

### Mini DomiLED<sup>™</sup>

Synonymous with function and performance, the Mini DomiLED<sup>™</sup> series is perfectly suited for a variety of cross-industrial applications due to its small package outline, durability and superior brightness.



### 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 IR reflow soldering.
- > Environmental friendly; RoHS compliance.
- > Qualified based on AEC-Q101 Standard



### Applications:

- > Automotive: Interior applications, eg: switches, telematics, climate control system, dashboard, etc.
- > Consumer Appliances: Backlighting illumination as in PDAs, LCD TV.



### Optical characteristics at Tj=25°C

Part Ordering Number	Color	Viewing Angle°	Luminous Intensity @ 10mA IV (mcd)		
			Min.	Typ.	Max.
DNT-DJS-VW2-1-I1	True Green, 525nm	120	715.0	1125.0	1800.0
● DNT-DJS-T2U-1-I1	True Green, 525nm	120	355.0	550.0	715.0
DNB-DJS-RS1-1-I1	Blue, 470nm	120	112.5	170.0	224.0
● DNB-DJS-Q2R-1-I1	Blue, 470nm	120	90.0	120.0	180.0
● Not for new design					

NOTE

1. All part number above comes in a quantity of 3000 units per reel.
2. Luminous intensity is measured with an accuracy of ± 11%.
3. 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 = 10 mA			Vr @ Ir = 10 µA
	Min. (V)	Typ. (V)	Max. (V)	Min. (V)
DNx-DJS	2.8	3.1	3.6	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 ≤ 10µs, Duty cycle = 0.005)	100	mA
Reverse Voltage	5	V
ESD Threshold (HBM)	2000	V
LED Junction Temperature	125	°C
Operating Temperature	-40 ... +100	°C
Storage Temperature	-40 ... +100	°C
Power Dissipation (at room temperature)	80	mW
Thermal resistance		
- Junction / ambient, Rth JA	480	K/W
- Junction / solder point, Rth JS	230	K/W
(Mounting on FR4 PCB, pad size ≥ 16 mm <sup>2</sup> per pad)		

**Wavelength Grouping at Tj=25°C**

Color	Group	Wavelength distribution (nm)
DNT; True Green	Full	520 - 535
	A	520 - 525
	B	525 - 530
	C	530 - 535
DNB; Blue	Full	465 - 475
	A	465 - 470
	B	470 - 475

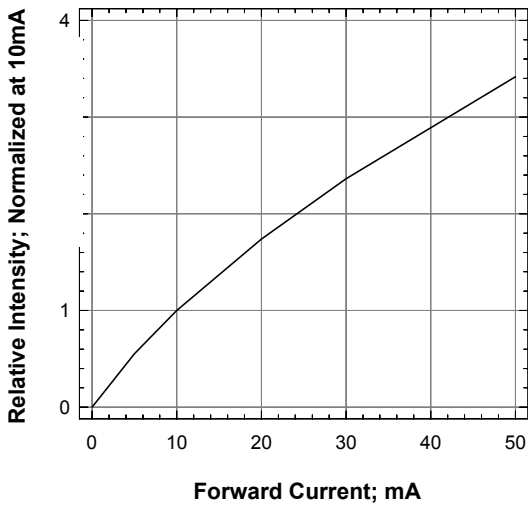
Dominant wavelength is measured with an accuracy of ± 1 nm.

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.

