

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

With its significant power in terms brightness, viewing angle and variety of application possibilities, Power DomiLED<sup>TM</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.
- > Long lifetime up to 50,000 hours due to silicone encapsulation.
- > 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 IR reflow soldering.
- > Environmental friendly; RoHS compliance.



### Applications:

- > Automotive:  
Interior applications, eg: switches, telematics, climate control system, dashboard, etc.



### Luminous Intensity Grouping (Tj=25°C)

Part Ordering Number	Viewing Angle°	Luminous Intensity @ IF = 30mA IV (mcd)		
		Min.	Typ.	Max.
DWZB-UJG-U2X1-3J8L	120	560.0	1400.0	2240.0

**NOTE**

1. All part number above comes in a quantity of 2000 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.
4. 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.

### Electrical Characteristics at Tj=25°C

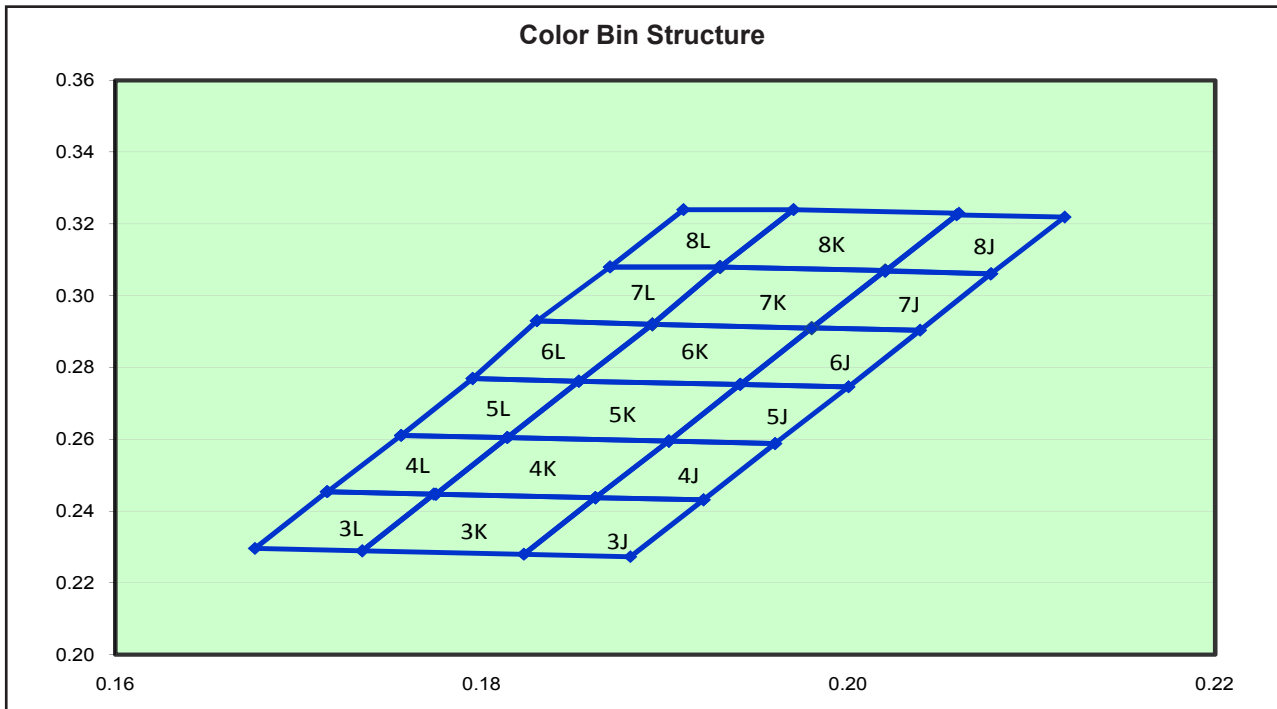
Part Number	Min. (V)	Vf @ If = 30mA		Vr @ Ir = 10uA
		Typ. (V)	Max. (V)	Min. (V)
DWZB-UJG	3.05	3.40	4.00	5

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

## Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	50	mA
Peak pulse current; (tp ≤ 10μs, Duty cycle = 0.1)	200	mA
Reverse voltage; Ir (max) = 10μA	5	V
ESD threshold (HBM)	2	kV
LED junction temperature	125	°C
Operating temperature	-40 ... +110	°C
Storage temperature	-40 ... +110	°C
Power dissipation (at room temperature)	200	mW
Thermal resistance		
- Junction / ambient, R <sub>th JA</sub>	300	K/W
- Junction / solder point, R <sub>th JS</sub>	130	K/W
(Mounting on FR4 PCB, pad size ≥ 16 mm <sup>2</sup> per pad)		

**DWZB-UJG, Color Grouping**



Chromaticity coordinate groups are measured with an accuracy of  $\pm 0.01$ .

