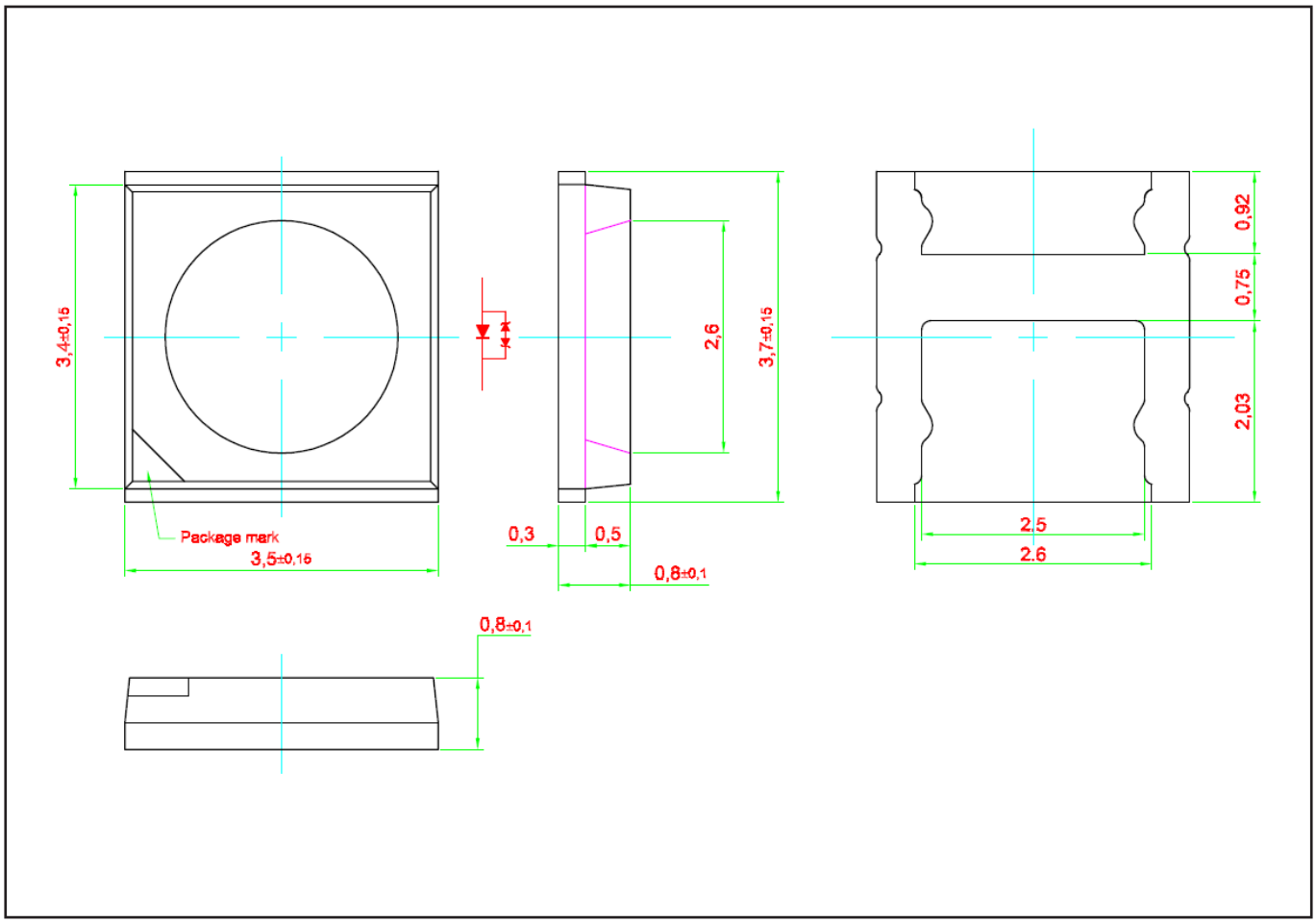
Allowable Forward Current Vs Duty Ratio
(Ta=25 Deg C, tp≤10uS)