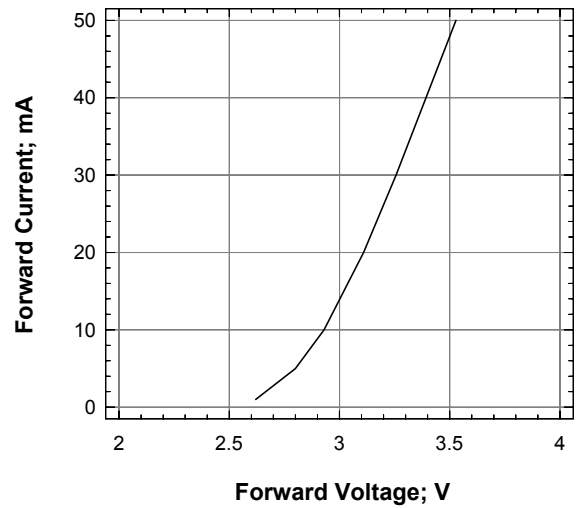
**Luminous Intensity Group at Tj=25°C**

Brightness Group	Luminous Intensity IV (mcd)
Q2	90.0 ... 112.5
R1	112.5 ... 140.0
R2	140.0 ... 180.0
S1	180.0 ... 224.0
T2	355.0 ... 450.0
U1	450.0 ... 560.0
U2	560.0 ... 715.0
V1	715.0 ... 900.0
V2	900.0 ... 1125.0
W1	1125.0 ... 1400.0
W2	1400.0 ... 1800.0

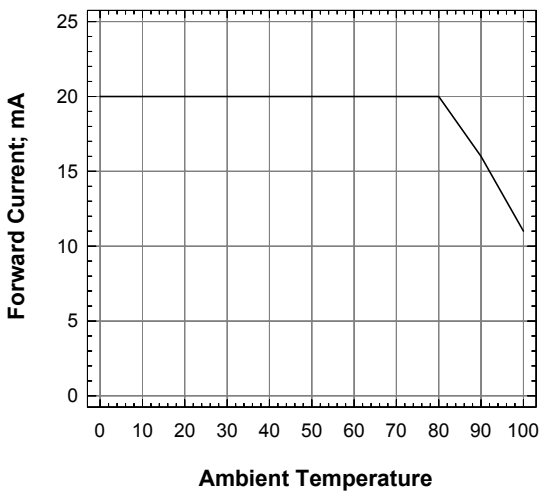
**Relative Intensity Vs Forward Current**



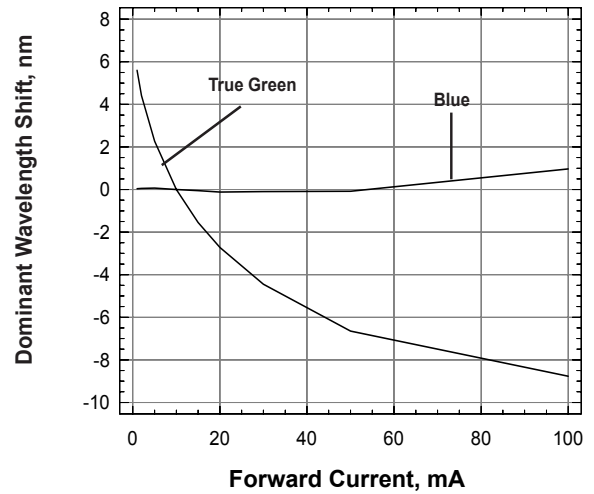
**Forward Current Vs Forward Voltage**



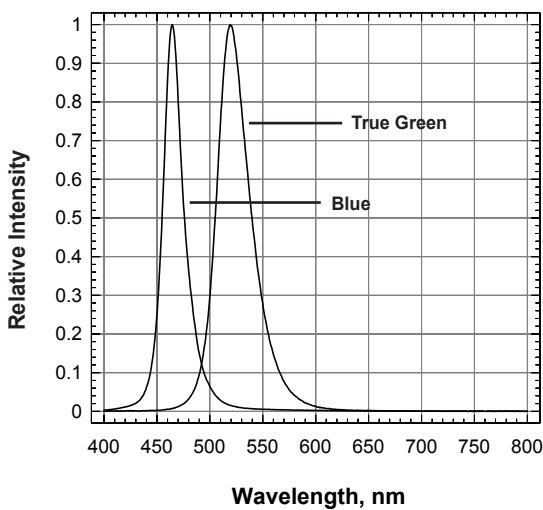
**Maximum Current Vs Ambient Temperature**



