

Mini DomiLED™

With the intense colors that seem to glow with energy and its significant brightness, Mini DomiLED™ white LED is a highly reliable design device. Its dynamic nature makes it perfect choice for lighthning applications, office and home applications and standard industrial applications.



Features:

- > High brightness surface mount LED.
- > Based on InGaN technology.
- > 120° viewing angle.
- > Small package outline (LxWxH) of 2.0 x 1.4 x 1.3mm.
- > Qualified according to JEDEC moisture sensitivity Level 2.
- > Compatible to both IR reflow soldering.
- > Environmental friendly; RoHS compliance.



Applications:

- > Automotive: interior applications, eg: switches, telematics, climate control system, dashboard, etc.
- > Communication: indicator and backlight in mobilephone.
- > Display: full color display video notice board.
- > Industry: white goods (eg: Oven, microwave, etc.).



Optical Characteristics at Tj=25°C

Part Ordering Number	Color	Viewing Angle°	Luminous Intensity @ IF = 10mA IV (mcd)		
			Min.	Typ.	Max.
DNZP-DJG-RS1-1-I1	InGaN Pure Green	120	112.5	180.0	224.0

NOTE

1. All part number above comes in a quantity of 3000 units per reel.
2. Other luminous intensity groups are also available upon request.
3. Luminous intensity is measured with an accuracy of $\pm 11\%$.
4. Color binning is carried for all units as per the color binning table. Only one color group is allowed for each reel.

Electrical Characteristics at Tj=25°C

Part Number	Vf @ If = 10 mA			Vr @ Ir = 10 μ A
	Min. (V)	Typ. (V)	Max. (V)	Min. (V)
DNZP-DJG	2.7	3.0	3.5	5.0

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

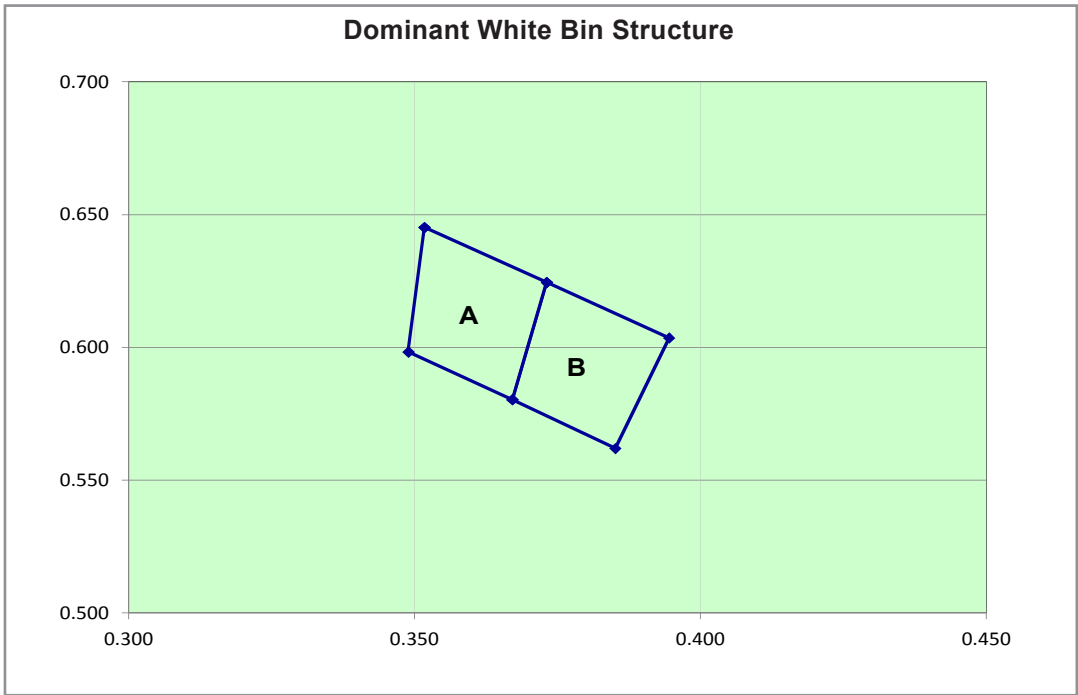
Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	20	mA
Peak pulse current; (tp $\leq$ 10 μ s, Duty cycle = 0.005)	100	mA
Reverse voltage	5	V
ESD threshold (HBM)	2000	V
LED junction temperature	110	°C
Operating temperature	-40 ... +100	°C
Storage temperature	-40 ... +100	°C
Power dissipation (at room temperature)	70	mW
Thermal resistance		
- Junction / ambient, Rth JA	530	K/W
- Junction / solder point, Rth JS	280	K/W
(Mounting on FR4 PCB, pad size $\geq$ 5 mm ² per pad)		

