

### DomiLED<sup>TM</sup>

Synonymous with function and performance, the DomiLED<sup>TM</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 using thin film technology.
- > 120° viewing angle.
- > Small package outline (LxWxH) of 3.2 x 2.8 x 1.8mm.
- > Qualified according to JEDEC moisture sensitivity Level 2.
- > Compatible to both IR reflow soldering and TTW soldering.
- > Environmental friendly; RoHS compliance.



### Applications:

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



Part Ordering Number	Chip Technology / Color	Viewing Angle°	Luminous Intensity @ IF = 20mA IV (mcd)
<b>DDR-SJE-Q2R-1</b>	<b>AlIGaP</b>	<b>120</b>	<b>90.0 - 180.0</b>
• DDR-SJE-Q2	Red, 625nm		90.0 - 112.5
• DDR-SJE-R1			112.5 - 140.0
• DDR-SJE-R2			140.0 - 180.0
<b>DDY-CJE-ST2-1</b>	<b>AlIGaP</b>	<b>120</b>	<b>180.0 - 450.0</b>
• DDY-CJE-S1	Yellow, 587nm		180.0 - 224.0
• DDY-CJE-S2			224.0 - 285.0
• DDY-CJE-T1			285.0 - 355.0
• DDY-CJE-T2			355.0 - 450.0
<b>DDY-SJE-S2T-1</b>			<b>224.0 - 450.0</b>
• DDY-SJE-S2			224.0 - 285.0
• DDY-SJE-T1			285.0 - 355.0
• DDY-SJE-T2			355.0 - 450.0
<b>DDT-SJE-ST2-1</b>	<b>InGaN</b>	<b>120</b>	<b>180.0 - 450.0</b>
• DDY-SJE-S1	True Green, 525nm		180.0 - 224.0
• DDY-SJE-S2			224.0 - 285.0
• DDY-SJE-T1			285.0 - 355.0
• DDY-SJE-T2			355.0 - 450.0
<b>DDB-SJE-PQ2-1</b>	<b>InGaN</b>	<b>120</b>	<b>45.0 - 112.5</b>
• DDB-SJE-P1	Blue, 470nm		45.0 - 56.0
• DDB-SJE-P2			56.0 - 71.5
• DDB-SJE-Q1			71.5 - 90.0
• DDB-SJE-Q2			90.0 - 112.5

NOTE

1. All part number above comes in a quantity of 2000 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. Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each reel.
5. An optional Vf binning is also available upon request. Binning scheme is as per following table.

## Wavelength Grouping

Color	Group	Wavelength distribution (nm)
DDR; Red	Full	620 - 630
DDY; Yellow	Full	582 - 594
	W	582 - 585
	X	585 - 588
	Y	588 - 591
	Z	591 - 594
DDT; True Green	Full	520 - 536
	W	520 - 524
	X	524 - 528
	Y	528 - 532
	Z	532 - 536
DDB; Blue	Full	464 - 476
	W	464 - 468
	X	468 - 472
	Y	472 - 476

Dominant wavelength is measured with an accuracy of  $\pm 1$  nm.

## Vf Bining (Optional)

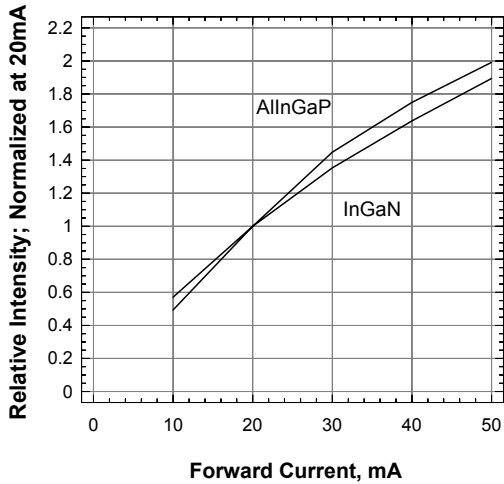
Vf @ If = 20mA	Forward Voltage (V) InGaN	Forward Voltage (V) AllnGaP
Standard	3.35 ... 4.25	1.55 ... 2.45
01	3.35 ... 3.65	1.55 ... 1.85
02	3.65 ... 3.95	1.85 ... 2.15
03	3.95 ... 4.45	2.15 ... 2.45