Bin		1	2	3	4
3J	Cx	0.1862	0.1823	0.1881	0.1921
	Cy	0.2437	0.2280	0.2273	0.2431
3K	Cx	0.1774	0.1735	0.1823	0.1862
	Cy	0.2447	0.2289	0.2280	0.2437
3L	Cx	0.1716	0.1676	0.1735	0.1774
	Cy	0.2454	0.2296	0.2289	0.2447
4J	Cx	0.1902	0.1862	0.1921	0.1960
	Cy	0.2595	0.2437	0.2431	0.2588
4K	Cx	0.1814	0.1775	0.1862	0.1902
	Cy	0.2605	0.2447	0.2437	0.2595
4L	Cx	0.1756	0.1716	0.1775	0.1814
	Cy	0.2611	0.2454	0.2447	0.2605
5J	Cx	0.1941	0.1902	0.1960	0.2000
	Cy	0.2753	0.2595	0.2588	0.2746
5K	Cx	0.1853	0.1814	0.1902	0.1941
	Cy	0.2762	0.2605	0.2595	0.2753
5L	Cx	0.1795	0.1756	0.1814	0.1853
	Cy	0.2769	0.2611	0.2605	0.2762
6J	Cx	0.1980	0.1941	0.2000	0.2039
	Cy	0.2910	0.2753	0.2746	0.2904
6K	Cx	0.1893	0.1853	0.1941	0.1980
	Cy	0.2920	0.2762	0.2753	0.2910
6L	Cx	0.1830	0.1795	0.1853	0.1893
	Cy	0.2930	0.2769	0.2762	0.2920

Bin		1	2	3	4
7J	Cx	0.2020	0.1980	0.2039	0.2078
	Cy	0.3070	0.2910	0.2904	0.3060
7K	Cx	0.1930	0.1893	0.1980	0.2020
	Cy	0.3080	0.2920	0.2910	0.3070
7L	Cx	0.1870	0.1830	0.1893	0.1930
	Cy	0.3080	0.2930	0.2920	0.3080
8J	Cx	0.2059	0.2020	0.2078	0.2118
	Cy	0.3225	0.3068	0.3061	0.3219
8K	Cx	0.1970	0.1930	0.2020	0.2060
	Cy	0.3240	0.3080	0.3070	0.3230
8L	Cx	0.1910	0.1870	0.1930	0.1970
	Cy	0.3240	0.3080	0.3080	0.3240

Dominant color coordinate is measured with an accuracy of  $\pm 0.01$ .

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

Brightness Group	Luminous Intensity IV (mcd)
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
X1	1800.0 ... 2240.0

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

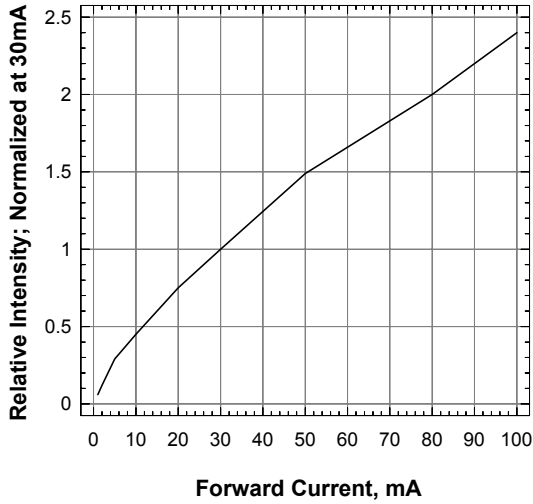
**Vf Bining (Optional)**

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

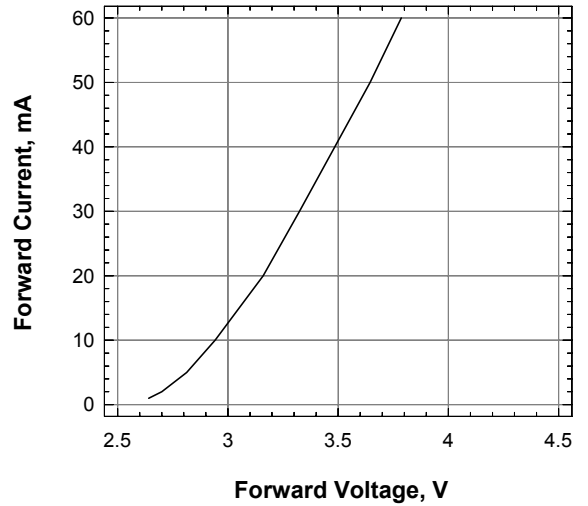
Forward voltage, Vf is measured with an accuracy of ± 0.1V.

Please consult sales and marketing to incorporate special part number to incorporate Vf binning.

