

### Power DomiLED<sup>™</sup>

With its significant power in terms brightness, viewing angle and variety of application possibilities, Power DomiLED<sup>™</sup> truly is a standout performer! Ideal for automotive interior lighting as well as home, office and industrial applications, it is also a proven performer in electronic signs and signals.



### Features:

- > High brightness surface mount LED.
- > 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.  
exterior applications, eg: signal lighting, Center High Mounted Stop Light (CHMSL),
- > Display: full color display video notice board.
- > Industry: white goods (eg: Oven, microwave, etc.).
- > Lighting: architecture lighting, general lighting, garden light, etc



Part Ordering Number	Chip Technology / Color	Viewing Angle°	Total Flux @ IF=30mA, mlm (typ)	Luminous Intensity @ IF = 30mA IV (mcd)
<b>DWT-CJS-ST2-1 *</b>	<b>InGaN</b>	<b>120</b>	<b>850</b>	180.0 - 450.0
• DWT-CJS-S1	True Green, 525nm			180.0 - 224.0
• DWT-CJS-S2				224.0 - 285.0
• DWT-CJS-T1				285.0 - 355.0
• DWT-CJS-T2				355.0 - 450.0
<b>DWT-SJS-TU2-1</b>			<b>1350</b>	<b>285.0 - 715.0</b>
• DWT-SJS-T1				285.0 - 355.0
• DWT-SJS-T2				355.0 - 450.0
• DWT-SJS-U1				450.0 - 560.0
• DWT-SJS-U2				560.0 - 715.0
<b>DWT-SJS-UV2-1 *</b>			<b>1800</b>	450.0 - 1125.0
• DWT-SJS-U1				450.0 - 560.0
• DWT-SJS-U2				560.0 - 715.0
• DWT-SJS-V1				715.0 - 900.0
• DWT-SJS-V2				900.0 - 1125.0
<b>DWT-UJS-UV2-1</b>			<b>2000</b>	<b>450.0 - 1125.0</b>
• DWT-UJS-U1				450.0 - 560.0
• DWT-UJS-U2				560.0 - 715.0
• DWT-UJS-V1				715.0 - 900.0
• DWT-UJS-V2				900.0 - 1125.0
<b>DWC-CJS-ST2-1 *</b>	<b>InGaN</b>	<b>120</b>	<b>850</b>	180.0 - 450.0
• DWC-CJS-S1	Cyan, 505nm			180.0 - 224.0
• DWC-CJS-S2				224.0 - 285.0
• DWC-CJS-T1				285.0 - 355.0
• DWC-CJS-T2				355.0 - 450.0
<b>DWC-SJS-TU2-1</b>			<b>1350</b>	<b>285.0 - 715.0</b>
• DWC-SJS-T1				285.0 - 355.0
• DWC-SJS-T2				355.0 - 450.0
• DWC-SJS-U1				450.0 - 560.0
• DWC-SJS-U2				560.0 - 715.0
<b>DWC-SJS-UV2-1 *</b>			<b>1800</b>	450.0 - 1125.0
• DWC-SJS-U1				450.0 - 560.0
• DWC-SJS-U2				560.0 - 715.0
• DWC-SJS-V1				715.0 - 900.0
• DWC-SJS-V2				900.0 - 1125.0
<b>DWC-UJS-UV2-1</b>			<b>2000</b>	<b>450.0 - 1125.0</b>
• DWC-UJS-U1				450.0 - 560.0
• DWC-UJS-U2				560.0 - 715.0
• DWC-UJS-V1				715.0 - 900.0
• DWC-UJS-V2				900.0 - 1125.0

\* Not for New Design

Part Ordering Number	Chip Technology / Color	Viewing Angle°	Total Flux @ IF=30mA, mlm (typ)	Luminous Intensity @ IF = 30mA IV (mcd)
DWB-SJS-Q2R-1 *	<b>InGaN</b>	<b>120</b>	<b>370</b>	90.0 - 180.0
• DWB-SJS-Q2	Blue, 470nm			90.0 - 112.5
• DWB-SJS-R1				112.5 - 140.0
• DWB-SJS-R2				140.0 - 180.0
<b>DWB-SJS-RS1-1</b>			<b>470</b>	<b>112.5 - 224.0</b>
• DWB-SJS-R1				112.5 - 140.0
• DWB-SJS-R2				140.0 - 180.0
• DWB-SJS-S1				180.0 - 224.0
<b>DWB-UJS-R2S-1</b>			<b>600</b>	<b>140.0 - 285.0</b>
• DWB-UJS-R2				140.0 - 180.0
• DWB-UJS-S1				180.0 - 224.0
• DWB-UJS-S2				224.0 - 285.0
<b>DWB-UJS-S2T-1</b>			<b>900</b>	<b>224.0 - 450.0</b>
• DWB-UJS-S2				224.0 - 285.0
• DWB-UJS-T1				285.0 - 355.0
• DWB-UJS-T2				355.0 - 450.0

\* Not for New Design

NOTE

1. All part number above comes in a quantity of 2000 units per reel.
2. Other luminous intensity groups may also be 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. 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.
6. An optional Vf binning is also available upon request. Binning scheme is as per following table.

## Wavelength Grouping

Color	Group	Wavelength distribution (nm)
DWT; True Green	Full	520 - 536
	W	520 - 524
	X	524 - 528
	Y	528 - 532
	Z	532 - 536
DWC; Cyan	Full	499 - 511
	W	499 - 503
	X	503 - 507
	Y	507 - 511
DWB; Blue	Full	464 - 480
	W	464 - 468
	X	468 - 472
	Y	472 - 476

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

## Electrical Characteristics at Ta=25°C

Part Number	Min. (V)	V <sub>f</sub> @ I <sub>f</sub> = 30mA		V <sub>r</sub> @ I <sub>r</sub> = 10uA
		Typ. (V)	Max. (V)	Min. (V)
DWB	3.05	3.4	4.0	5
DWT, DWC	3.05	3.5	4.2	5

Forward voltages are measure using a current pulse of 1 ms and with an accuracy of  $\pm 0.1$ V.

