

Power DomiLED[™]

With its significant power in terms brightness, viewing angle and variety of application possibilities, Power DomiLED[™] 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 IR reflow 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



Optical Characteristics (Tj=25°C)

Part Ordering Number	Color	Viewing Angle°	Total Flux IF=30mA, mlm (typ)	Luminous Intensity @ IF = 30mA IV (mcd)		
				Min.	Typ.	Max.
● DWW-LJG-W2X-1	White	120	7000	1400.0	2240.0	2850.0
DWW-LJG-XY1-1	White	120	8900	1800.0	2850.0	3550.0

● Not for new design

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

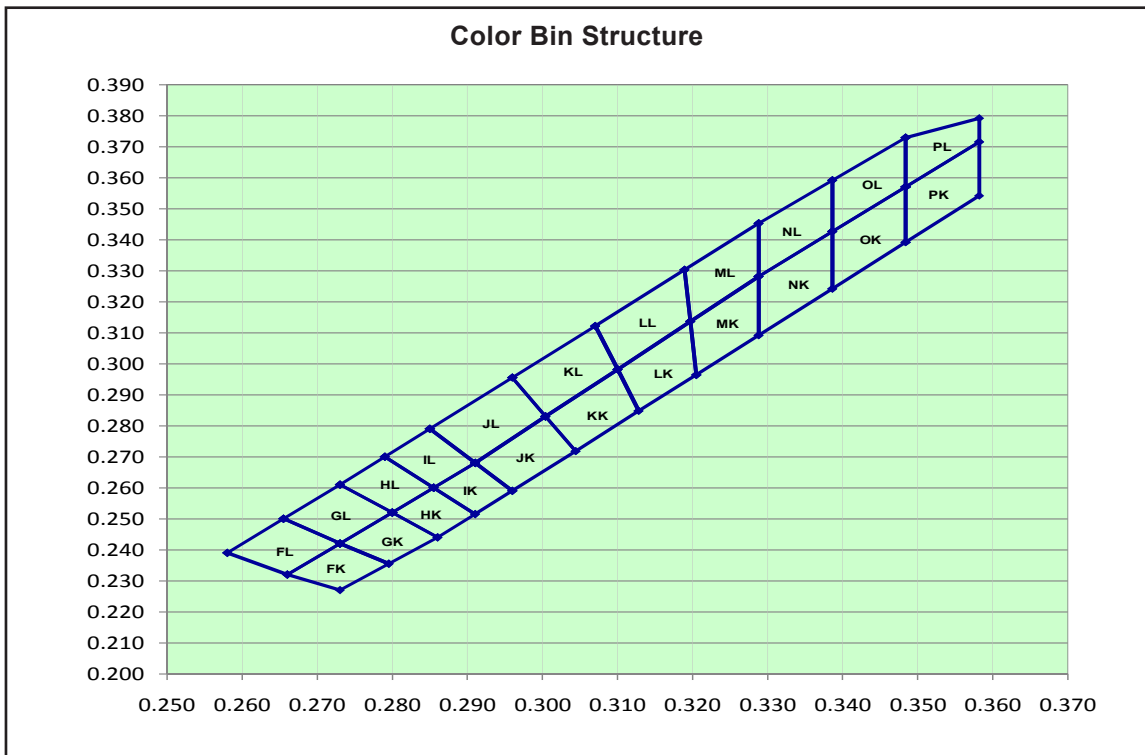
Part Number	Min. (V)	Typ. (V)	Max. (V)	Min. (V)
DWW-LJG	2.90	3.25	3.60	5

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

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	50	mA
Peak pulse current; (tp ≤ 10µs, Duty cycle = 0.005)	300	mA
Reverse voltage; Ir (max) = 10µA	5	V
ESD threshold (HBM)	2000	V
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, Rth JA	300	K/W
- Junction / solder point, Rth JS	130	K/W
(Mounting on FR4 PCB, pad size ≥ 16 mm ² per pad)		