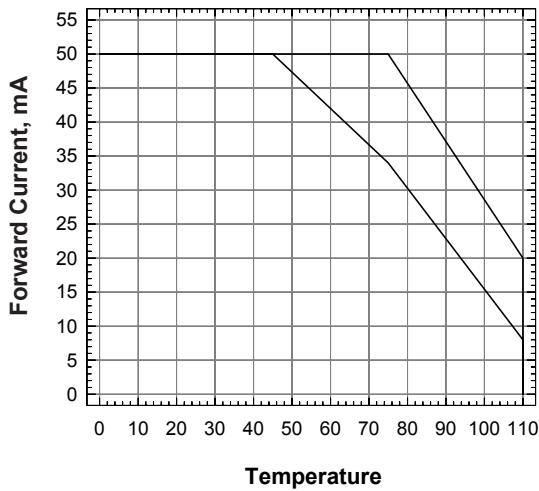
**Relative Intensity Vs Forward Current**



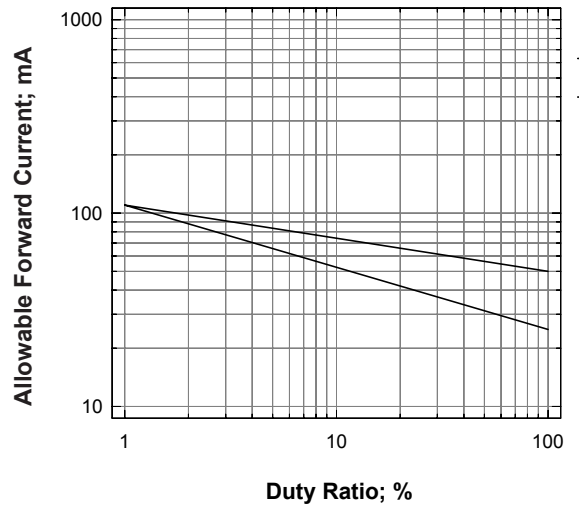
**Forward Current Vs Forward Voltage**



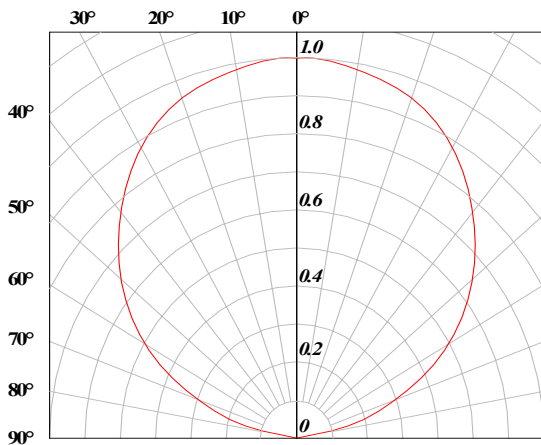
**Forward Current Vs Temperature**



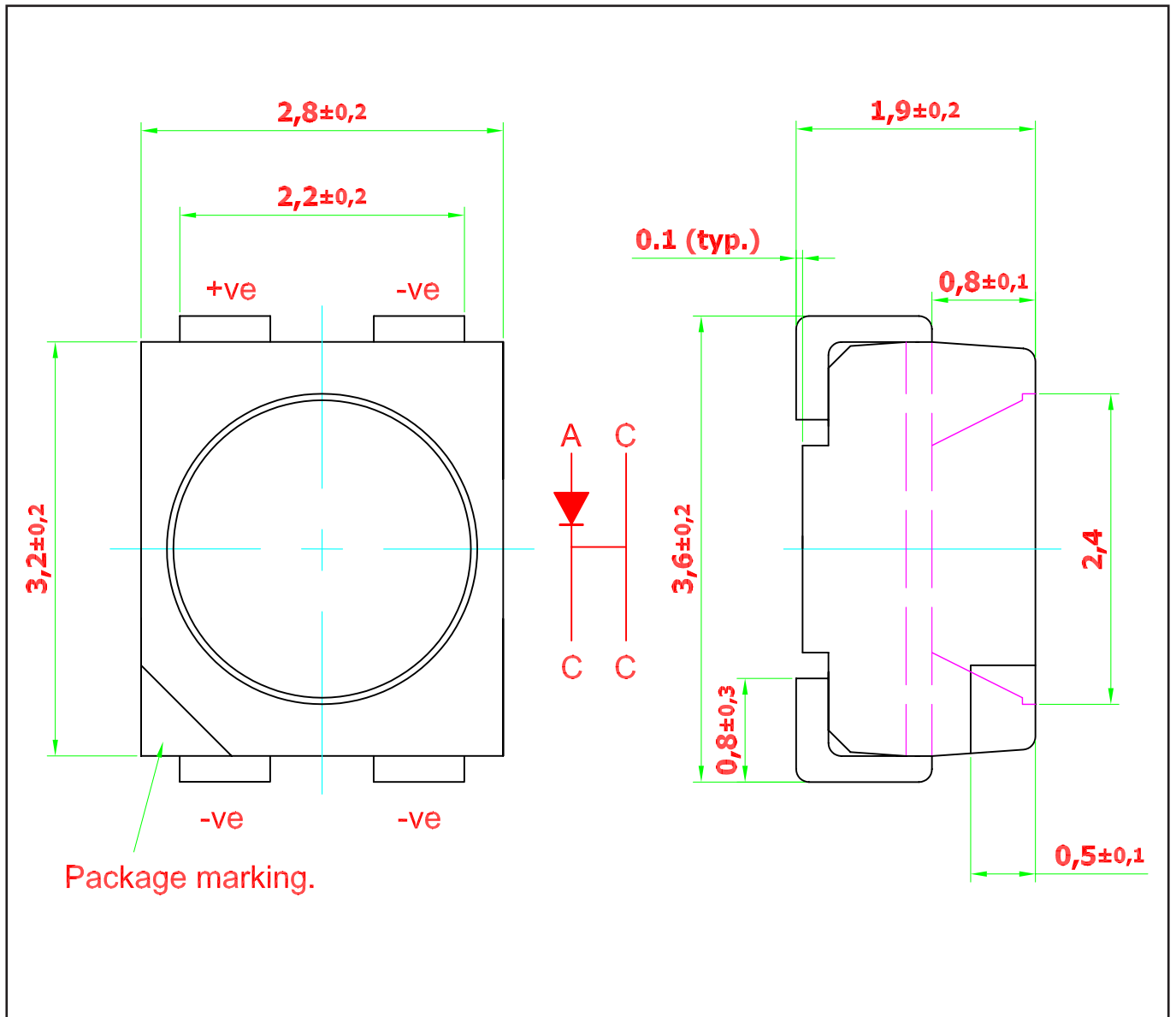
**Allowable Forward Current Vs Duty Ratio**