### Vf Bining (Optional)

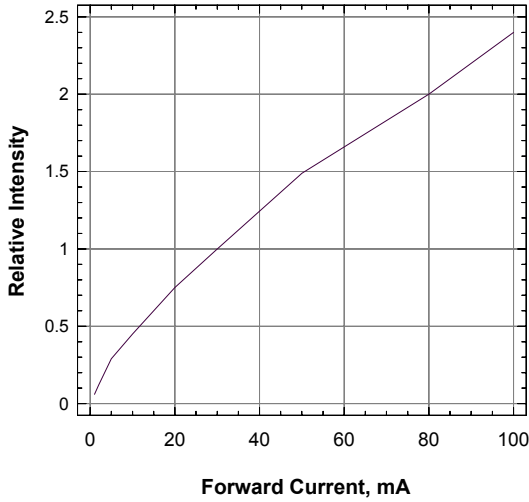
Vf @ If = 30mA	Forward Voltage (V)
3A	3.05 ... 3.35
30	3.35 ... 3.65
31	3.65 ... 3.95
32	3.95 ... 4.25

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

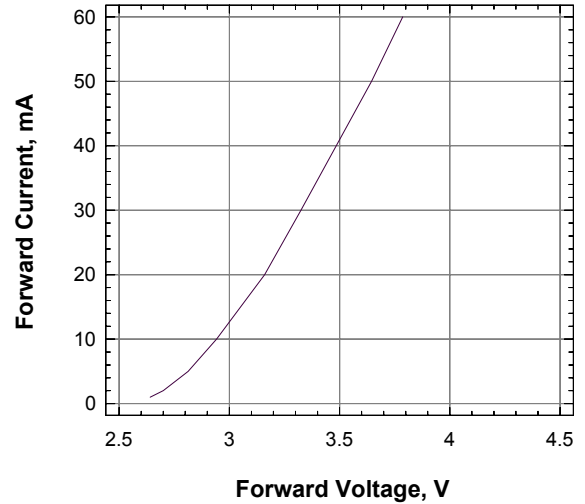
### Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	30	mA
Peak pulse current; (tp $\leq$ 10 $\mu$ s, Duty cycle = 0.1)	200	mA
Reverse voltage; Ir (max) = 10 $\mu$ A	5	V
ESD threshold (HBM)	2	kV
LED junction temperature	125	°C
Operating temperature	-40 ... +100	°C
Storage temperature	-40 ... +100	°C
Power dissipation (at room temperature)	135	mW

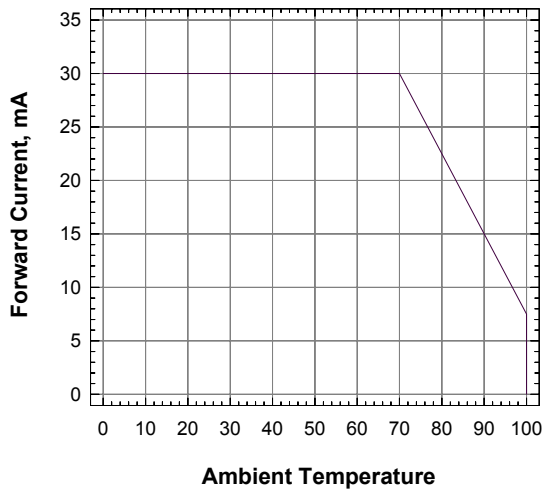
**Relative Intensity Vs Forward Current**