Characteristics

	Symbol	Part Number	Value	Unit
Temperature coefficient of V_F (typ) $I_F = 10\text{mA}$; $0\text{ }^{\circ}\text{C} \leq T \leq 100\text{ }^{\circ}\text{C}$	TC_V	DNZP-DJG	-2.0	mV / K
Temperature coefficient of I_V (typ) $I_F = 10\text{mA}$; $0\text{ }^{\circ}\text{C} \leq T \leq 100\text{ }^{\circ}\text{C}$	TC_{IV}	DNZP-DJG	-0.28	% / K
Temperature coefficient of C_x (typ) $I_F = 10\text{mA}$; $0\text{ }^{\circ}\text{C} \leq T \leq 100\text{ }^{\circ}\text{C}$	TC_{Cx}	DNZP-DJG	0.00002	C_x / K
Temperature coefficient of C_y (typ) $I_F = 10\text{mA}$; $0\text{ }^{\circ}\text{C} \leq T \leq 100\text{ }^{\circ}\text{C}$	TC_{Cy}	DNZP-DJG	-0.00003	C_y / K

DNZP, White Color Grouping



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

Bin		1	2	3	4
A	Cx	0.3517	0.3489	0.3671	0.3731
	Cy	0.6452	0.5983	0.5804	0.6245
B	Cx	0.3731	0.3671	0.3851	0.3945
	Cy	0.6245	0.5804	0.5620	0.6036

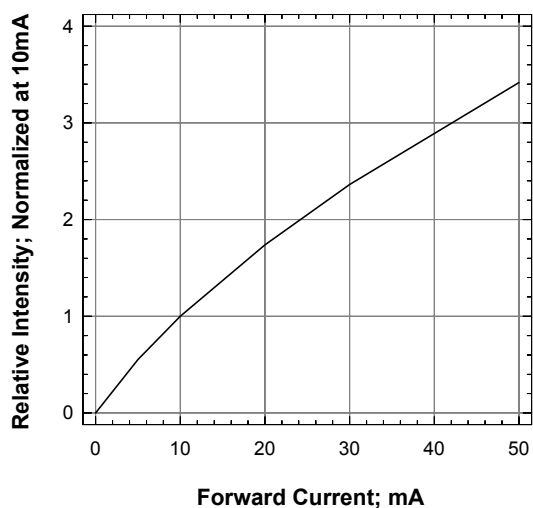
Dominant color coordinate is measured with an accuracy of ± 0.01 .

Luminous Intensity Group at Tj=25°C

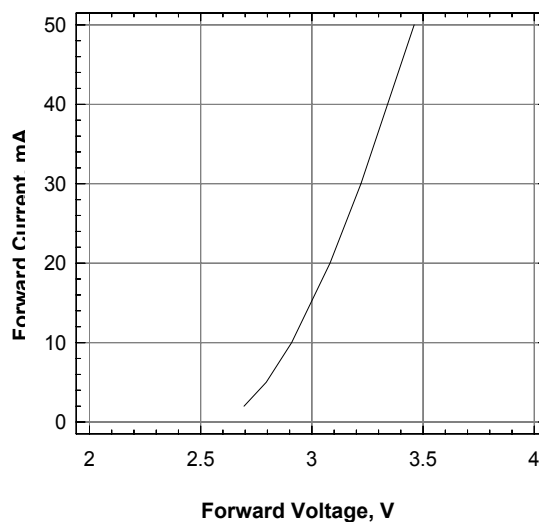
Brightness Group	Luminous Intensity IV (mcd)
R1	112.50 ... 140.00
R2	140.00 ... 180.00
S1	180.00 ... 224.00

Luminous intensity is measured with an accuracy of $\pm 11\%$.