**Radiation Pattern**



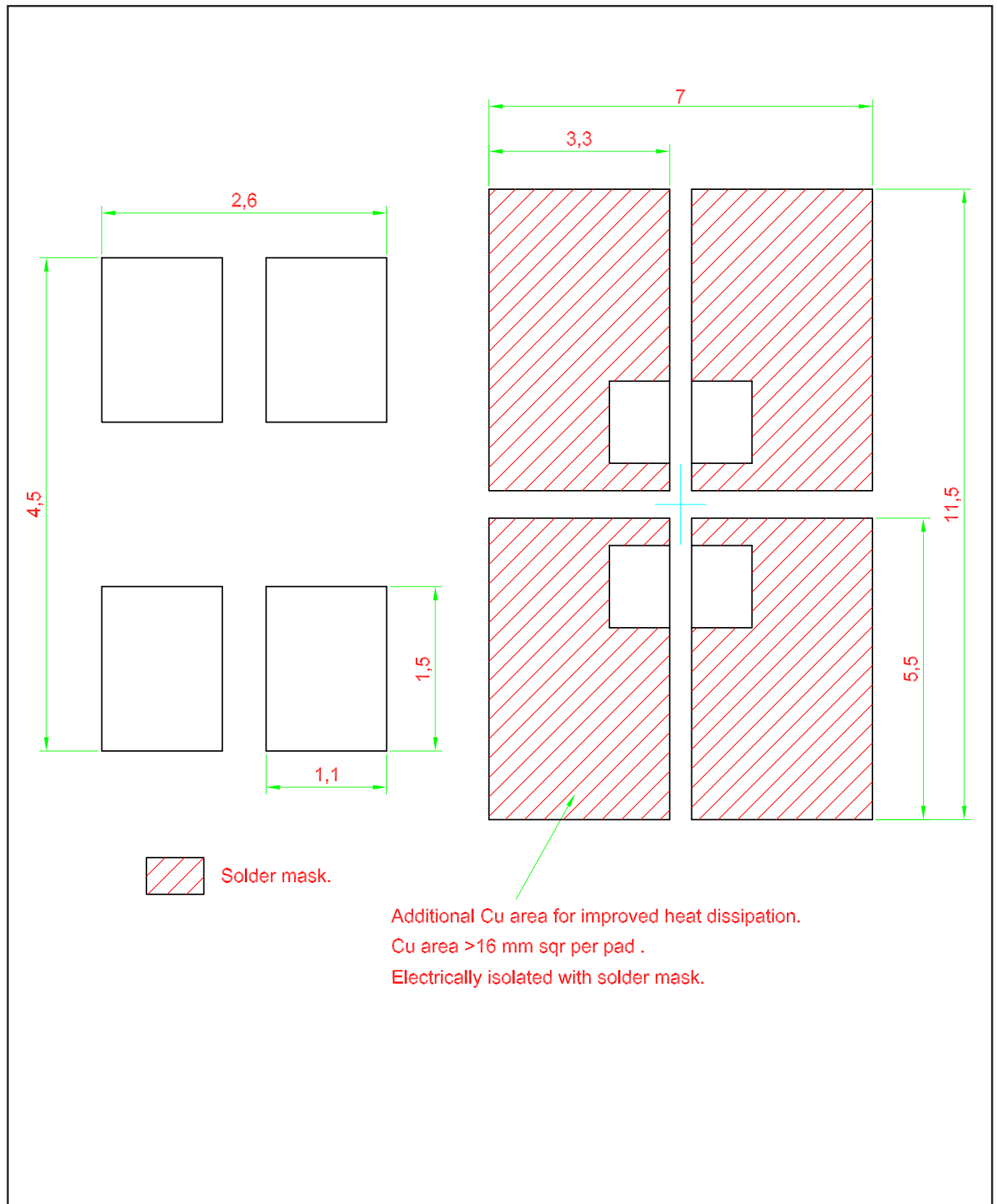
**Power DomiLED™ • InGaN: DWZB-UJG(3J8L) Package Outlines**