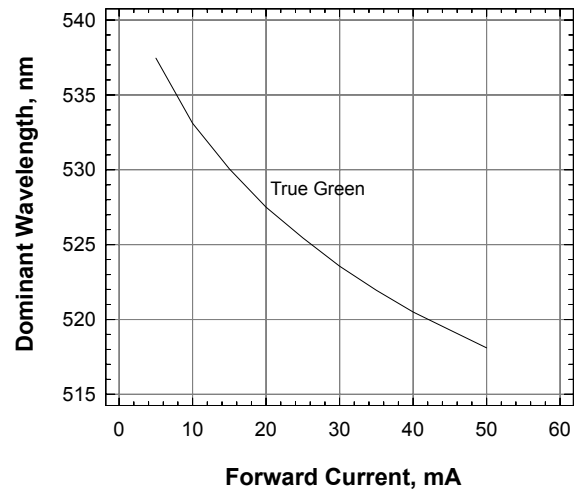
**Forward Current Vs Forward Voltage**



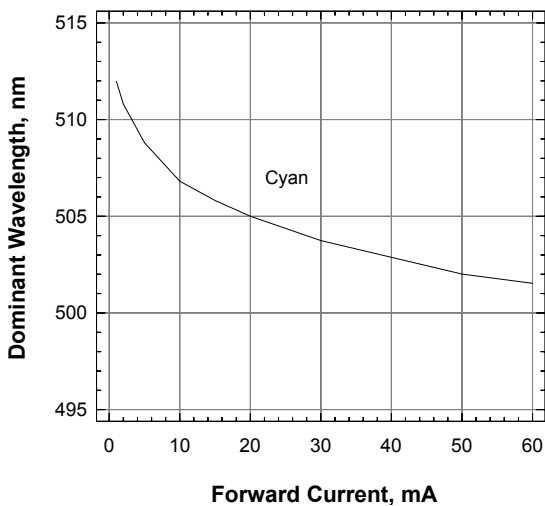
**Maximum Current Vs Temperature**



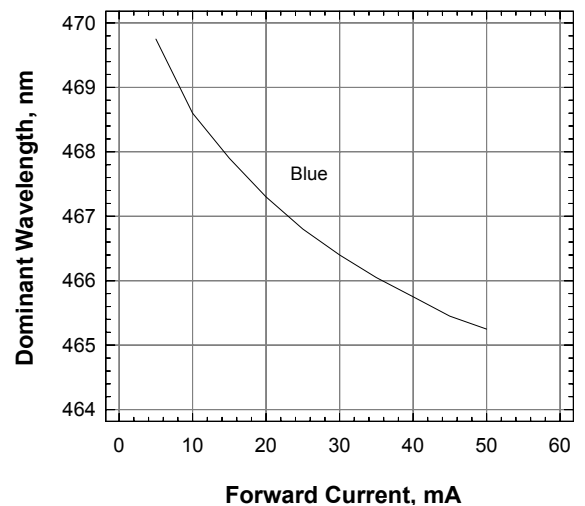
**Dominant Wavelength Vs Forward Current**



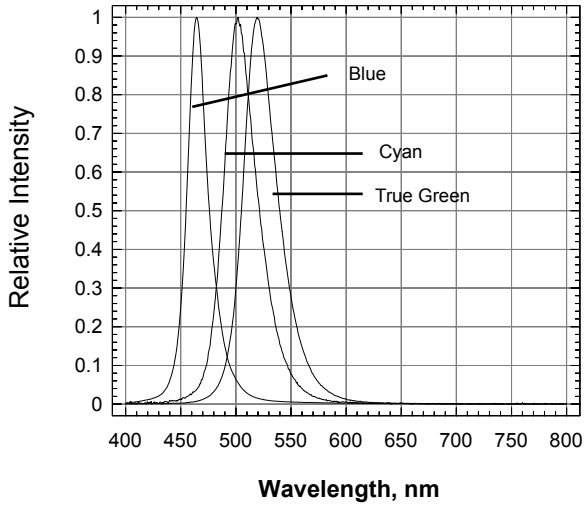
**Dominant Wavelength Vs Forward Current**



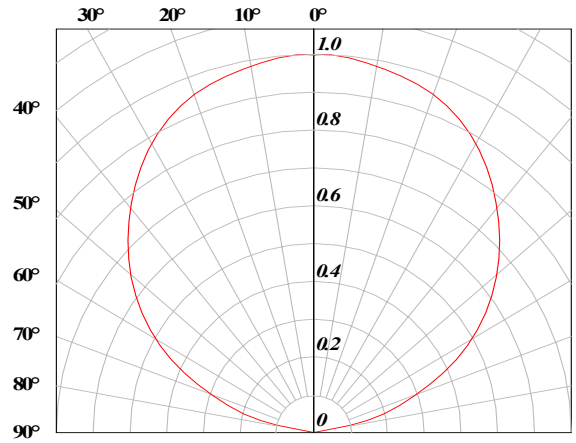
**Dominant Wavelength Vs Forward Current**