Radiation Pattern



PrimaxPlus • 350 InGaN Yellow: MAZY-YZHG Package Outlines

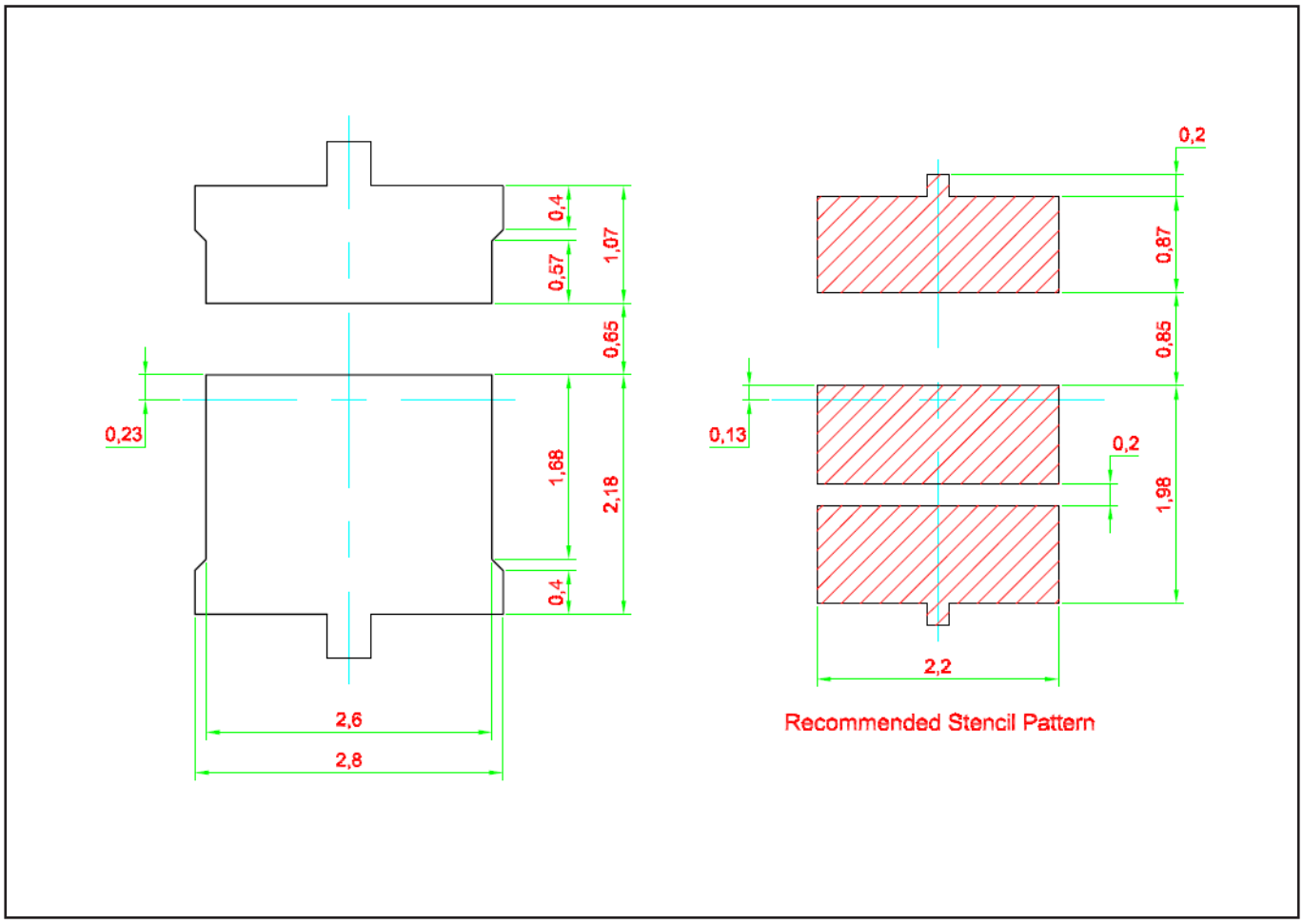