**Material**

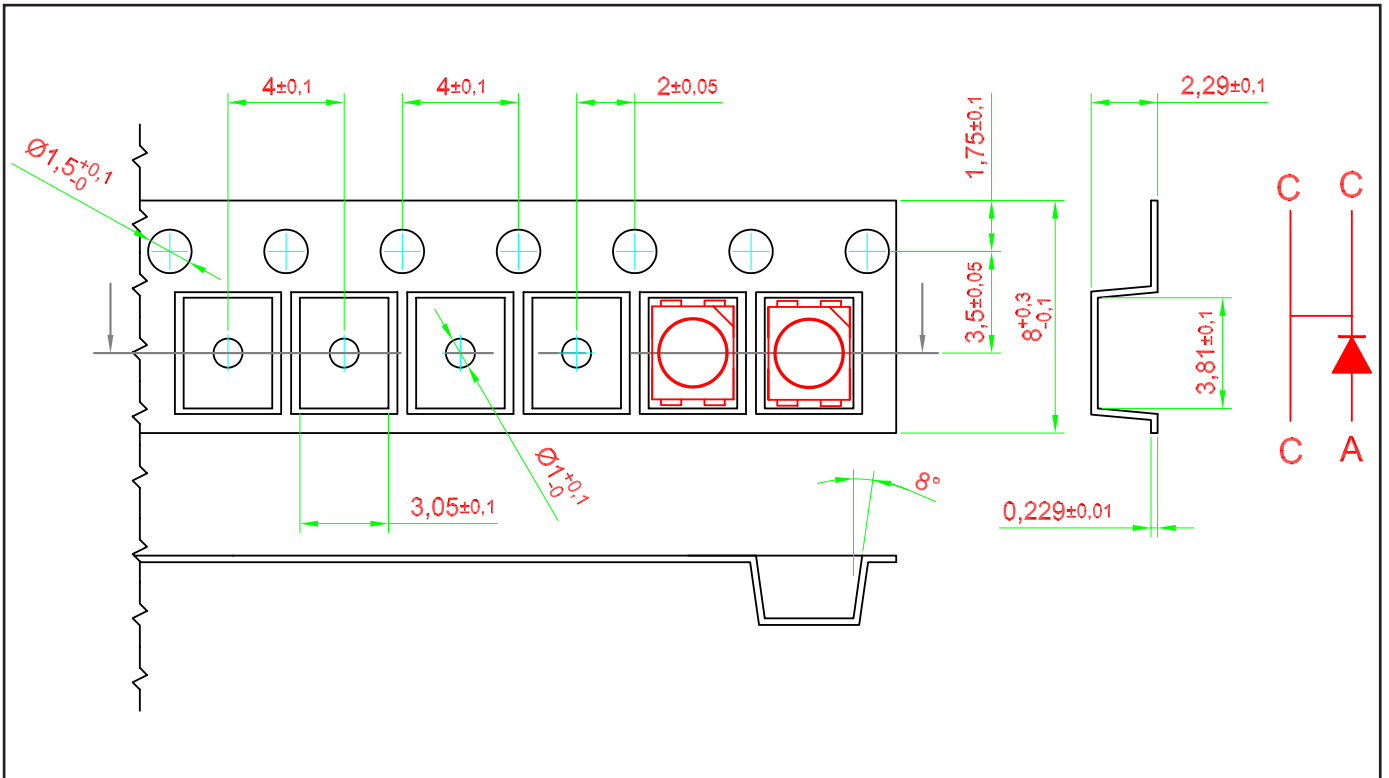
Material	
Lead-frame	Cu Alloy With Ag Plating
Package	High Temperature Resistant Plastic, PPA
Encapsulant	Silicone Resin
Soldering Leads	Sn-Sn Plating