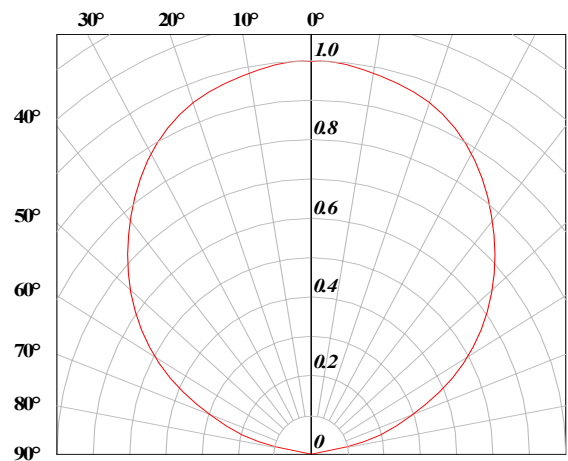
**Dominant Wavelength Shift Vs Forward Current**



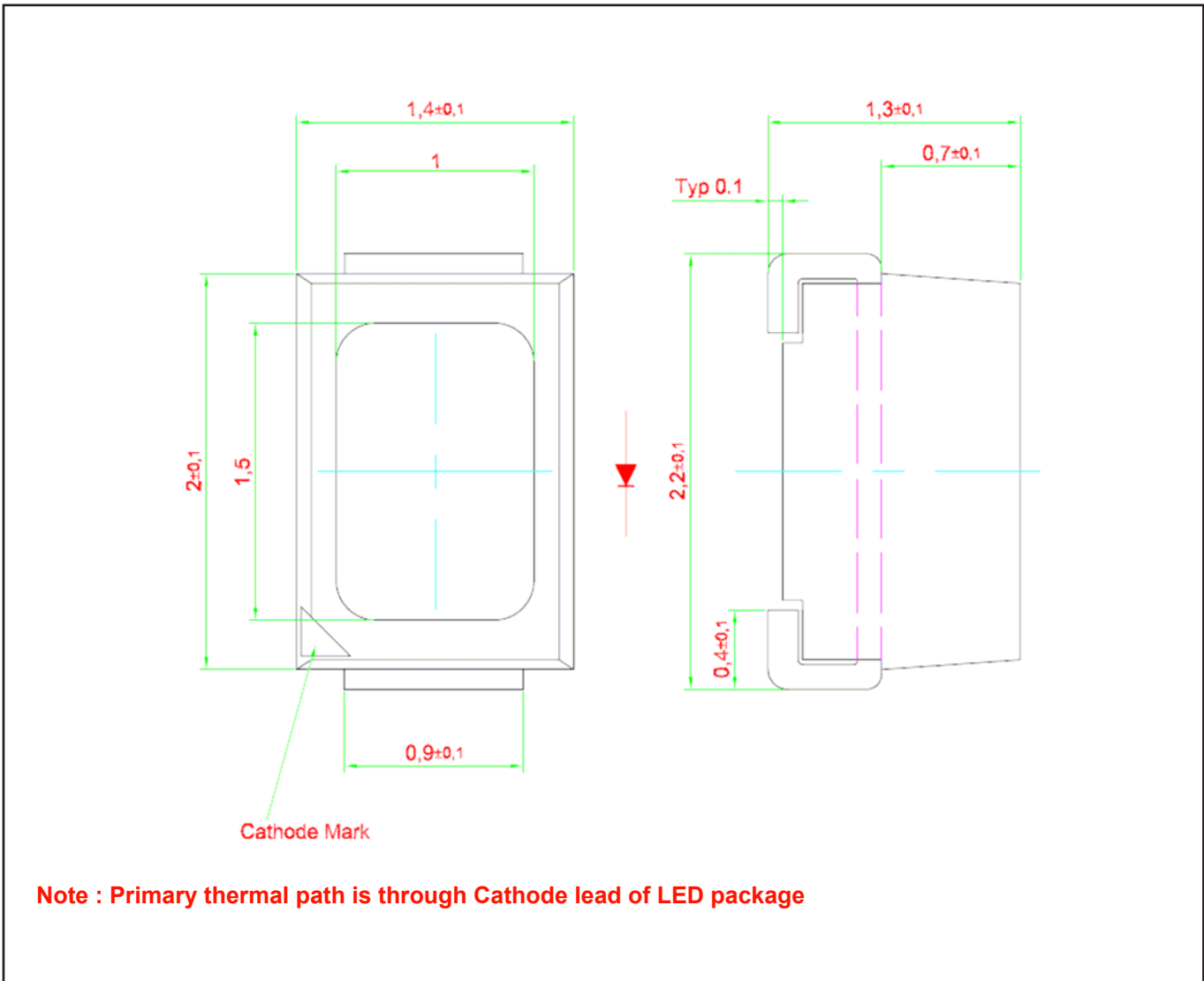
**Relative Intensity Vs Wavelength**



**Radiation Pattern**



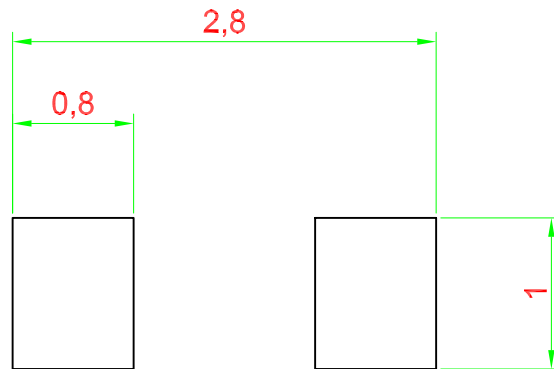
**Mini DomiLED™ • InGaN : DNx-DJS-XXX-1-I1 Package Outlines**