Material

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

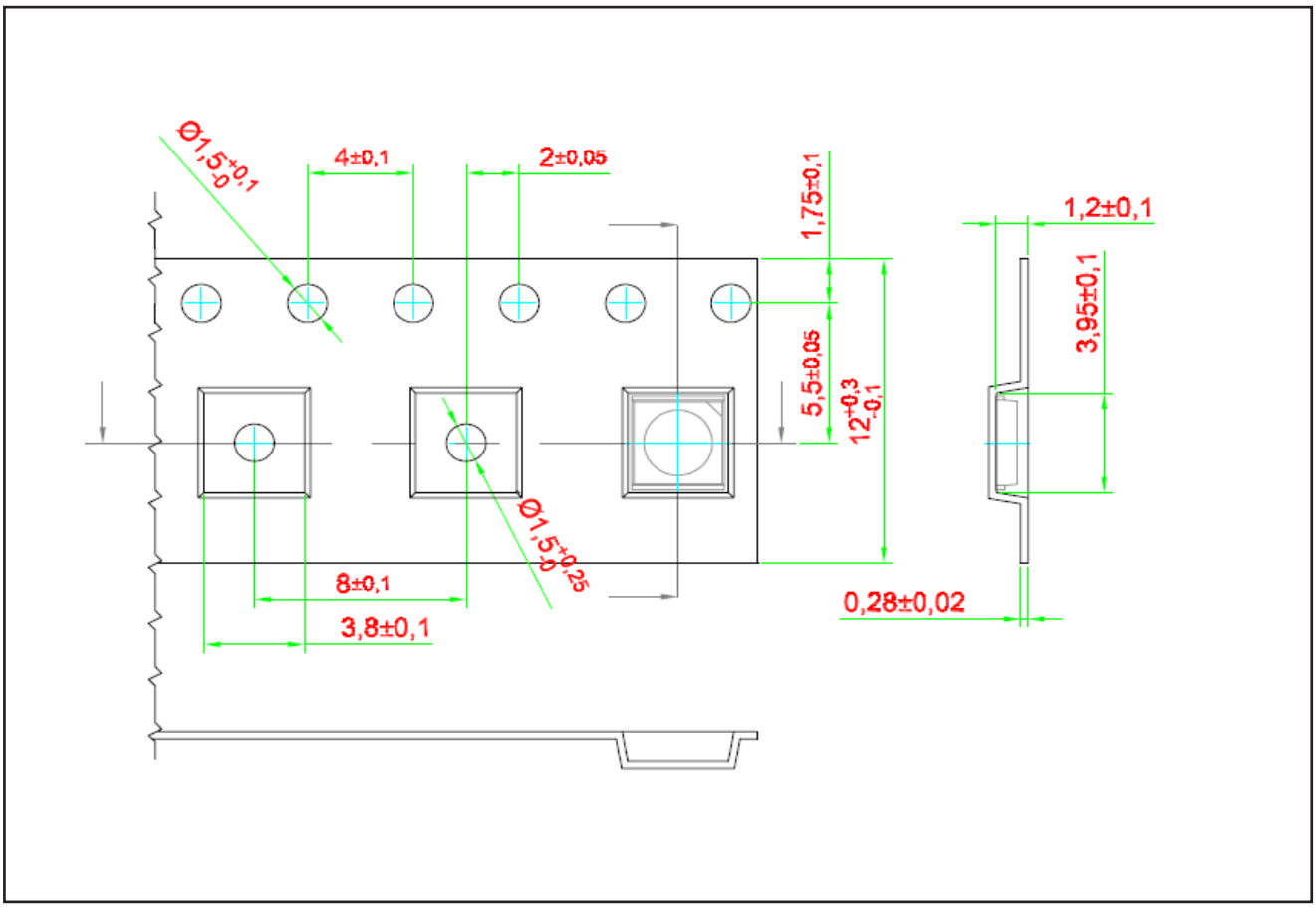