## Recommended Solder Pad



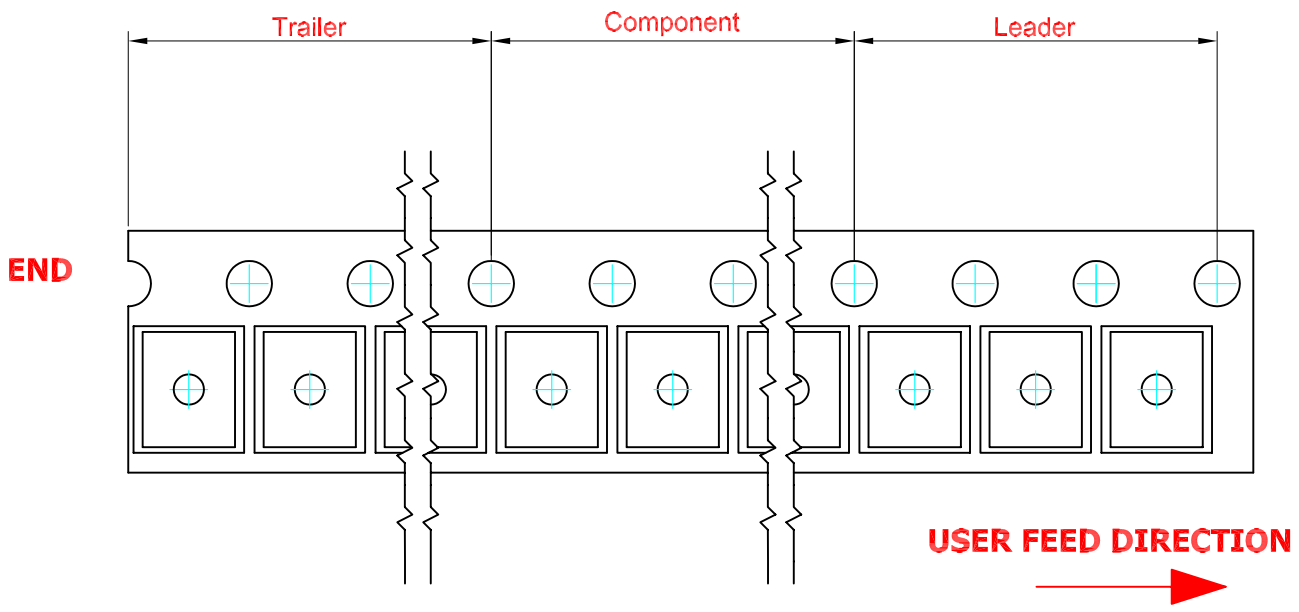
**Taping and orientation**

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

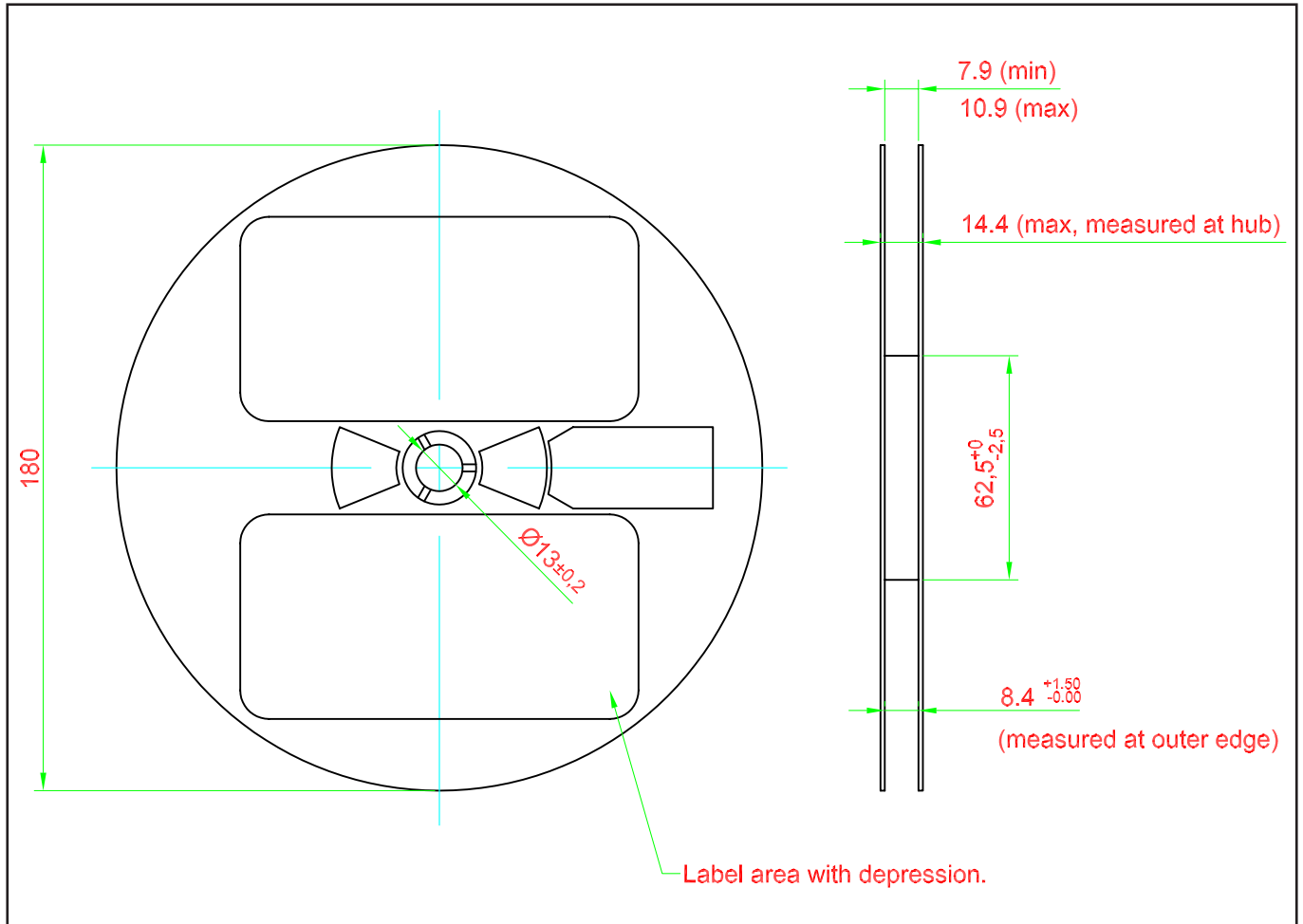