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

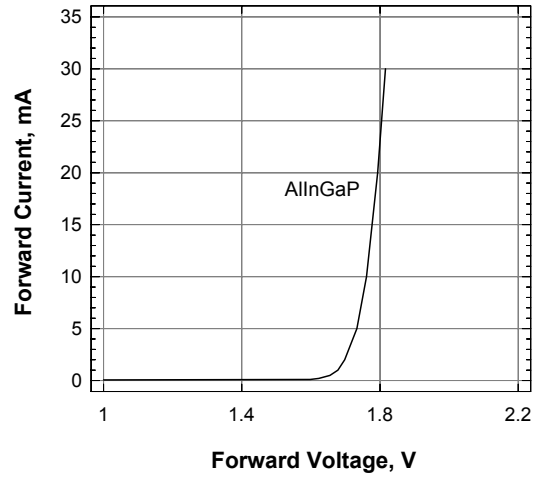
## Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	AllnGaP: 30; InGaN: 20	mA
Peak pulse current; (tp ≤ 10μs, Duty cycle = 0.005)	AllnGaP: 1000; InGaN: 200	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)	AllnGaP: 75; InGaN: 85	mW

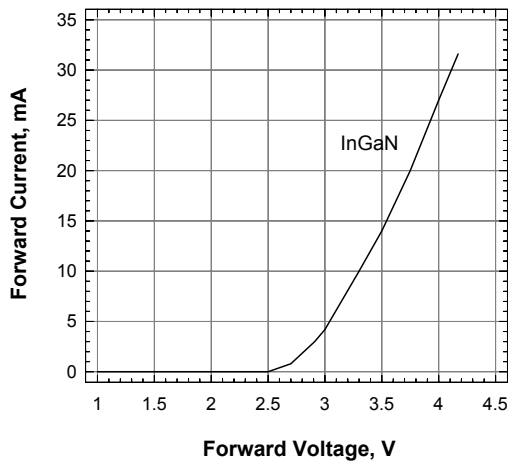
**Relative Luminous Intensity Vs Forward Current**