Note: This product is Pb free

Recommended Solder Pad

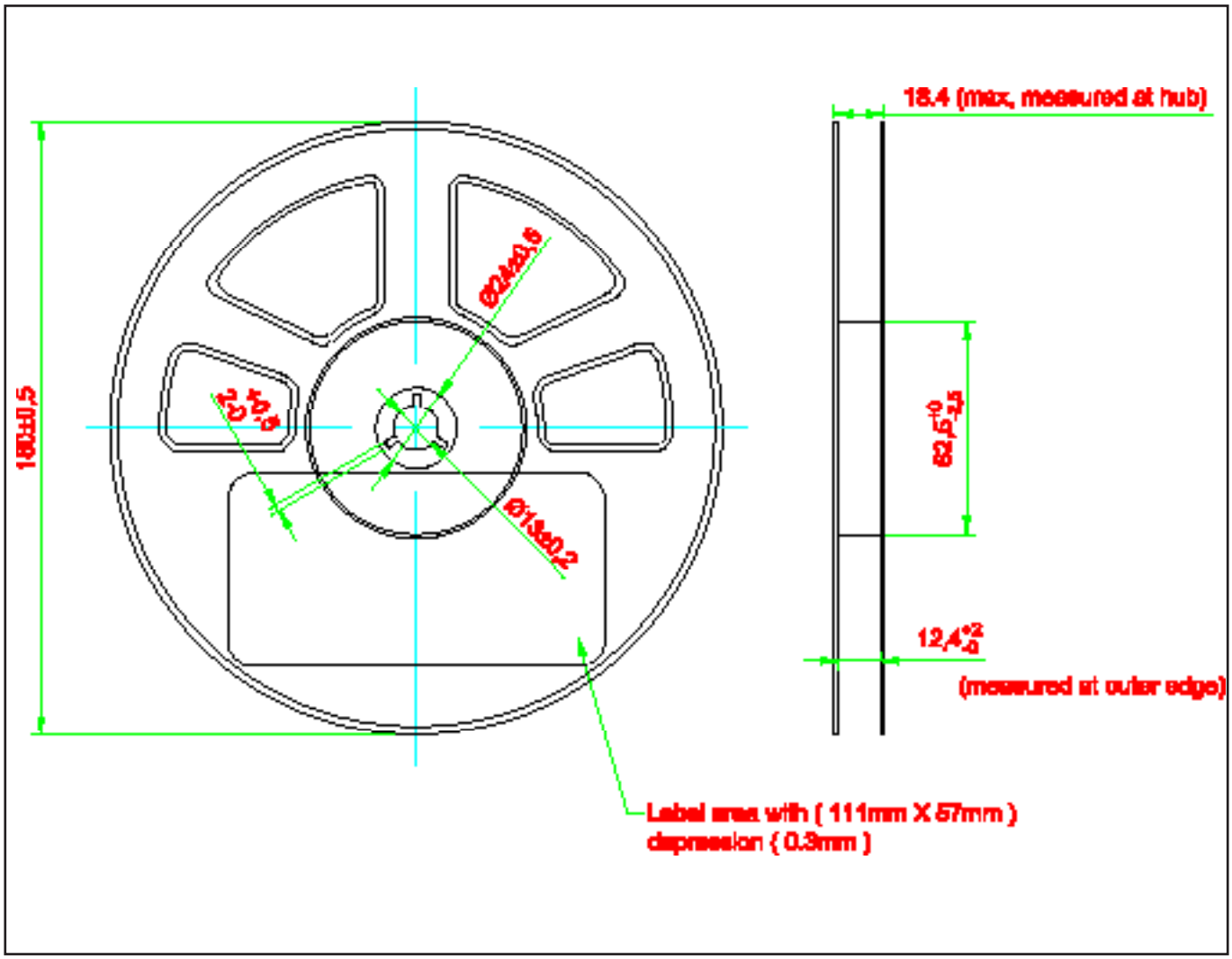


Taping and orientation