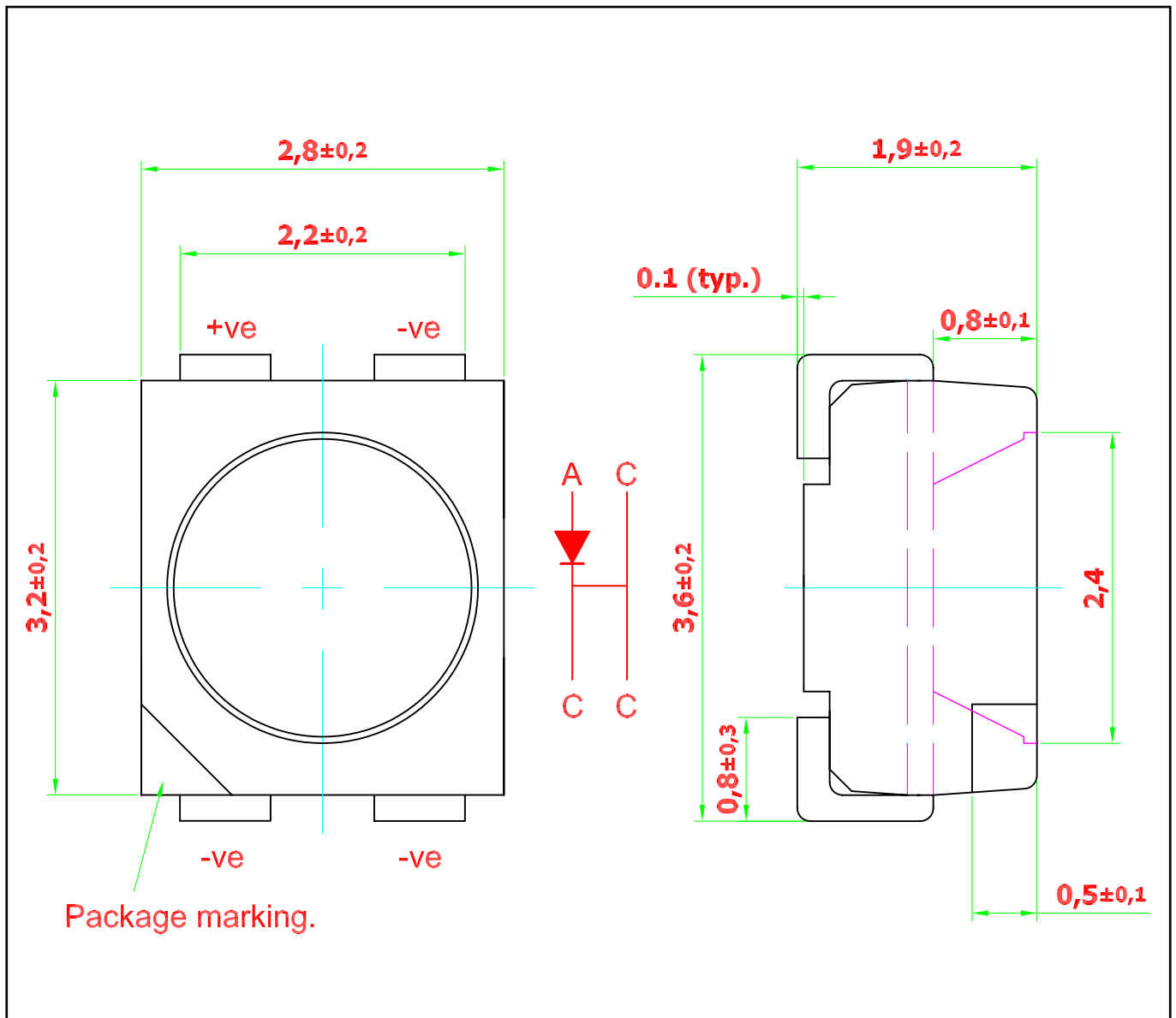
**Relative Intensity Vs Wavelength**



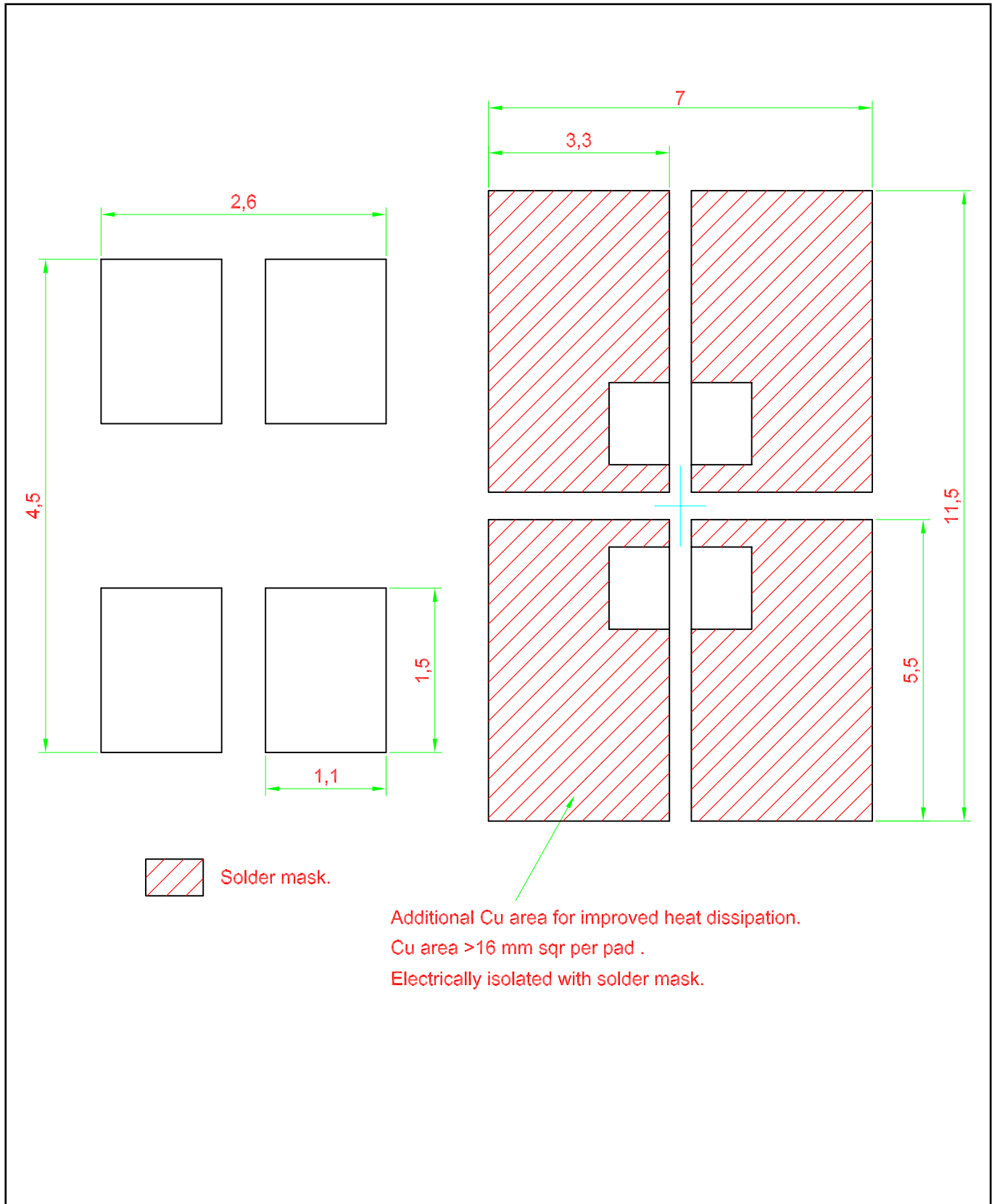
**Radiation Pattern**



**Power DomiLED™ • InGaN : DWx Package Outlines**

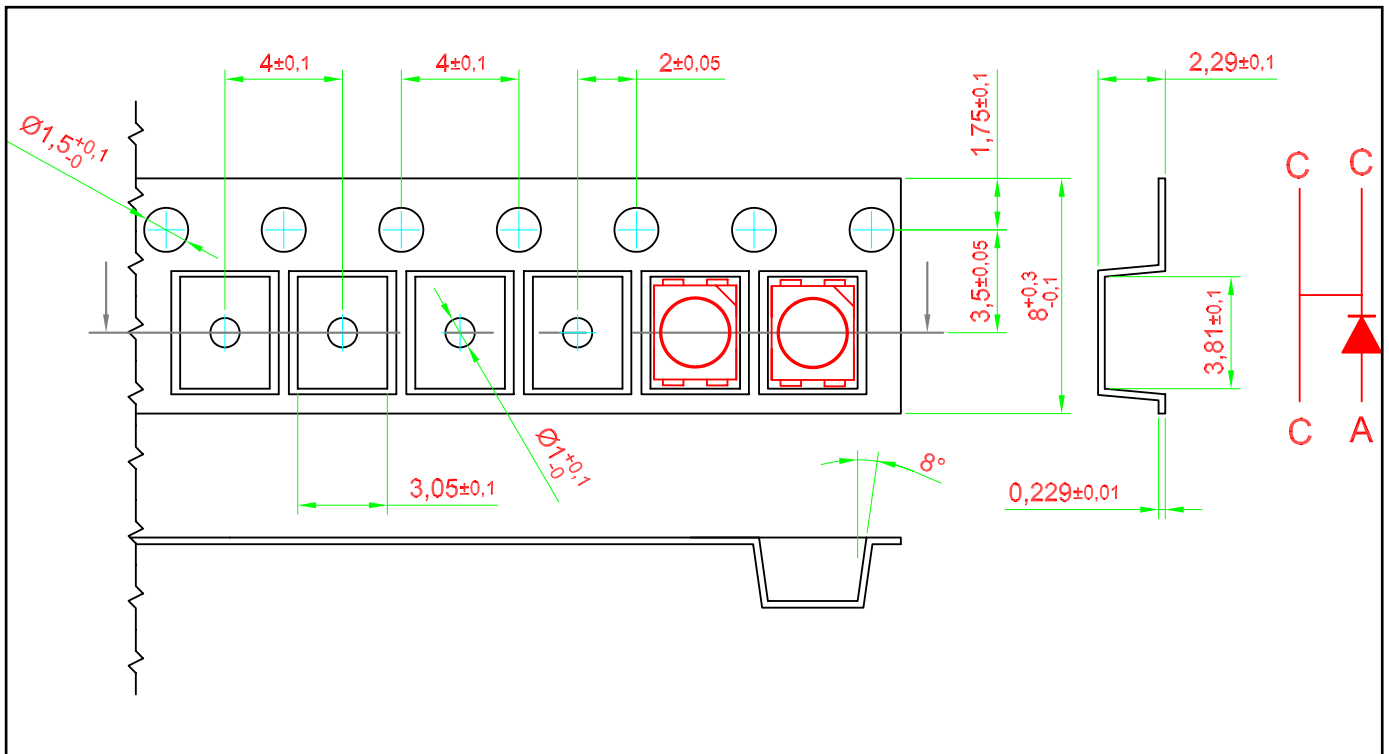


**Recommended Solder Pad**



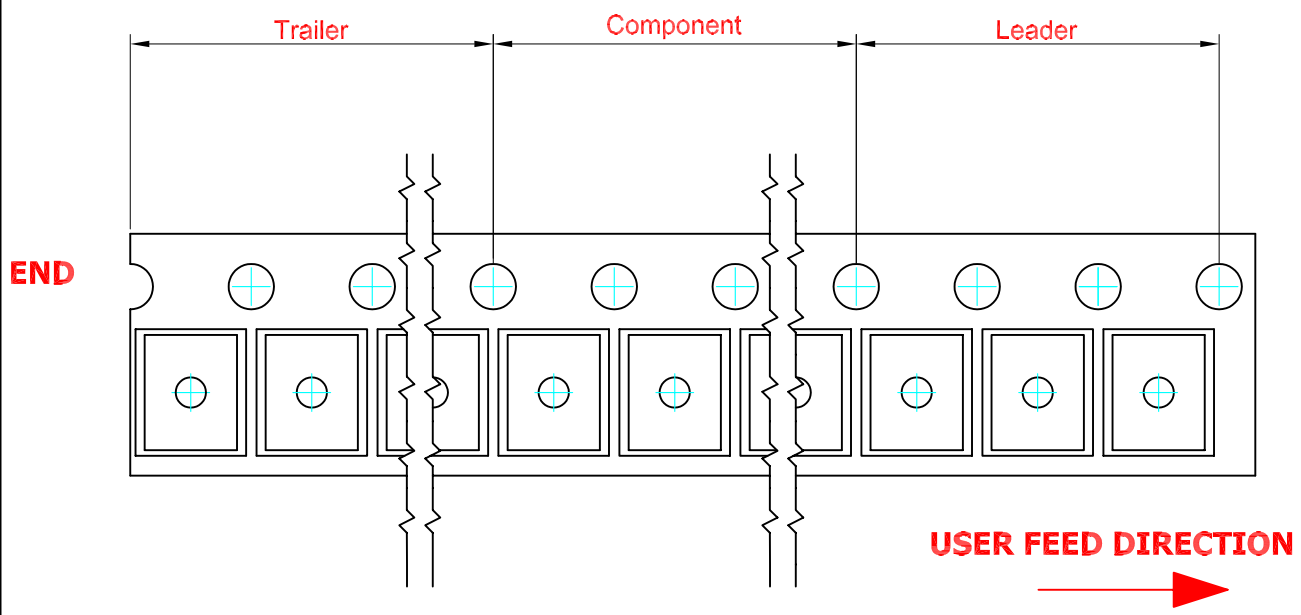
### Taping and orientation