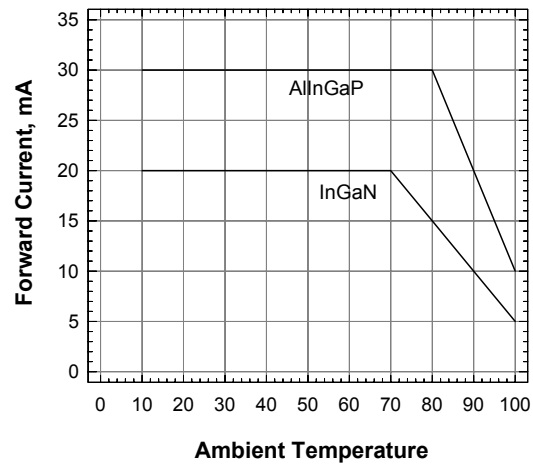
**Forward Current Vs Forward Voltage**



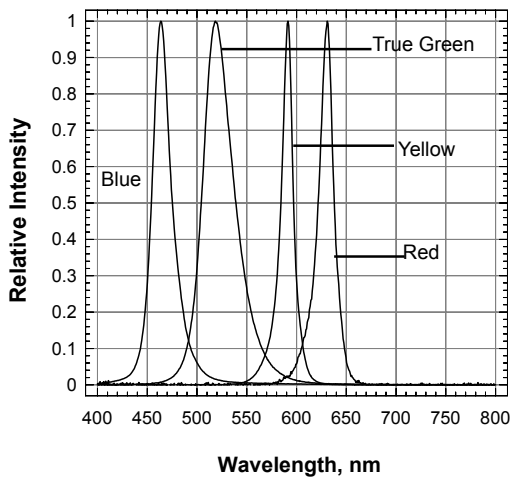
**Forward Current Vs Forward Voltage**



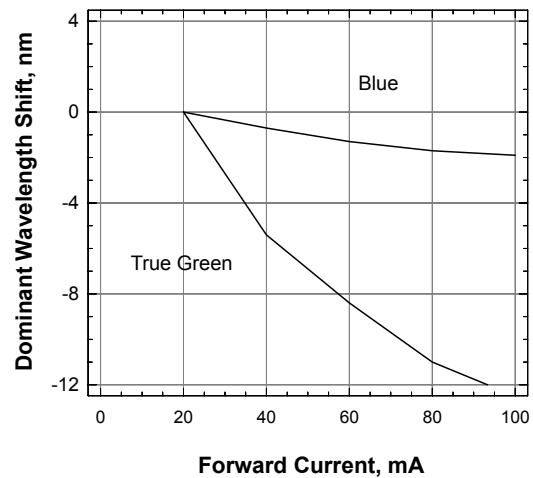
**Forward Current Vs Temperature**



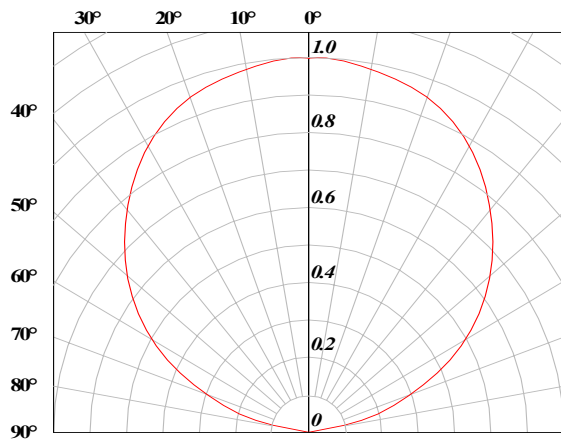
**Relative Intensity Vs Wavelength**



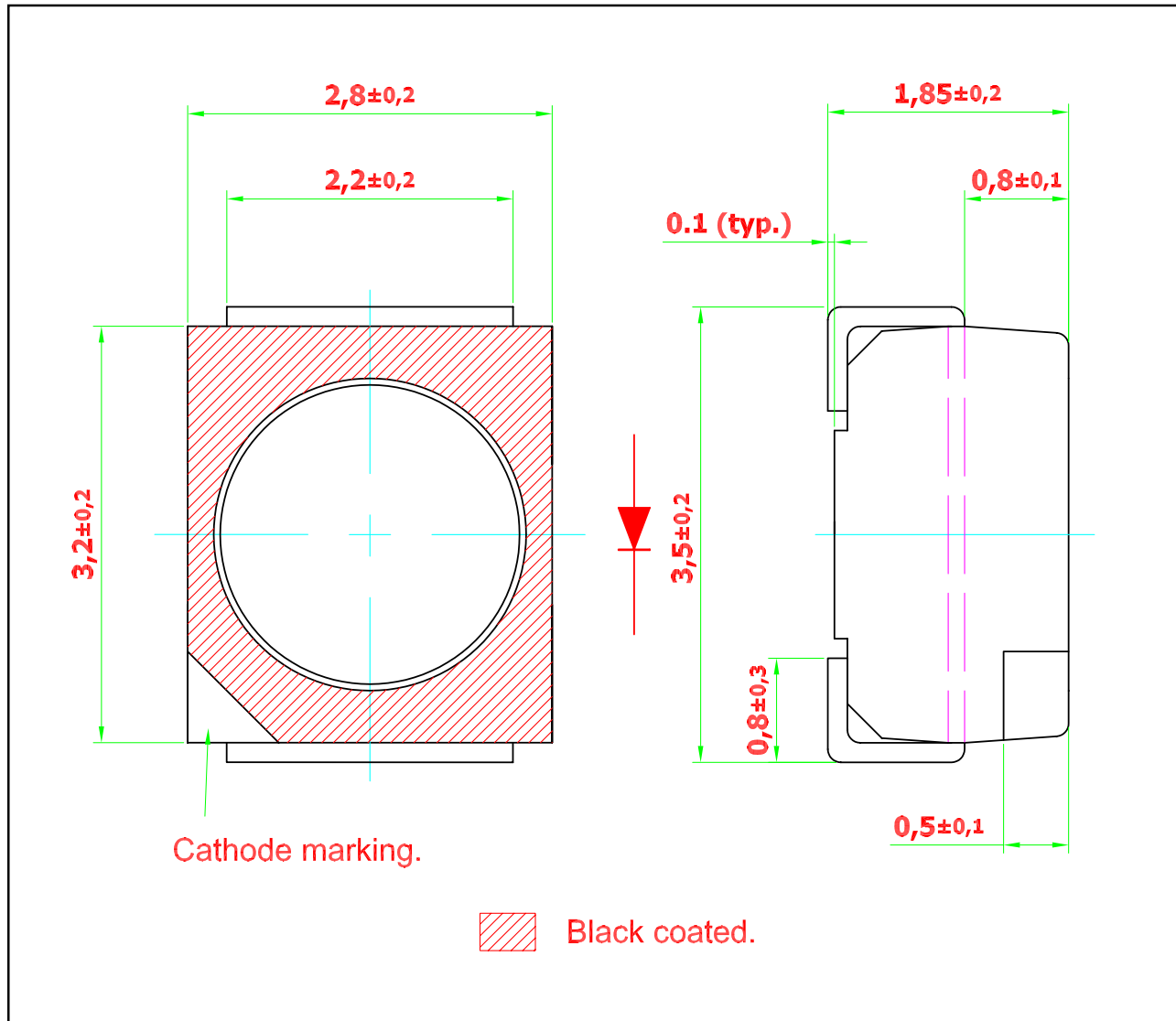
**Dominant Wavelength Shift Vs Forward Current**