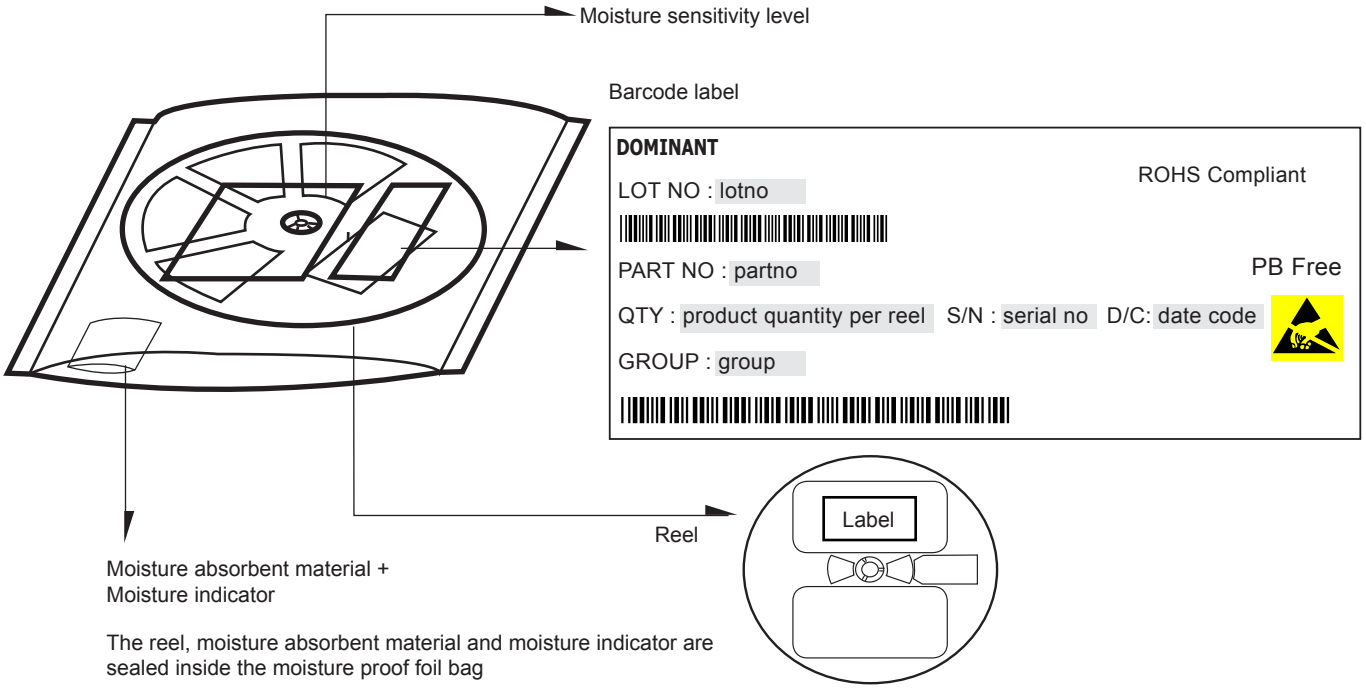
- Reels come in quantity of 1000 units.
- Reel diameter is 180 mm.