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

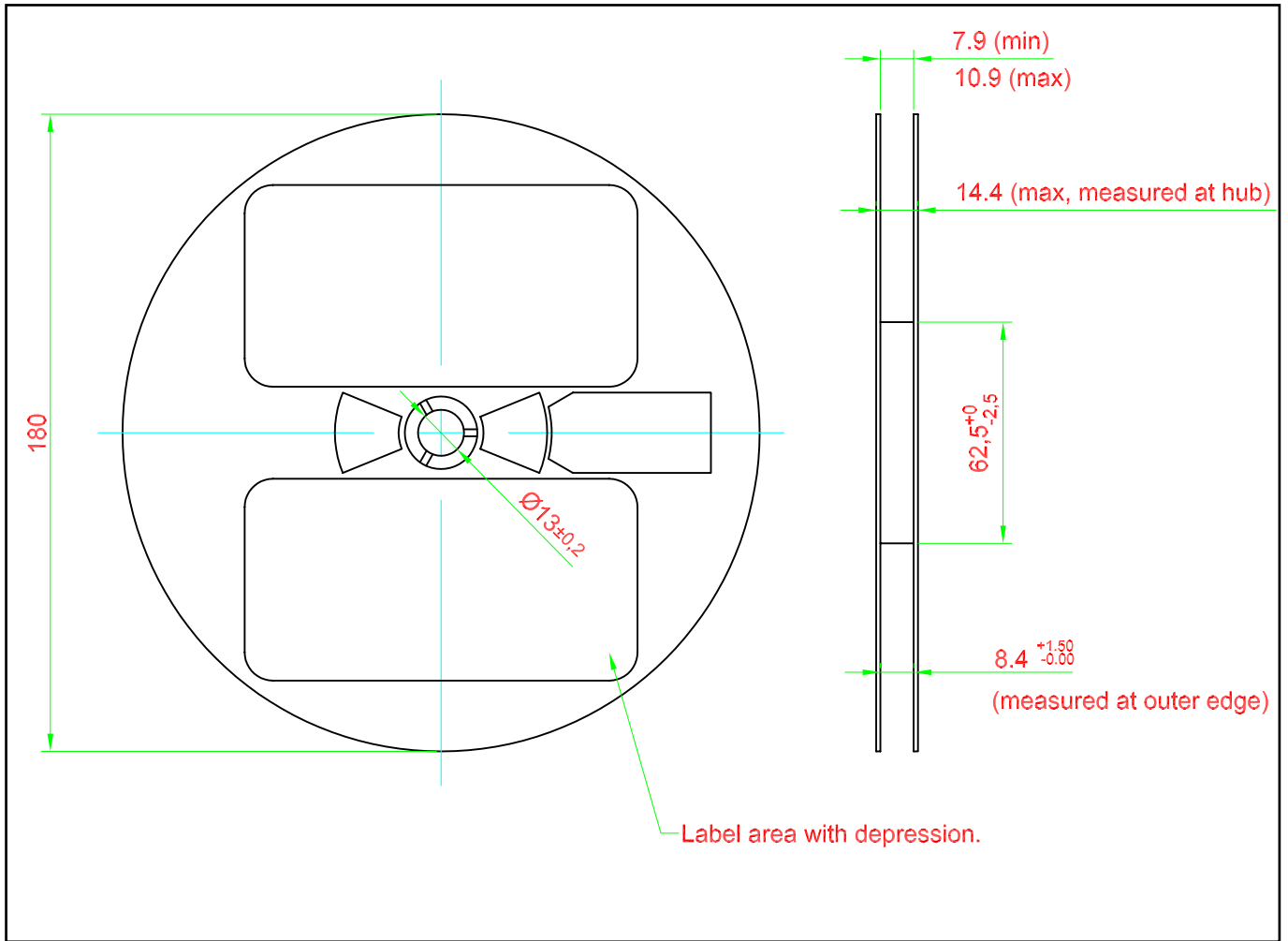


200 mm min. for  $\text{Ø}180$  reel.  
200 mm min. for  $\text{Ø}330$  reel.