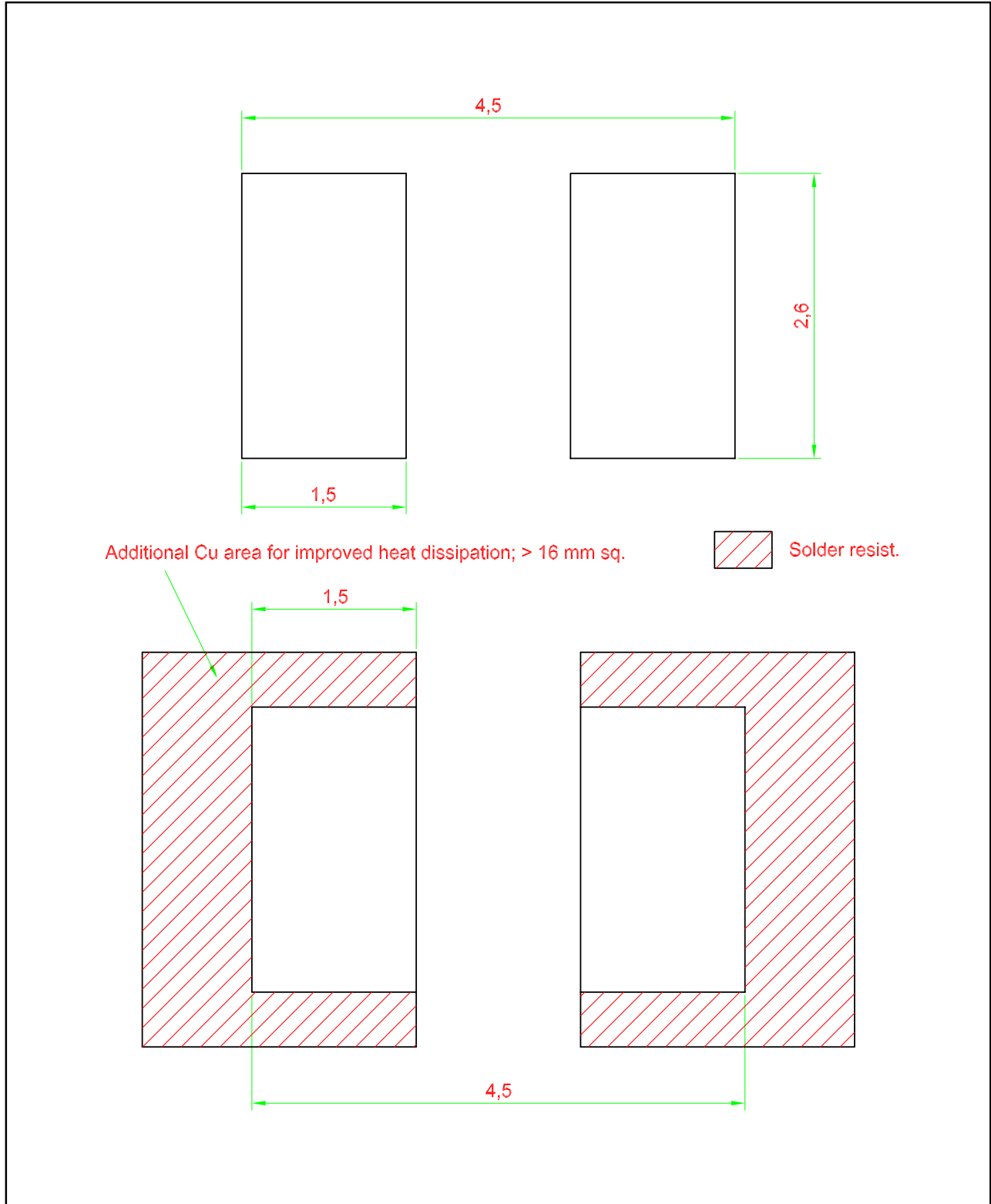
**Radiation Pattern**



**DomiLED™ • Colored Resin : DDx-xJE Package Outlines**



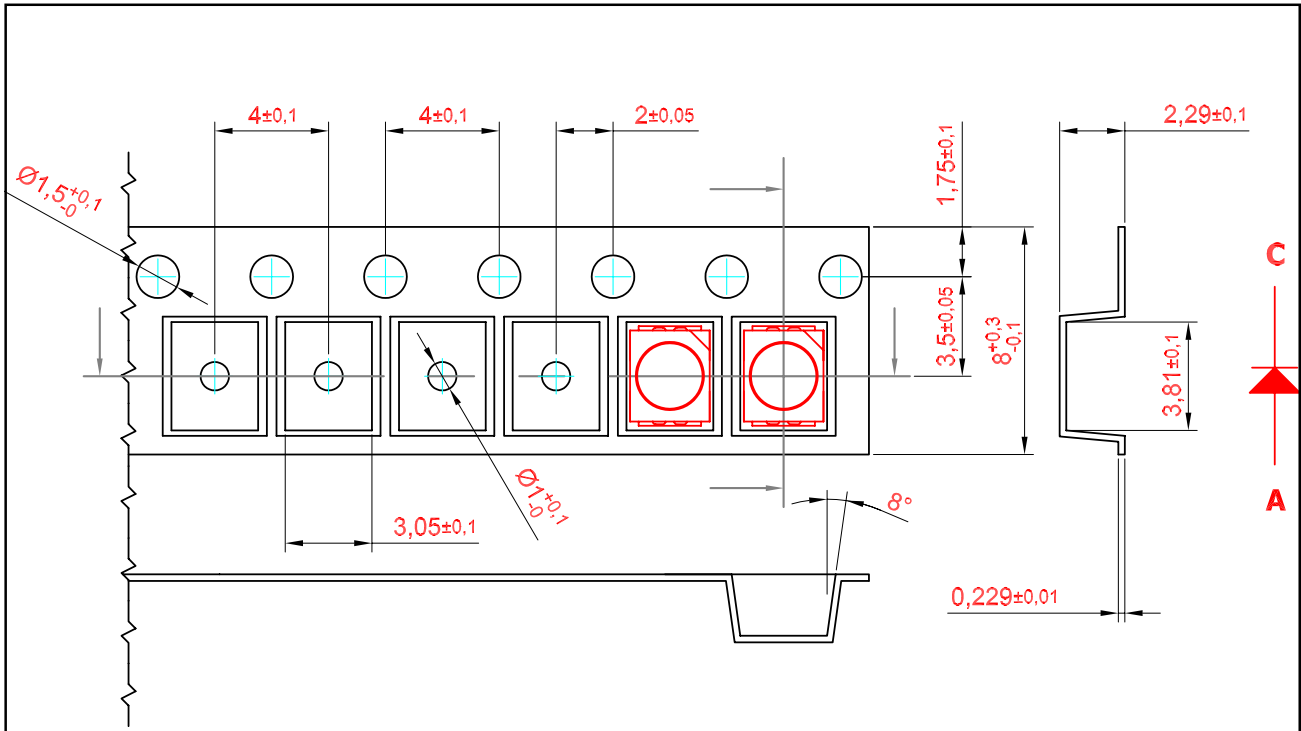