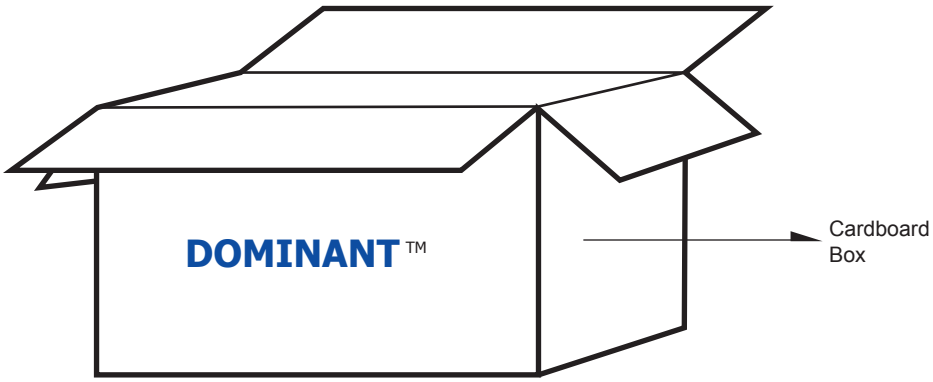
Packaging Specification



Packaging Specification



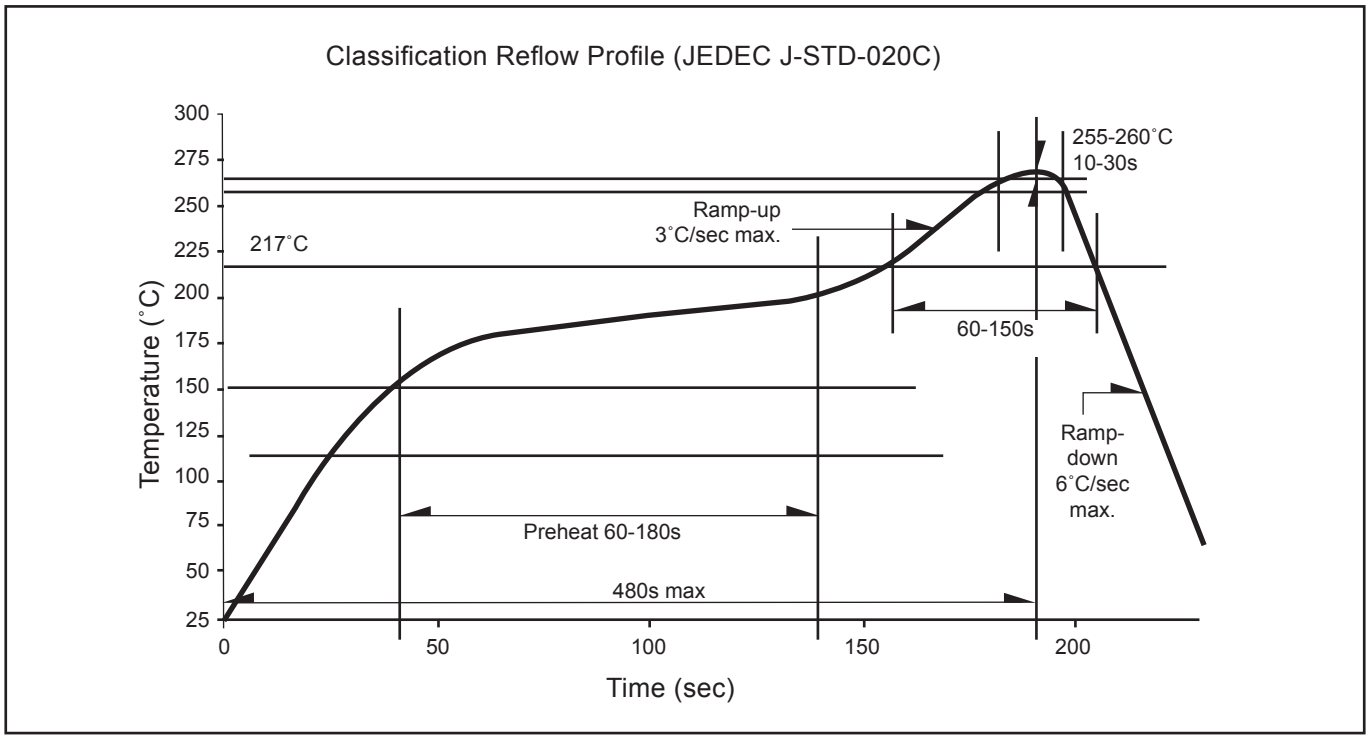
	Average 1pc PrimaxPlus	1 completed bag (1000pcs)
Weight (gram)	**0.041**	**160 ± 10**



For PrimaxPlus

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	26 Sep 2014
2, 5	Update Vf Add Vf Binning	03 Jun 2015

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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