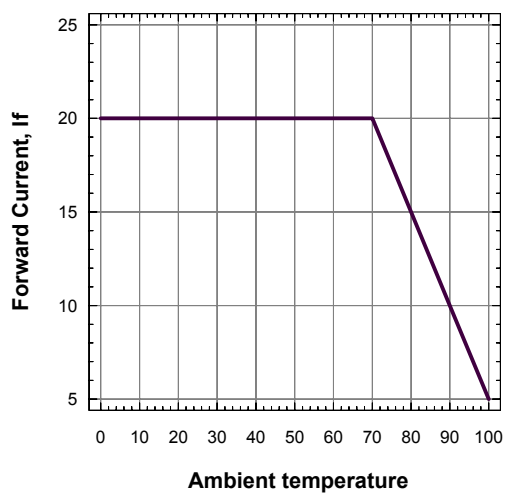
Relative Intensity Vs Forward Current



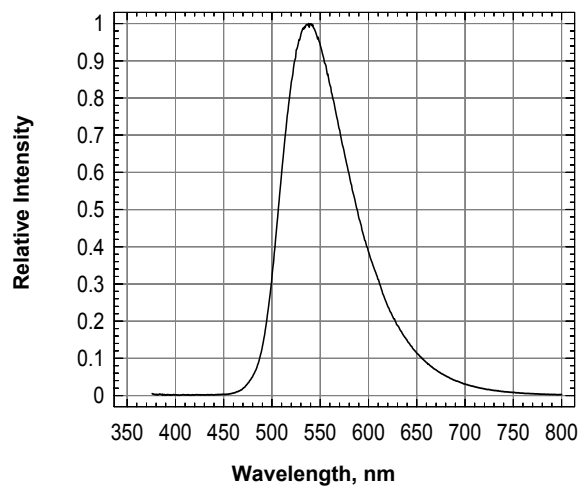
Forward Current Vs Forward Voltage



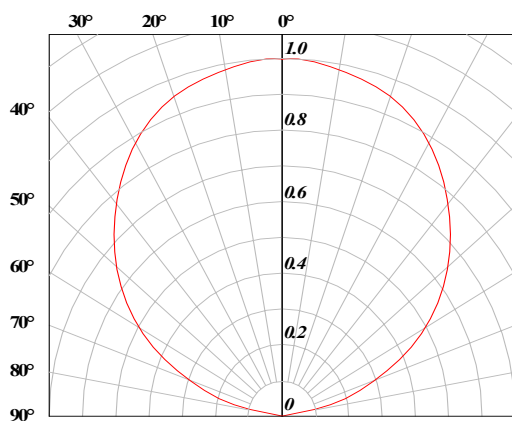