DWW, White Color Grouping



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

Bin		1	2	3	4
FK	Cx	0.2660	0.2730	0.2793	0.2731
	Cy	0.2320	0.2270	0.2357	0.2422
FL	Cx	0.2580	0.2655	0.2731	0.2660
	Cy	0.2390	0.2500	0.2422	0.2320
GK	Cx	0.2731	0.2793	0.2856	0.2799
	Cy	0.2422	0.2357	0.2445	0.2520
GL	Cx	0.2655	0.2731	0.2799	0.2729
	Cy	0.2500	0.2422	0.2520	0.2611
HK	Cx	0.2799	0.2855	0.2908	0.2856
	Cy	0.2520	0.2600	0.2518	0.2445
HL	Cx	0.2729	0.2790	0.2855	0.2799
	Cy	0.2611	0.2701	0.2600	0.2520
IK	Cx	0.2855	0.2908	0.2960	0.2910
	Cy	0.2600	0.2518	0.2590	0.2680
IL	Cx	0.2790	0.2850	0.2910	0.2855
	Cy	0.2701	0.2790	0.2680	0.2600
JK	Cx	0.2910	0.2960	0.3044	0.3004
	Cy	0.2680	0.2590	0.2718	0.2830
JL	Cx	0.2850	0.2910	0.3004	0.2960
	Cy	0.2790	0.2680	0.2830	0.2956
KK	Cx	0.3004	0.3044	0.3128	0.3100
	Cy	0.2830	0.2718	0.2848	0.2982
KL	Cx	0.2960	0.3004	0.3100	0.3070
	Cy	0.2956	0.2830	0.2982	0.3122

Bin		1	2	3	4
LK	Cx	0.3100	0.3128	0.3205	0.3197
	Cy	0.2982	0.2848	0.2964	0.3137
LL	Cx	0.3070	0.3100	0.3197	0.3189
	Cy	0.3122	0.2982	0.3137	0.3303
MK	Cx	0.3197	0.3205	0.3288	0.3288
	Cy	0.3137	0.2964	0.3092	0.3282
ML	Cx	0.3189	0.3197	0.3288	0.3288
	Cy	0.3303	0.3137	0.3282	0.3453
NK	Cx	0.3288	0.3288	0.3386	0.3386
	Cy	0.3282	0.3092	0.3242	0.3427
NL	Cx	0.3288	0.3288	0.3386	0.3386
	Cy	0.3453	0.3282	0.3427	0.3592
OK	Cx	0.3386	0.3386	0.3484	0.3484
	Cy	0.3427	0.3242	0.3392	0.3571
OL	Cx	0.3386	0.3386	0.3484	0.3484
	Cy	0.3592	0.3427	0.3571	0.3730
PK	Cx	0.3484	0.3484	0.3582	0.3582
	Cy	0.3571	0.3392	0.3542	0.3716
PL	Cx	0.3484	0.3484	0.3582	0.3582
	Cy	0.3730	0.3571	0.3716	0.3792

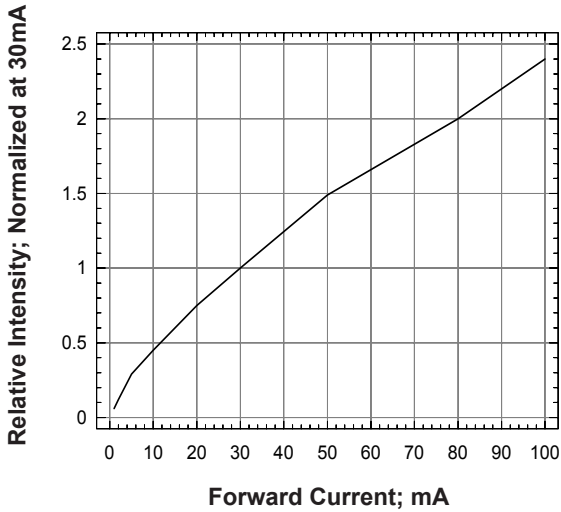
InGaN wavelength is very sensitive to drive current. Operating at lower current is not recommended and may yield unpredictable performance. Current pulsing should be used for dimming purposes.