200 mm min. for  $\varnothing 180$  reel.  
 200 mm min. for  $\varnothing 330$  reel.

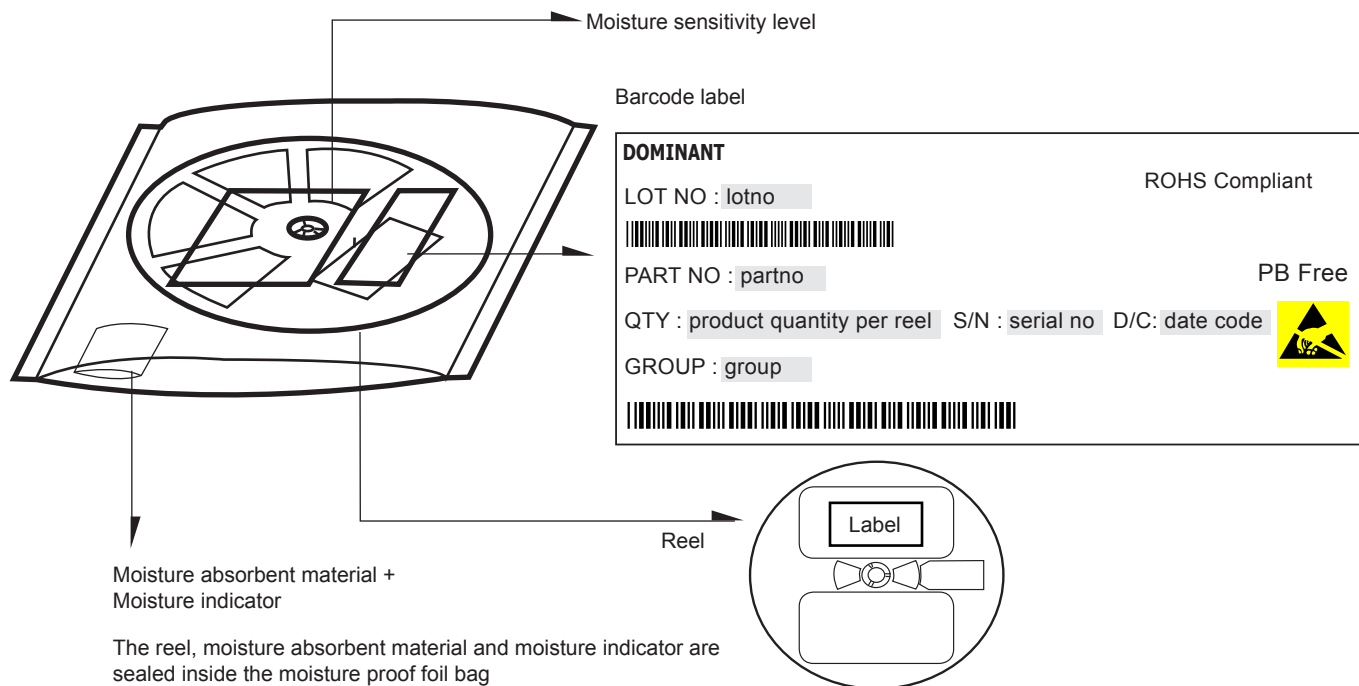
480 mm min. for  $\varnothing 180$  reel.  
 960 mm min. for  $\varnothing 330$  reel.