Maximum Current Vs Ambient Temperature



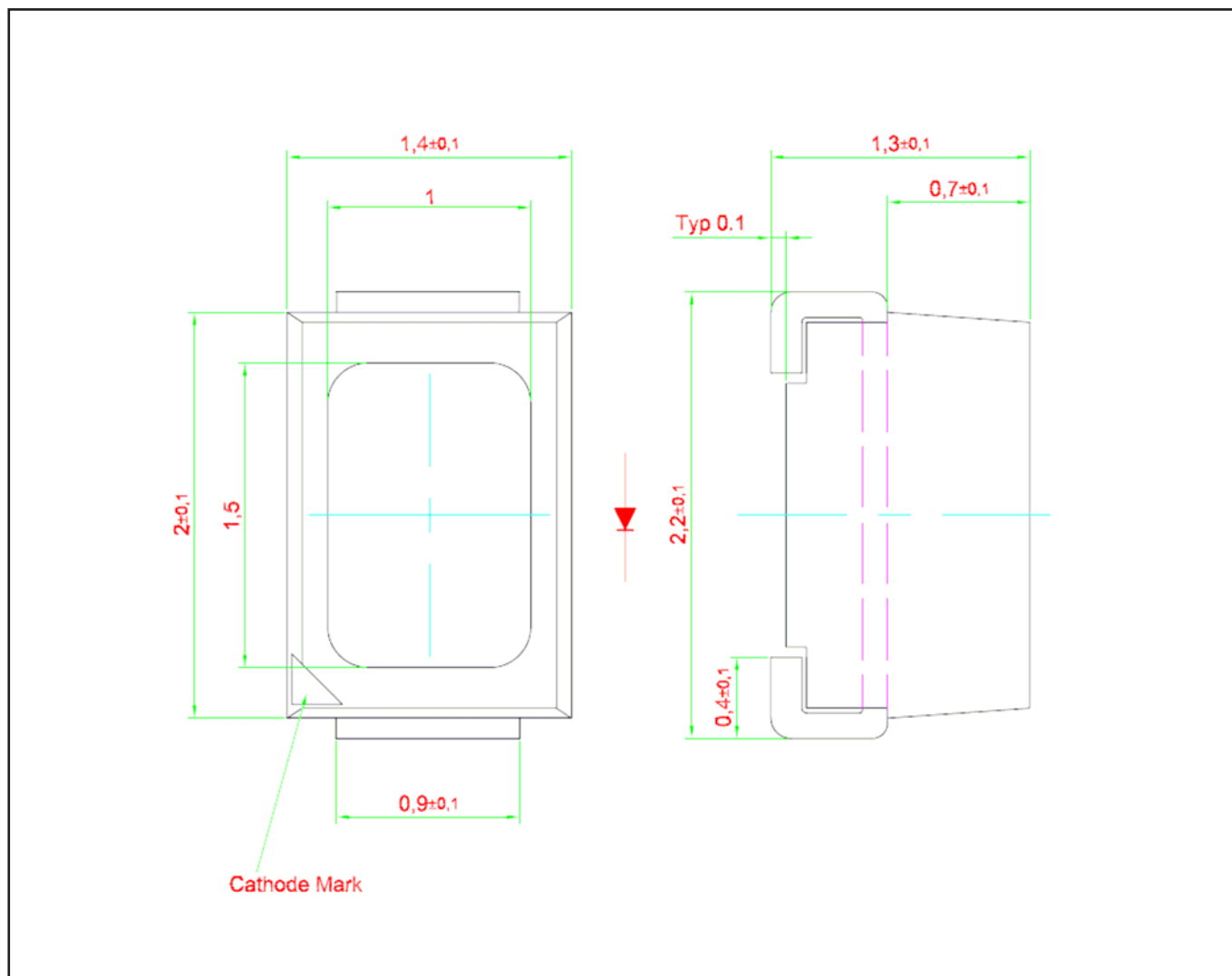
Relative Intensity Vs. Wavelength



Radiation Pattern



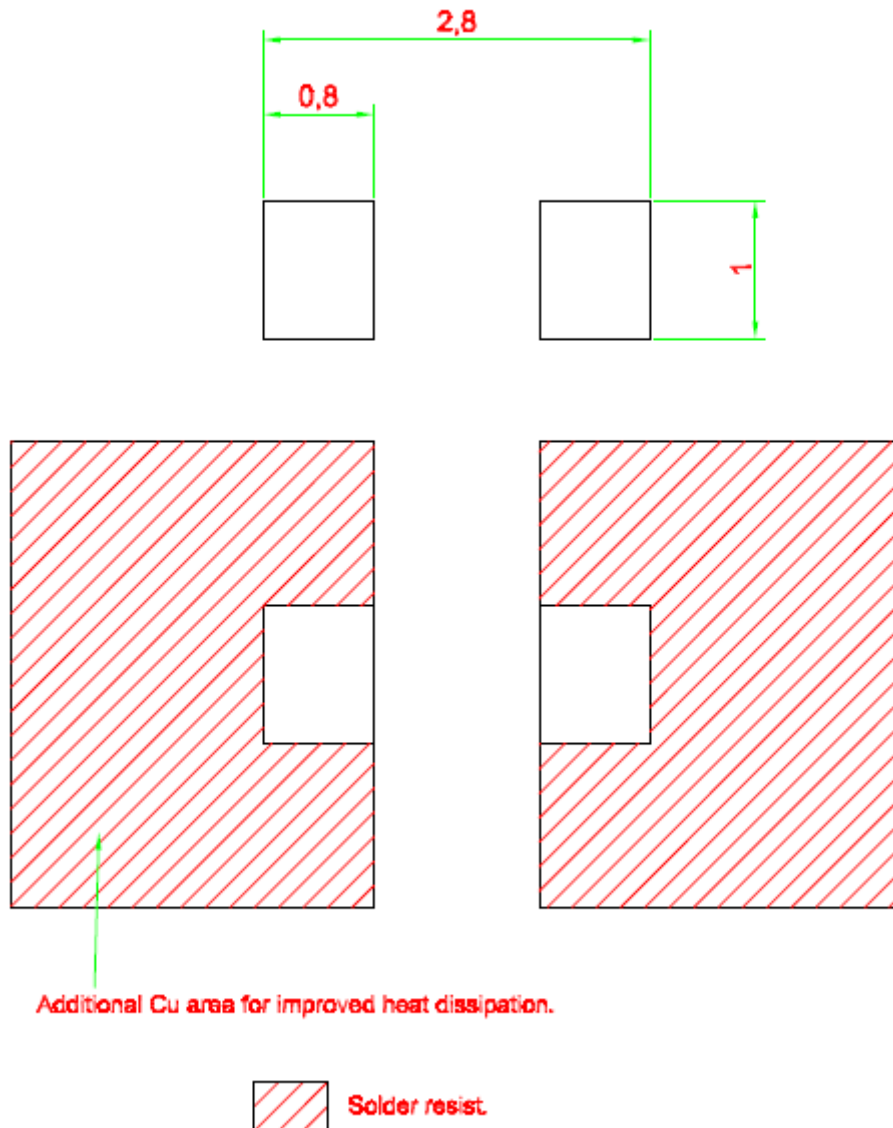
Mini DomiLED™ • InGaN : DNZP-DJG-I1 Package Outlines