### Recommended Solder Pad





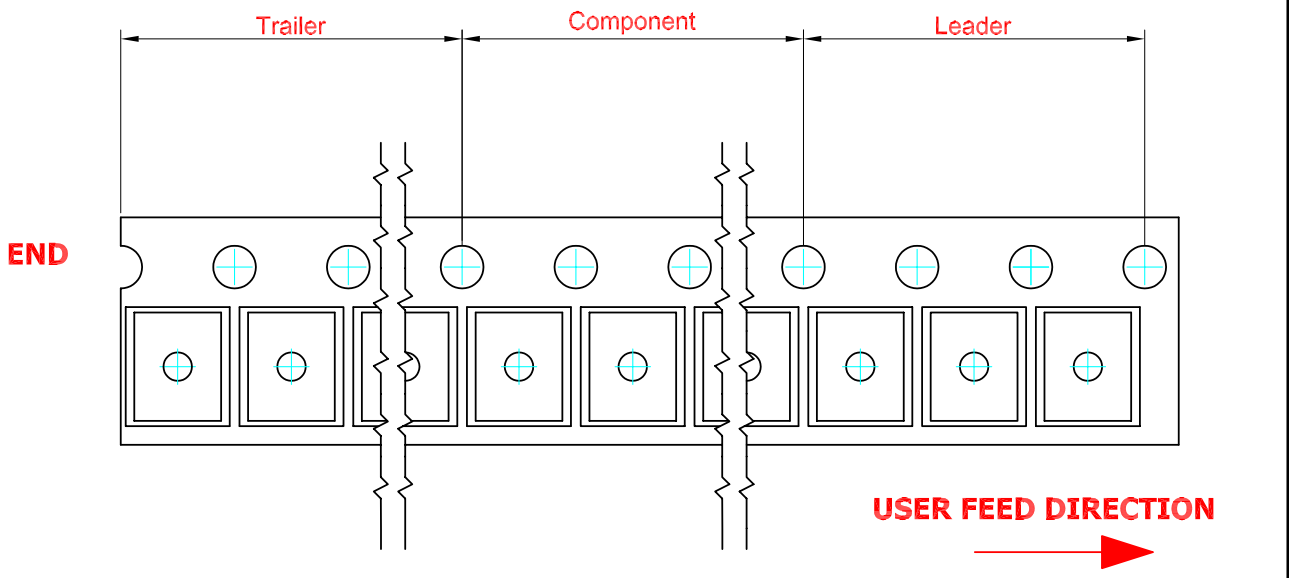
### Taping and orientation

- Reels come in quantity of 2000 units.
- Reel diameter is 180 mm.