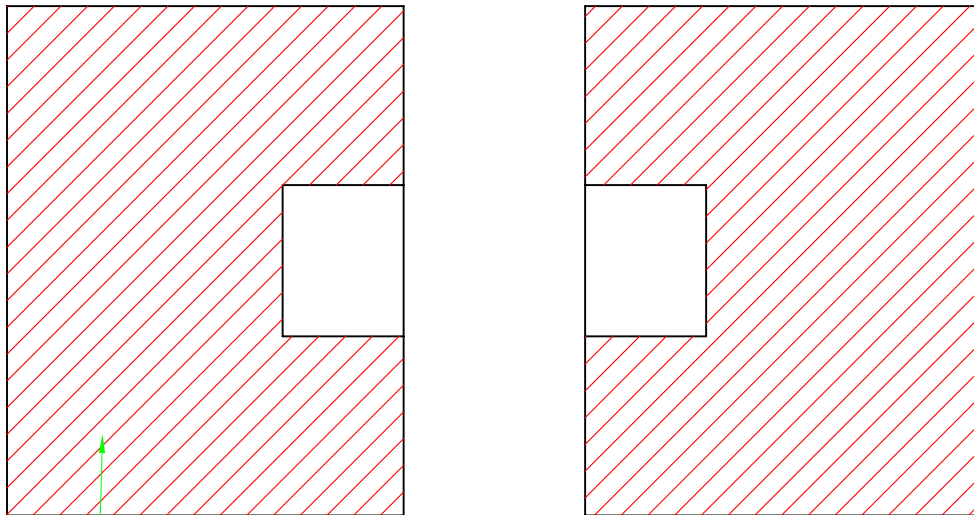
**Material**

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

### Recommended Solder Pad



### Improved Design For Better Heat Dissipation

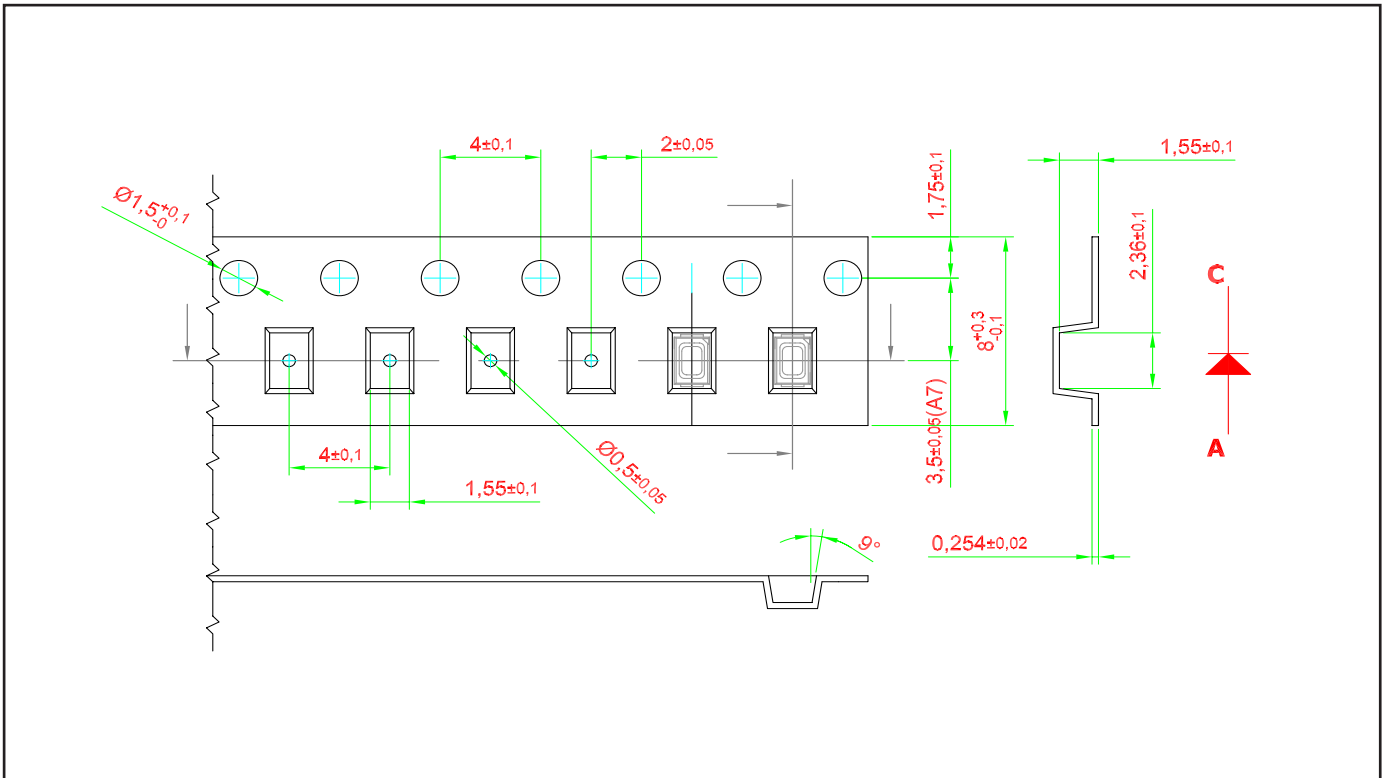


Additional Cu area for improved heat dissipation, > 16mm sq.