Material

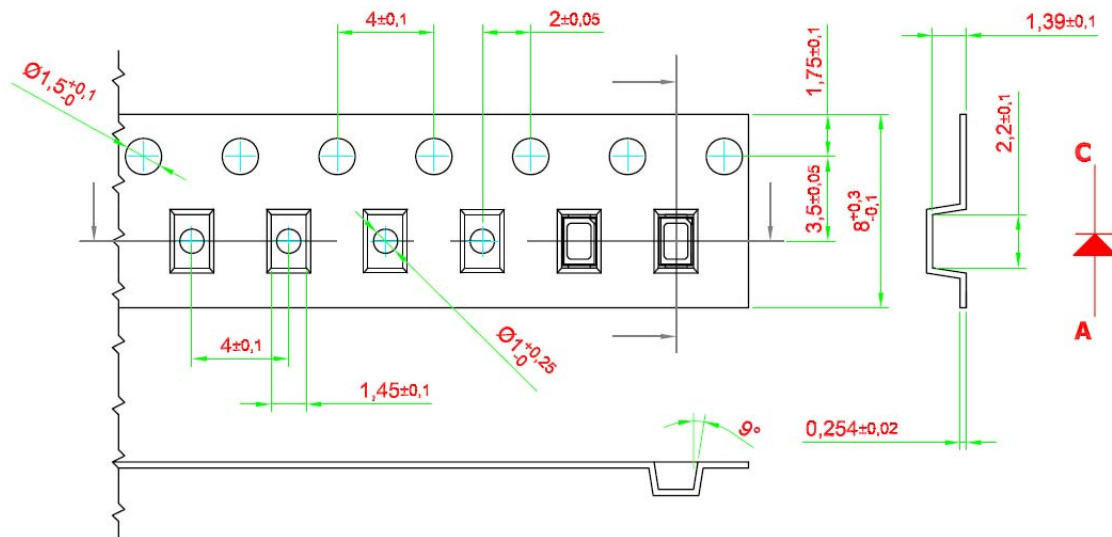
Material	
Lead-frame	Cu Alloy With Ag Plating
Package	High Temperature Resistant Plastic, PPA
Encapsulant	Silicone
Soldering Leads	Sn Plating