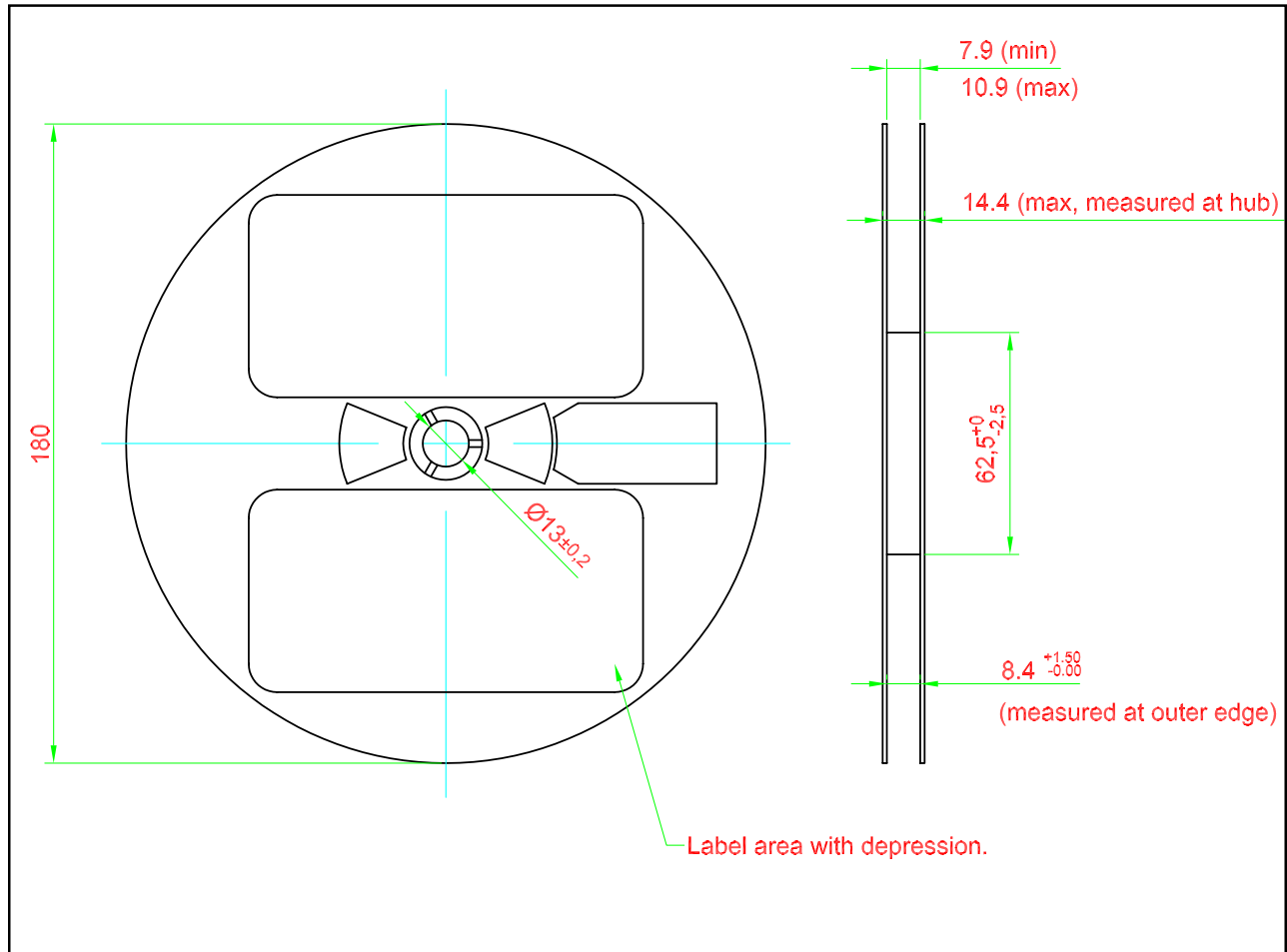


200 mm min. for  $\varnothing 180$  reel.  
200 mm min. for  $\varnothing 330$  reel.