Luminous Intensity Group at Tj=25°C

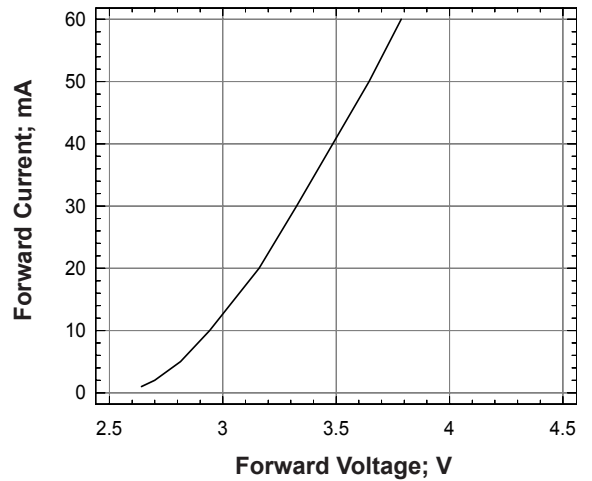
Brightness Group	Luminous Intensity IV (mcd)
W2	1400.0 ... 1800.0
X1	1800.0 ... 2240.0
X2	2240.0 ... 2850.0
Y1	2850.0 ... 3550.0

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

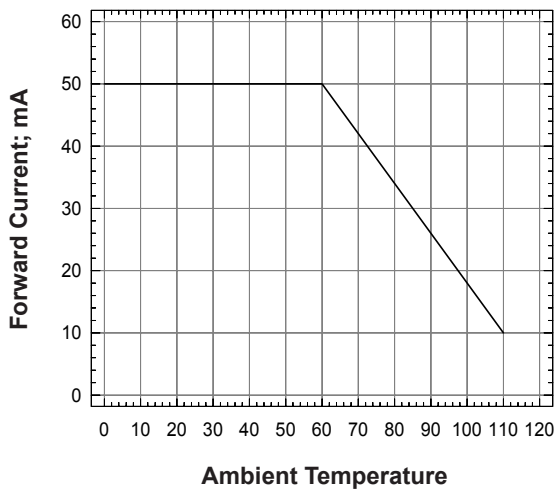
Relative Intensity Vs Forward Current



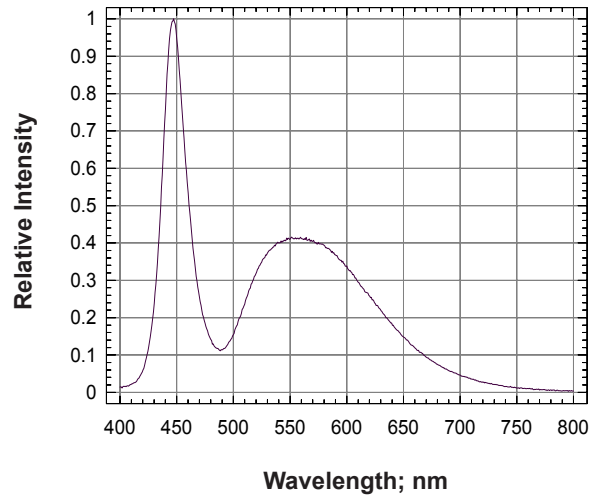
Forward Current Vs Forward Voltage



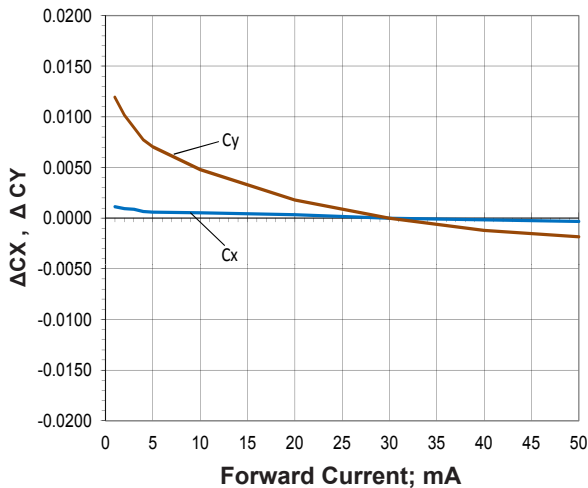
Forward Current Vs Ambient Temperature