Recommended Solder Pad

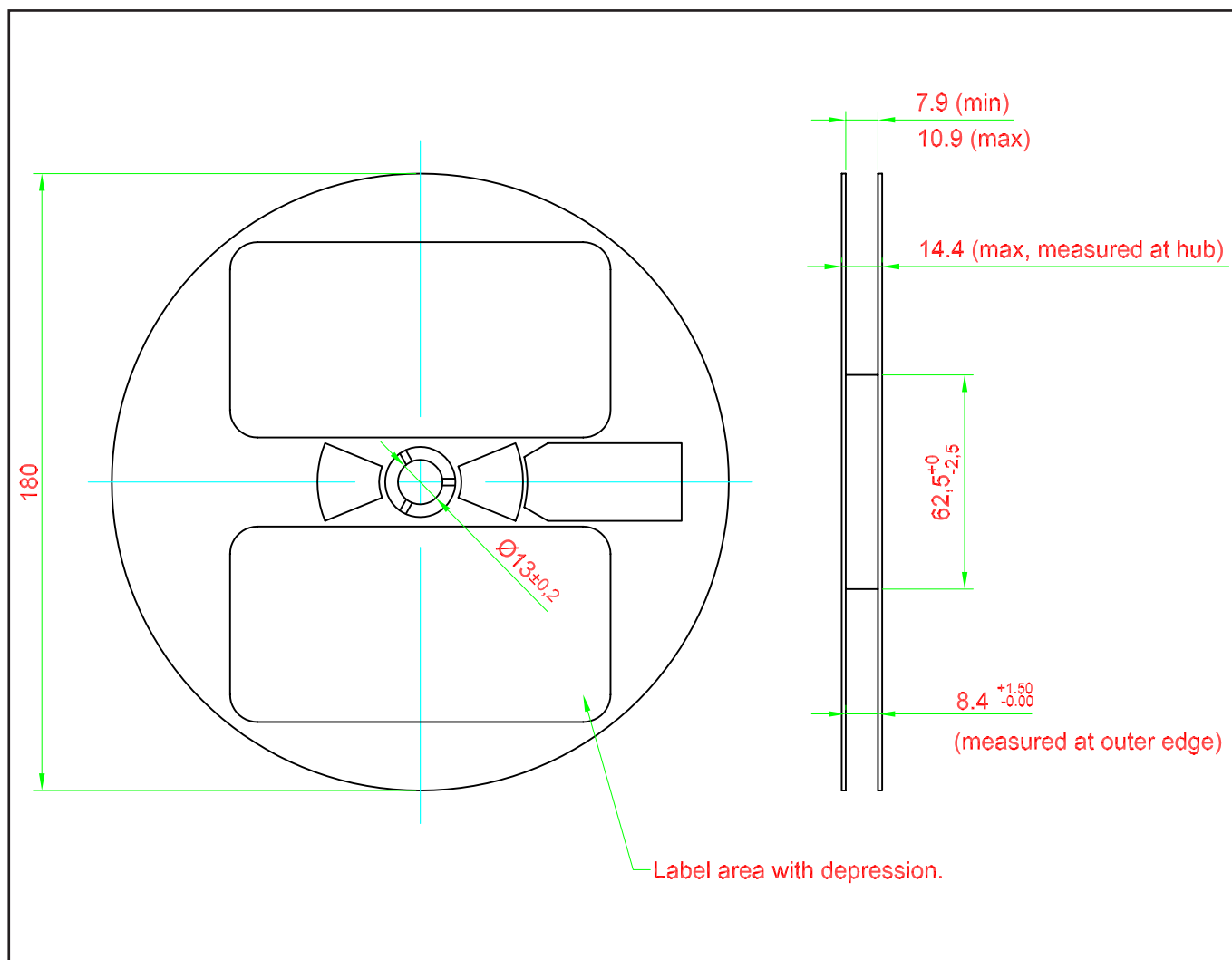


Taping and orientation