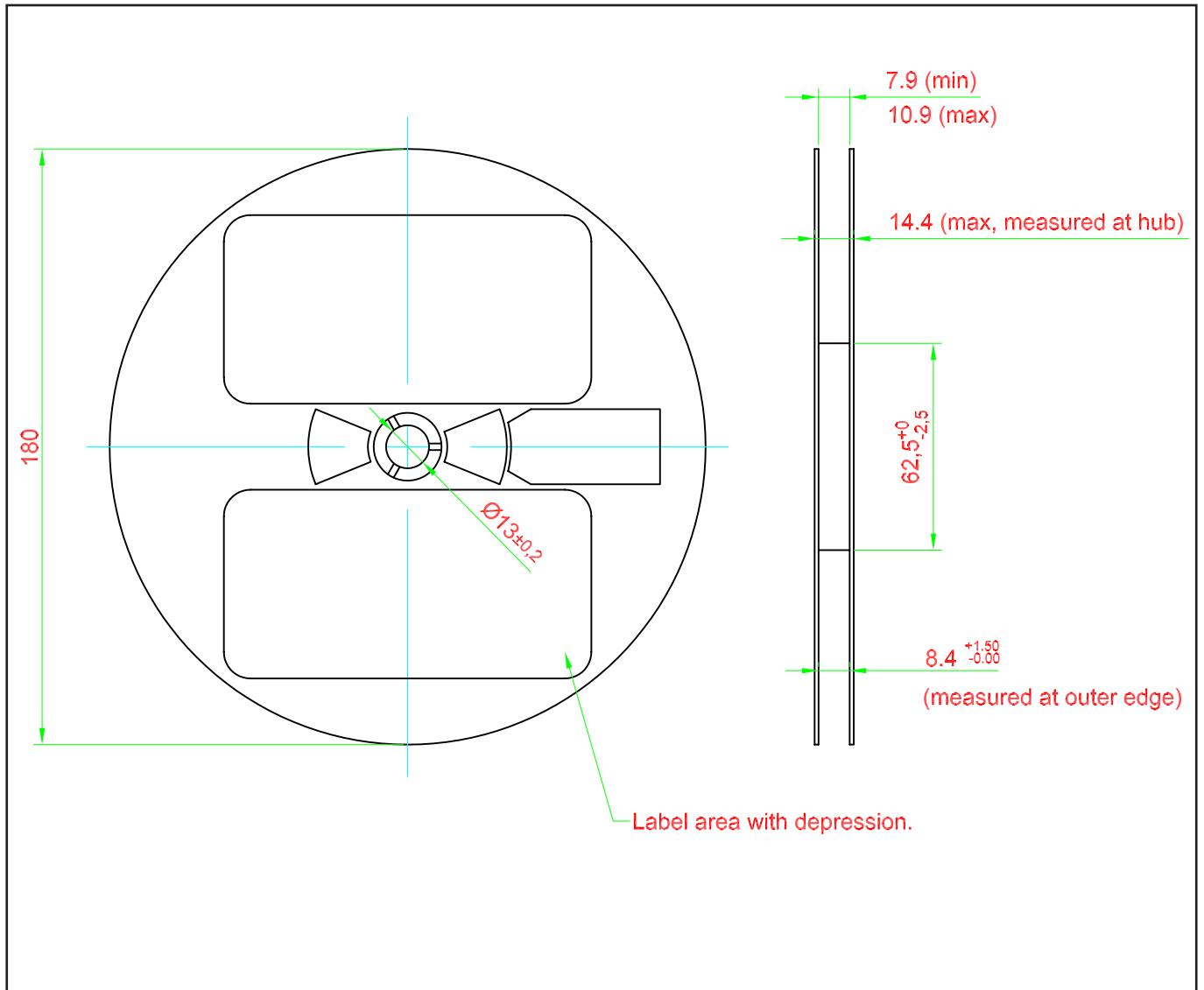
 Solder resist.