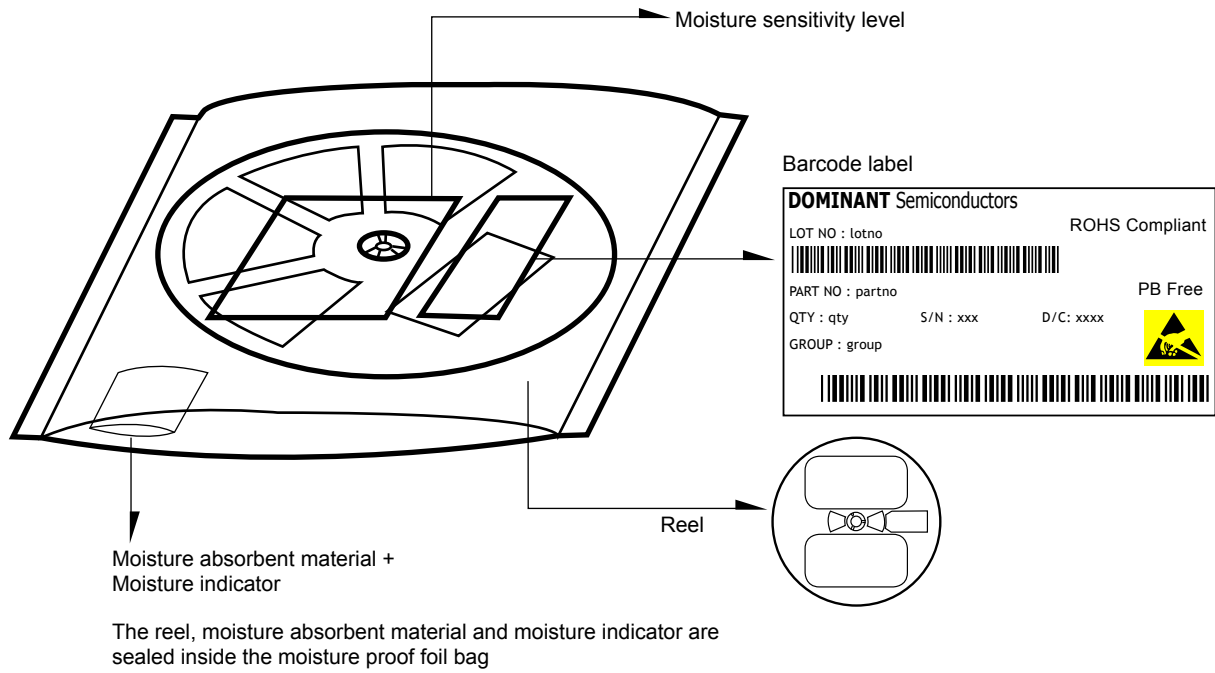
480 mm min. for  $\text{Ø}180$  reel.  
960 mm min. for  $\text{Ø}330$  reel.



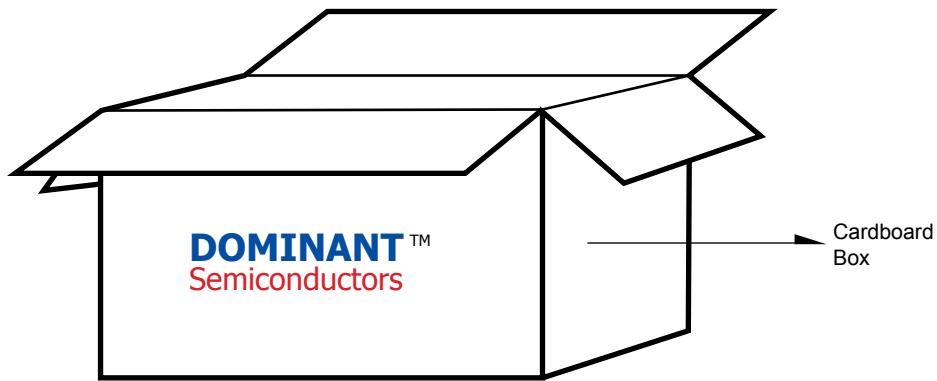
**Packaging Specification**



**Packaging Specification**



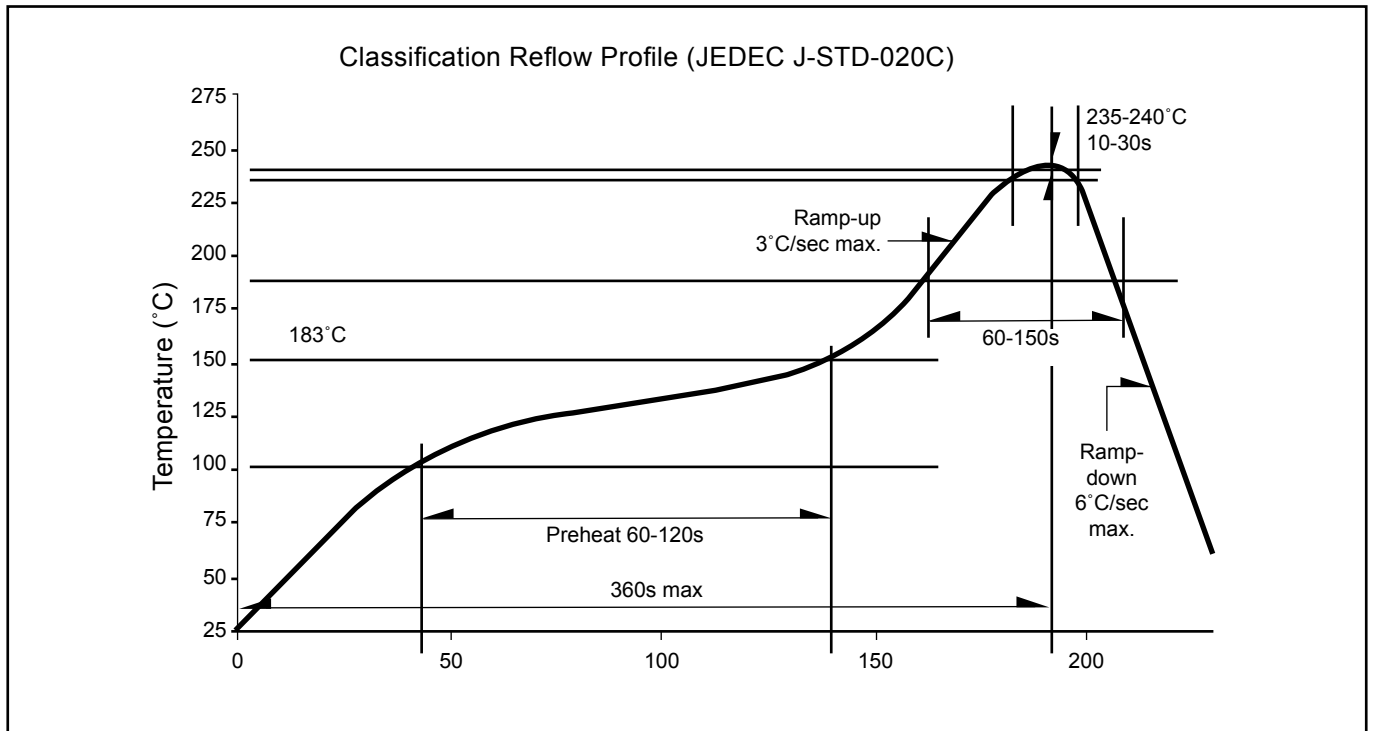
	Average 1pc Power DomiLED	1 completed bag (2000pcs)
Weight (gram)	0.034	190 ± 10