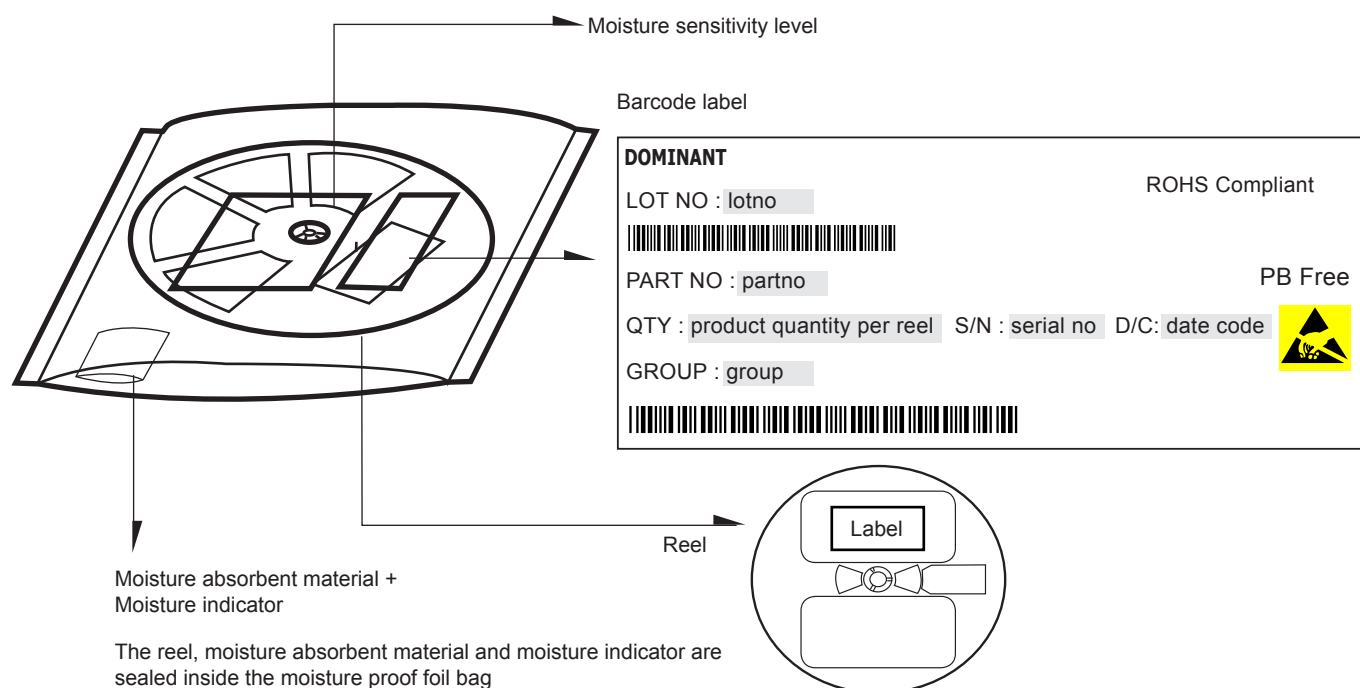
- Reels come in quantity of 3000 units.
- Reel diameter is 180 mm.