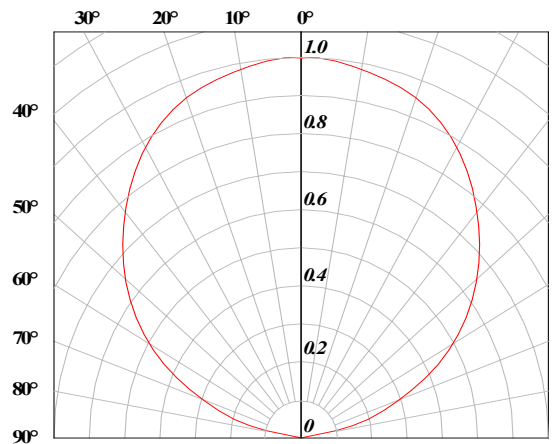
Relative Intensity Vs Wavelength



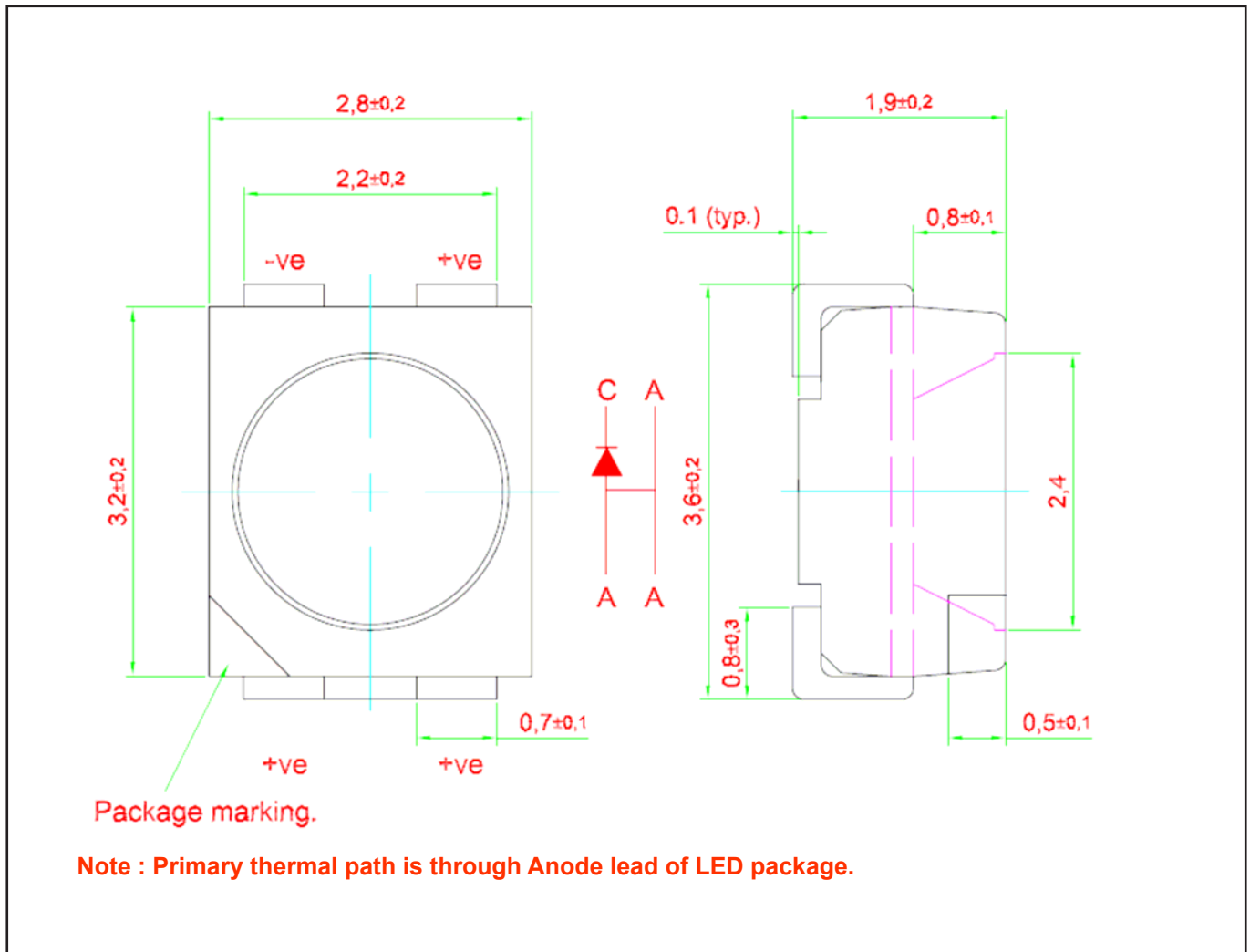
Chromaticity Coordinate Shift



Radiation Pattern



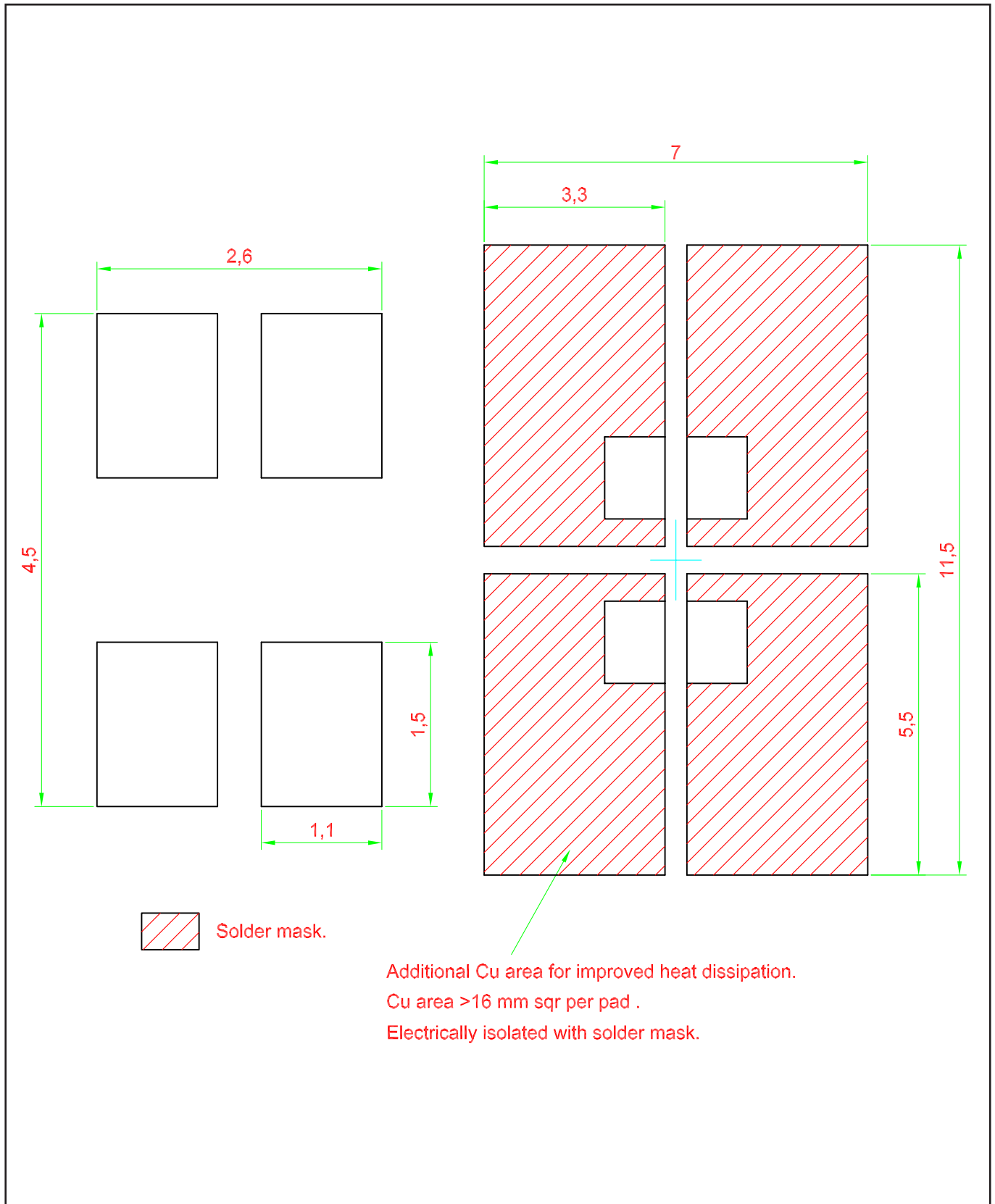
Power DomiLED™ • InGaN White : DWW-LJG Package Outlines