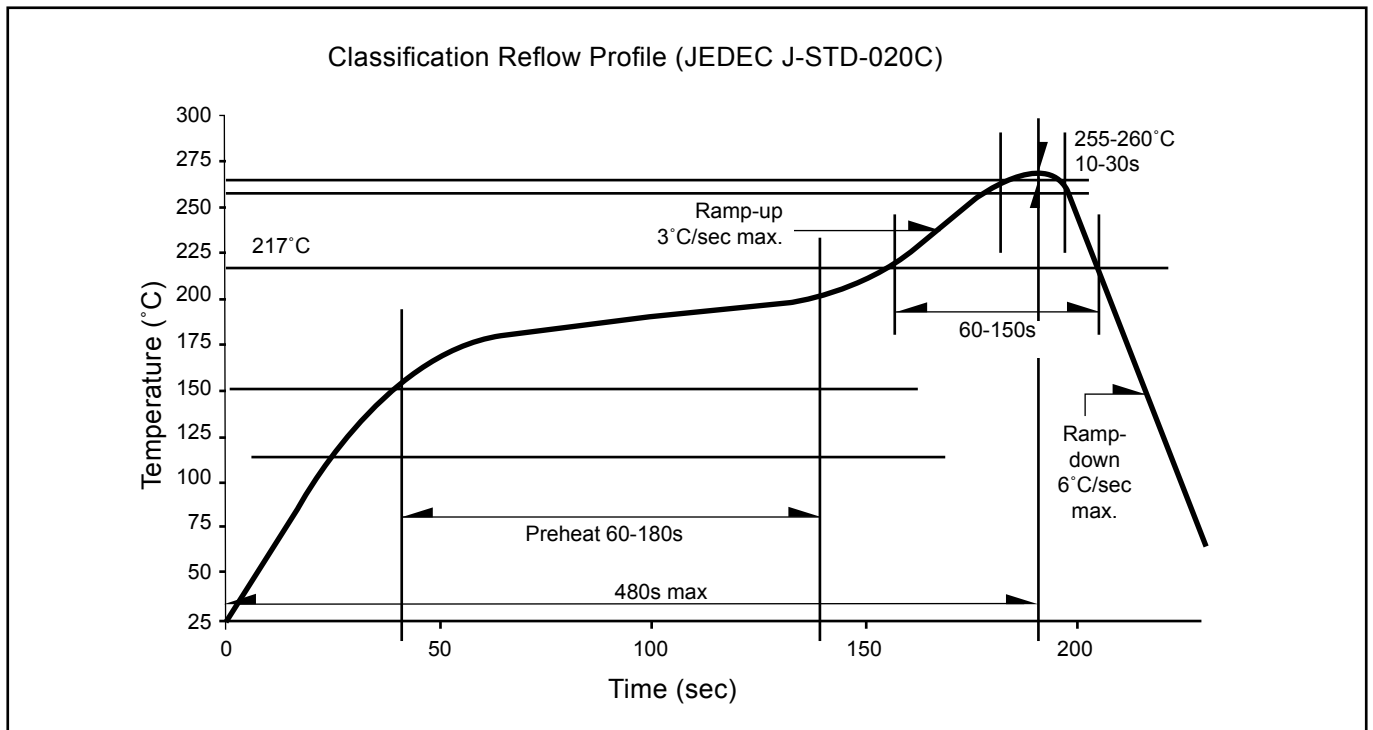
**For Power DomiLED™**

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	20 Feb 2006
3	<ul style="list-style-type: none"> <li>- Add New PartNo: DWB-UJS-S2T-1</li> <li>- DWT-SJS-UV2-1 --&gt; Not for new design</li> <li>- DWC-SJS-UV2-1 --&gt; Not for new design</li> </ul>	04 Apr 2006

**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>.

### **Please contact us for more information:**

#### Head Quarter

DOMINANT Semiconductors Sdn. Bhd.  
Lot 6, Batu Berendam, FTZ Phase III, 75350 Melaka, Malaysia  
Tel: (606) 283 3566 Fax: (606) 283 0566  
E-mail: [sales@dominant-semi.com](mailto:sales@dominant-semi.com)

#### DOMINANT China Sales Office

DOMINANT Semiconductors (Shenzhen) Co. Ltd.  
24BC Newbaohui Building, No. 1007 West Nanhai Blvd., Nanshan, Shenzhen, China P.C. 518054  
Tel: +86 (755) 86031785 / +86 (755) 86031786 Fax: +86 (755) 86031789  
E-mail: [sales\\_china@dominant-semi.com](mailto:sales_china@dominant-semi.com)

#### DOMINANT Korea Sales Office

DOMINANT Semiconductors Korea Inc.  
902 Sunil Technopia, 440 Sangdaewon-dong, Jungwon-gu, Sungnam-si, Kyunggi-do, Korea 462726  
Tel: 82-31-777-3978 Fax: 82-31-777-3976  
E-mail: [sales\\_korea@dominant-semi.com](mailto:sales_korea@dominant-semi.com)