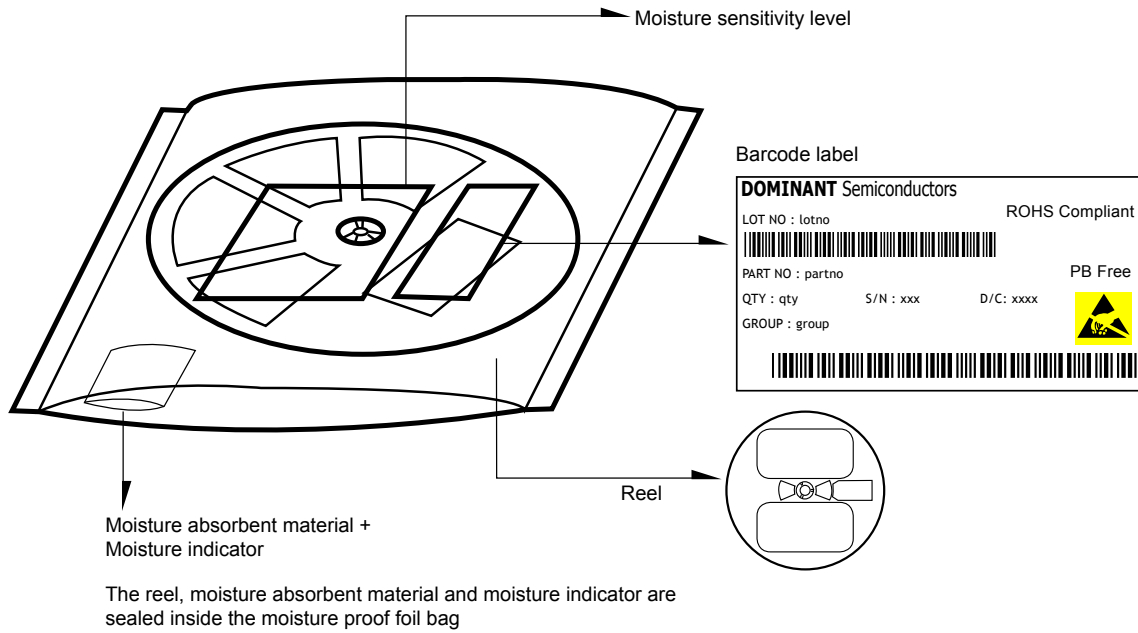
480 mm min. for  $\varnothing 180$  reel.  
960 mm min. for  $\varnothing 330$  reel.



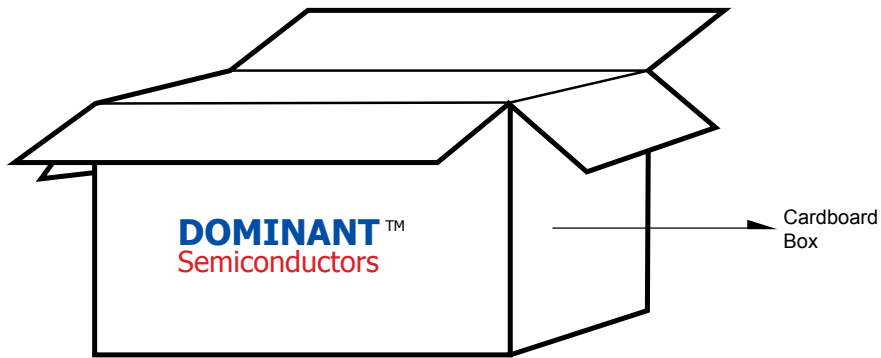
### Packaging Specification



**Packaging Specification**



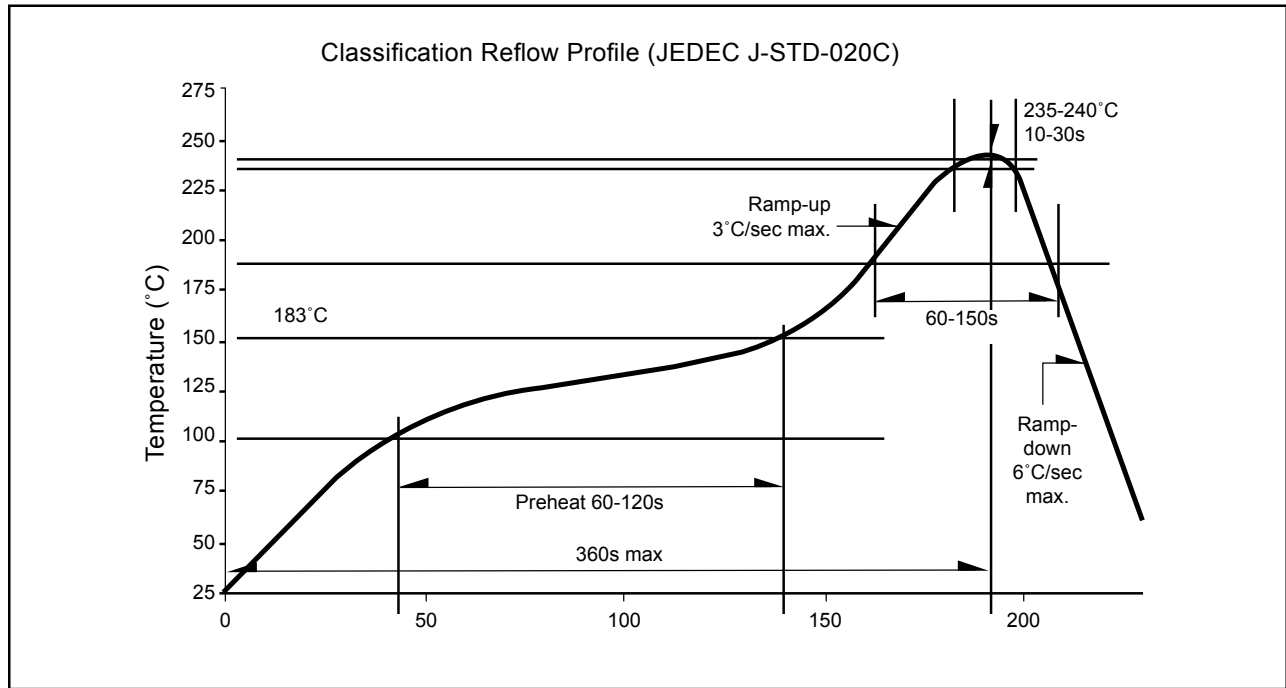
	Average 1pc DomiLED/Multi DomiLED	1 completed bag (2000pcs)
Weight (gram)	0.034	190 ± 10