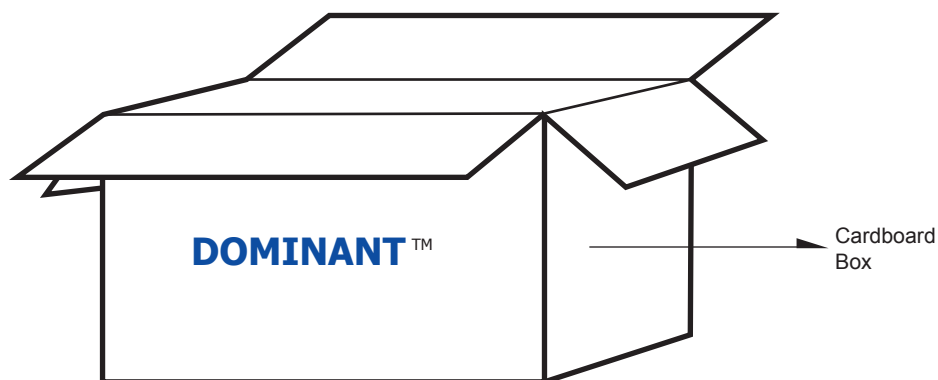
Packaging Specification



Packaging Specification



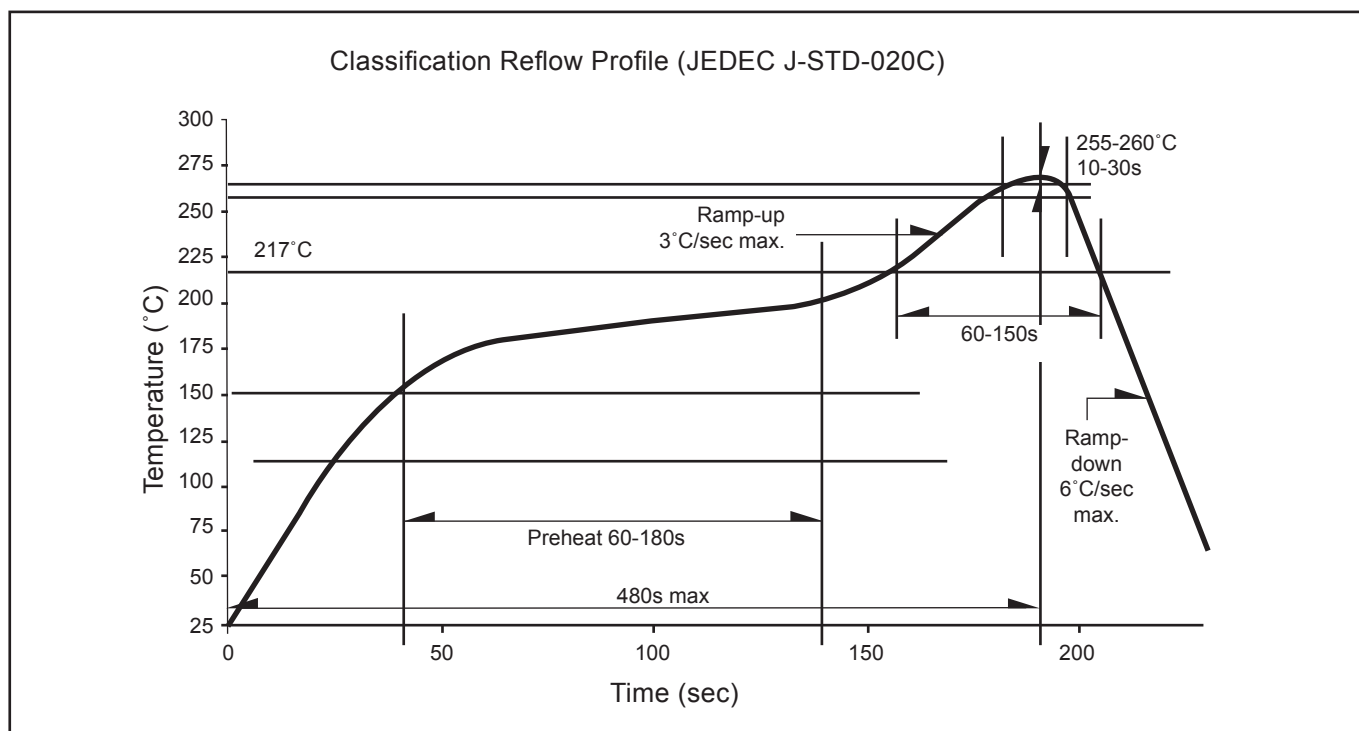
	Average 1pc Mini DomiLED	1 completed bag (3000pcs)
Weight (gram)	0.007	140 ± 10



For Mini DomiLED™

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	45,000 MAX
Large	416 x 516 x 476	1.74	96 reels MAX	288,000 MAX

Recommended Pb-free Soldering Profile



Revision History

Page	Subjects	Date of Modification
-	Initial Release	24 Jan 2014
2, 3	Add Thermal Resistance Add Characteristics	21 Apr 2014

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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