## Taping and orientation

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

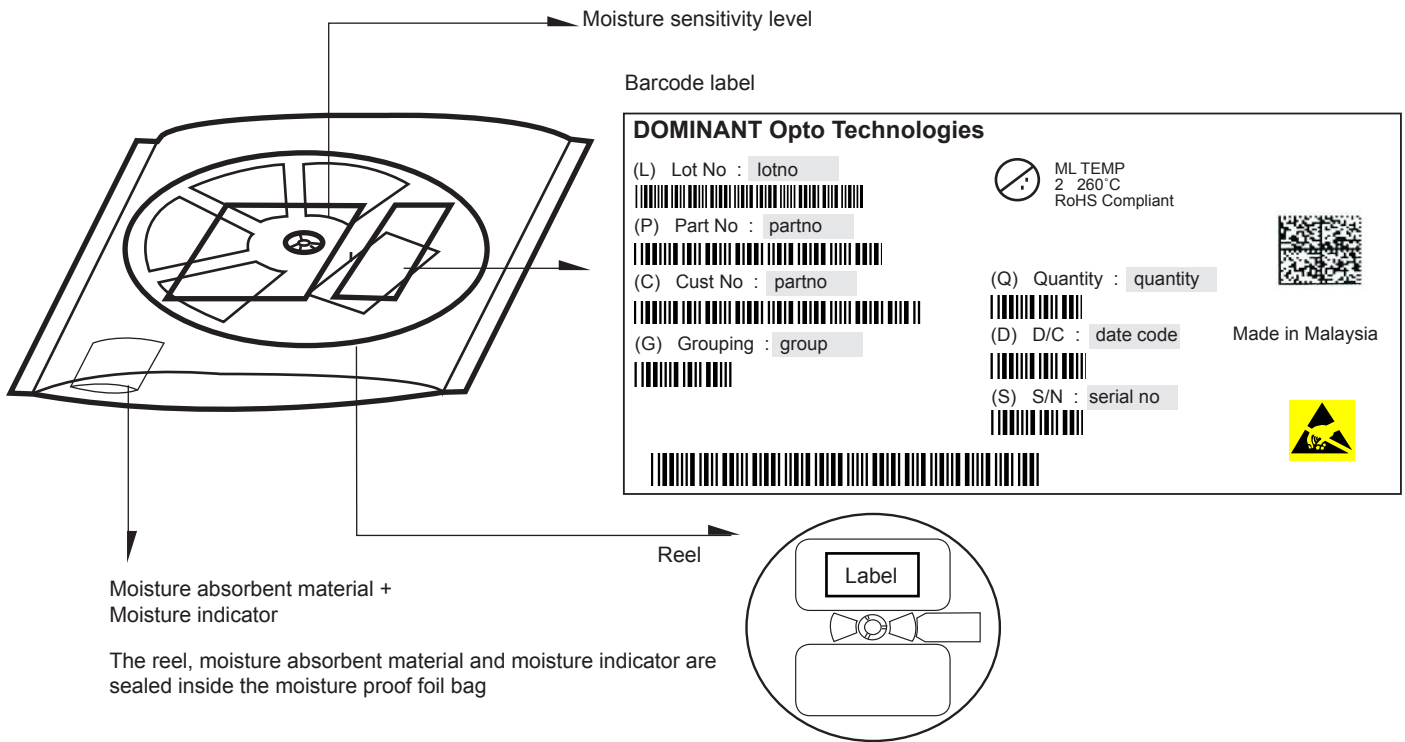


### Packaging Specification



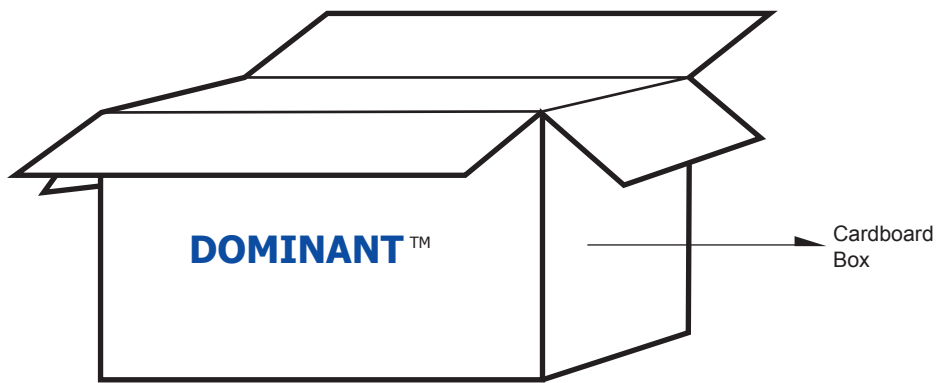


**Packaging Specification**



**Average 1pc Mini DomiLED** **1 completed bag (3000pcs)**

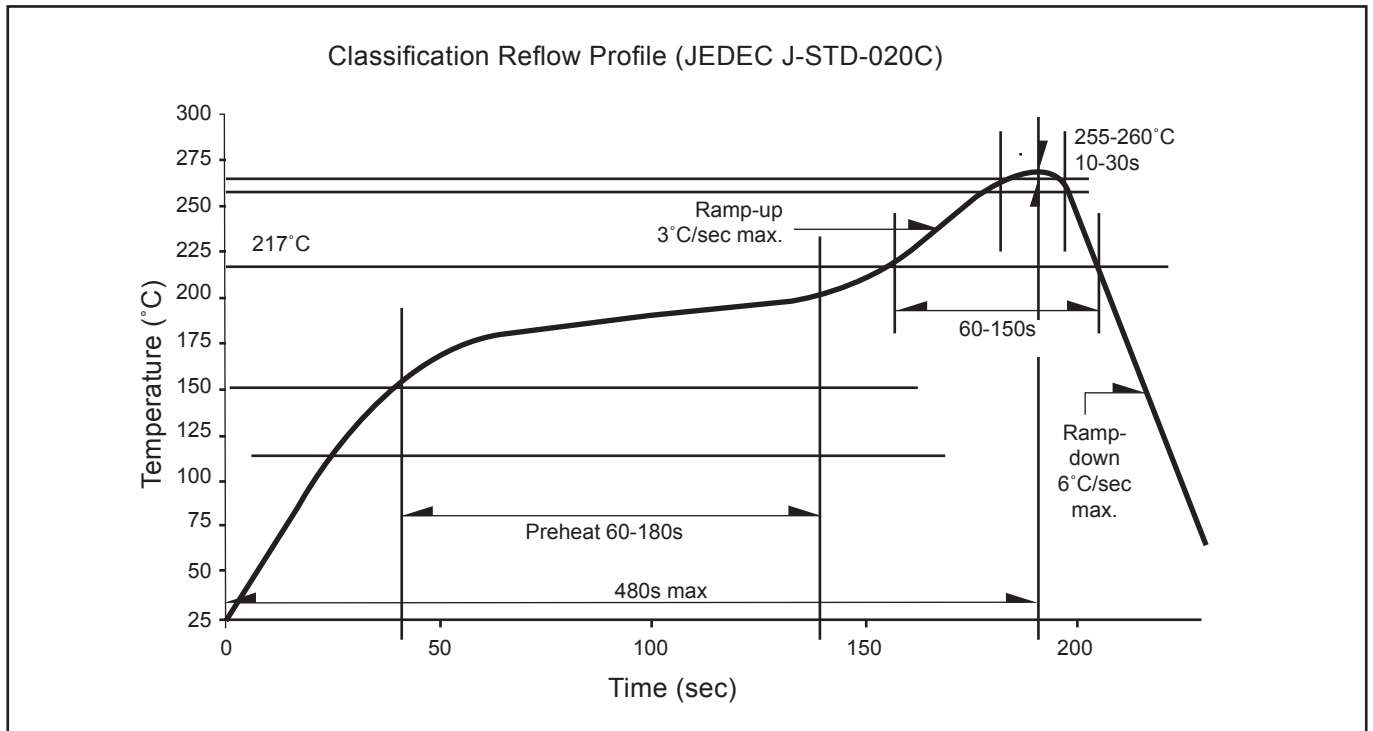
<b>Weight (gram)</b>	<b>0.007</b>	<b>200 ± 10</b>
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**For Mini DomiLED™**

Cardboard Box Size	Dimensions (mm)	Empty Box Weight (kg)	Reel / Box
Super Small	325 x 225 x 190	0.38	9 reels MAX
Small	325 x 225 x 280	0.54	15 reels MAX
Medium	570 x 440 x 230	1.46	60 reels MAX
Large	570 x 440 x 460	1.92	120 reels MAX

### Recommended Pb-free Soldering Profile



## Revision History

Page	Subjects	Date of Modification
-	Initial Release	23 Sep 2009
7	Update carrier tape drawing	10 Aug 2010
2	Update ESD threshold (HBM)	09 Jan 2013
1, 2	Update product photo Not for new design: DNT-DJS-T2U-1-I1 Add new partno: DNT-DJS-VW2-1-I1	09 May 2013
2	Not for new design: DNB-DJS-Q2R-1-I1 Add new partno: DNB-DJS-RS1-1-I1	25 Oct 2013
2	Add Thermal Resistance	06 Mar 2014
1, 4, 9	Update Features Typo Error on Graph: Dominant Wavelength Shift Vs Forward Current Update Packaging Specification	15 Jun 2015
5	Typo Error on Material Add Notes in Packaging Outline	04 Aug 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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