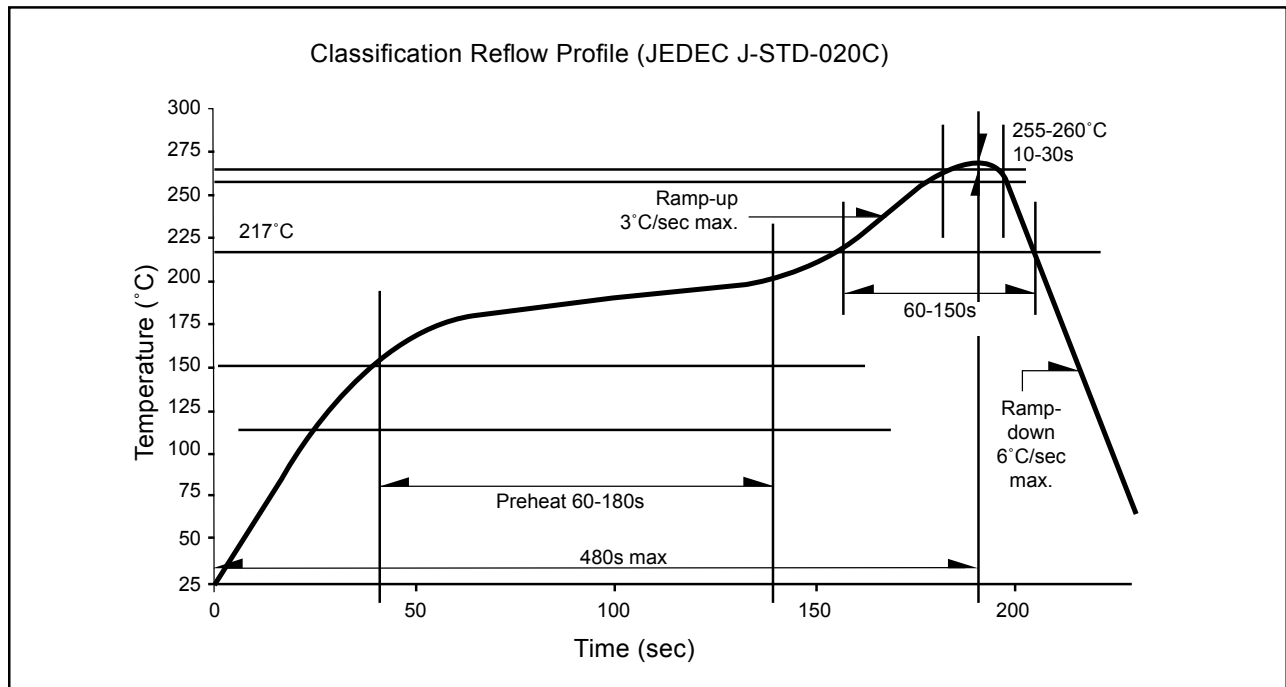
**For DomiLED™**

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	30,000 MAX
Large	416 x 516 x 476	1.74	55 reels MAX	110,000 MAX

**Recommended Sn-Pb IR-Reflow Soldering Profile**



**Recommended Pb-free Soldering Profile**



**Revision History**

Page	Subjects	Date of Modification
-	New Format - Add new PartNo: DDY-CJE-ST2-1	23 Apr 2007

**NOTE**

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## About Us

DOMINANT Semiconductors 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 Semiconductors can be found on the Internet at <http://www.dominant-semi.com>.

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