Material

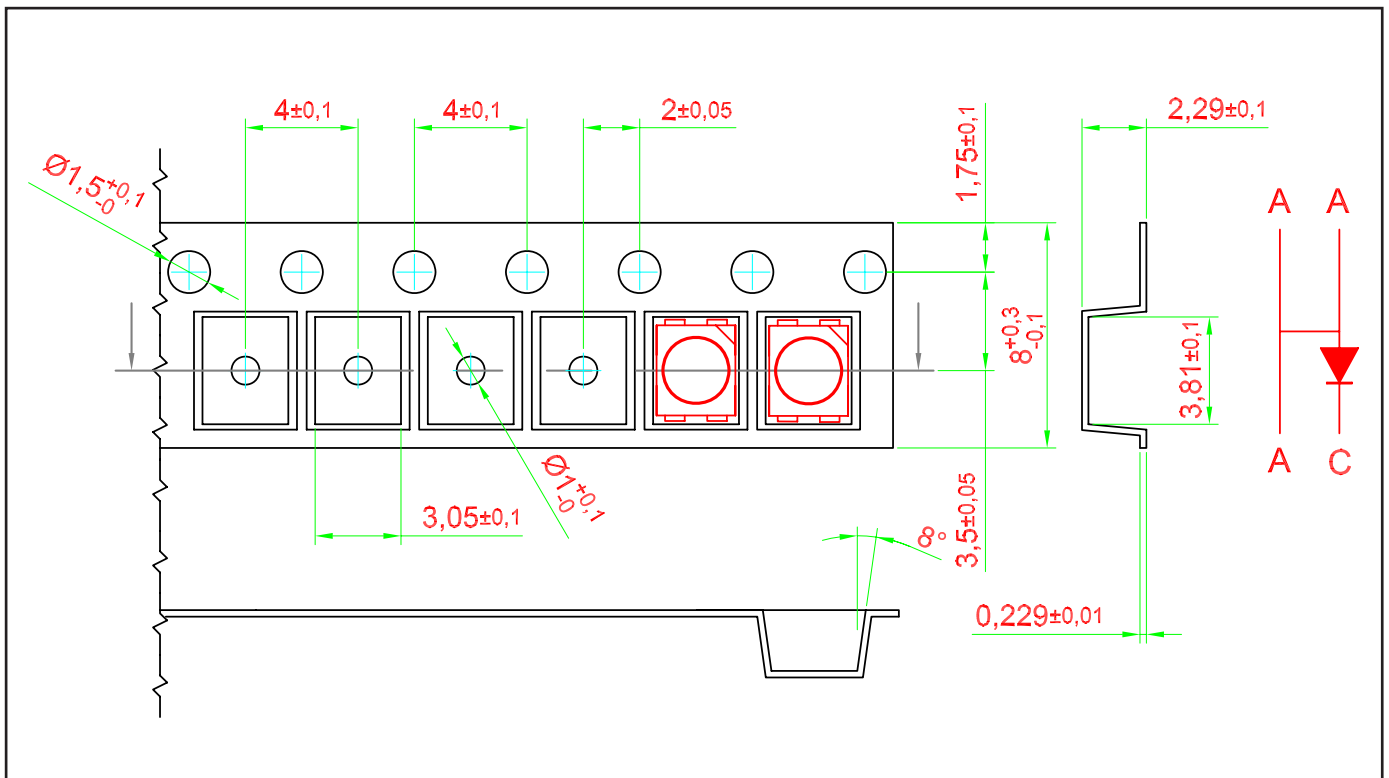
Material	
Lead-frame	Cu Alloy With Ag Plating
Package	High Temperature Resistant Plastic, PPA
Encapsulant	Silicone Resin
Soldering Leads	Sn-Sn Plating