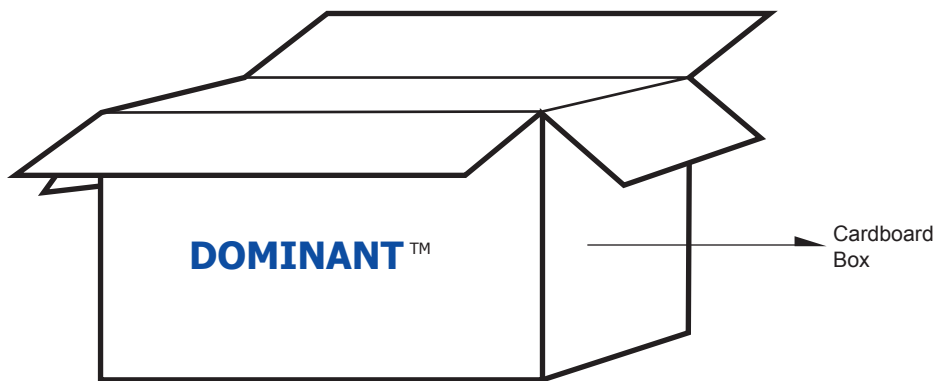
### Packaging Specification



**Packaging Specification**



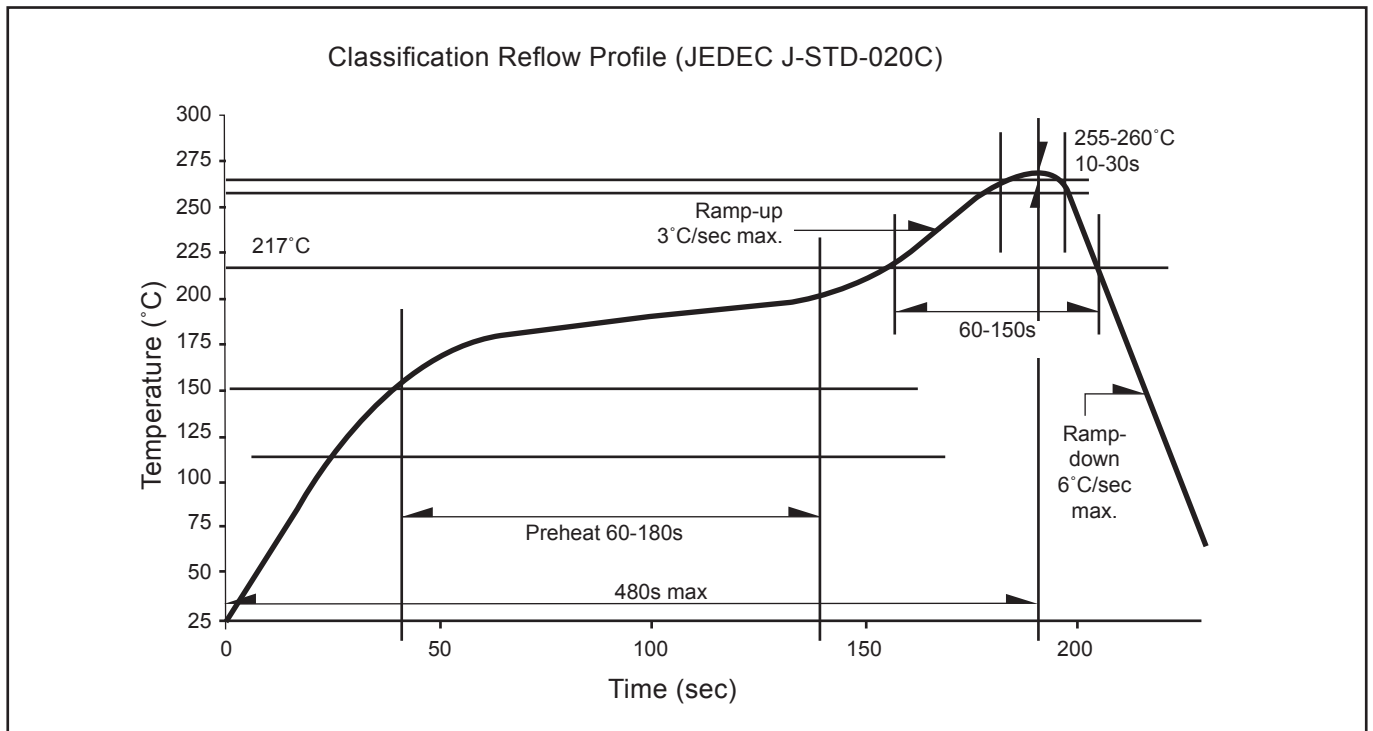
	Average 1pc Power DomiLED	1 completed bag (2000pcs)
Weight (gram)	0.034	190 ± 10



**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	96 reels MAX	192,000 MAX

### Recommended Pb-free Soldering Profile





## 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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