Recommended Solder Pad



Taping and orientation

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

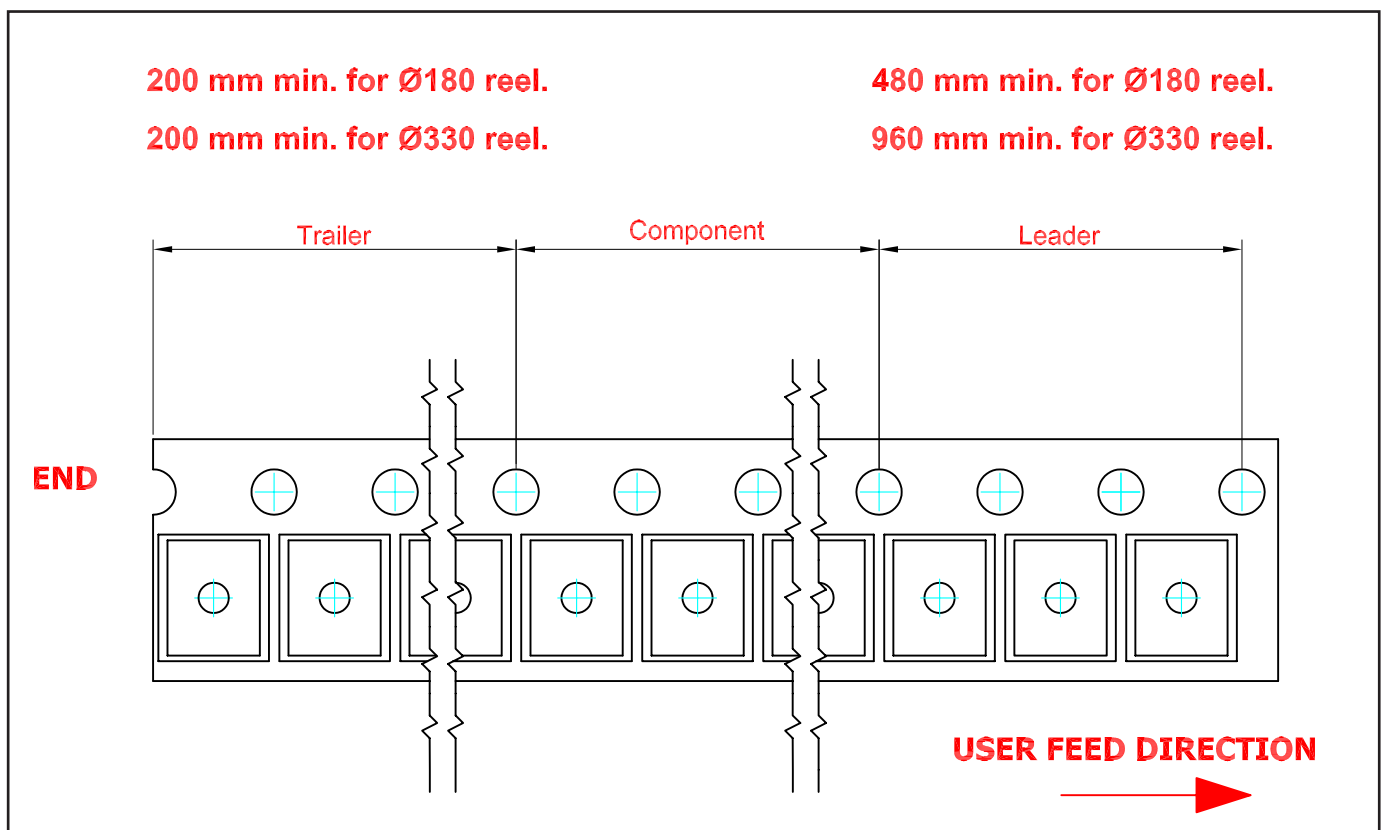


200 mm min. for $\varnothing 180$ reel.

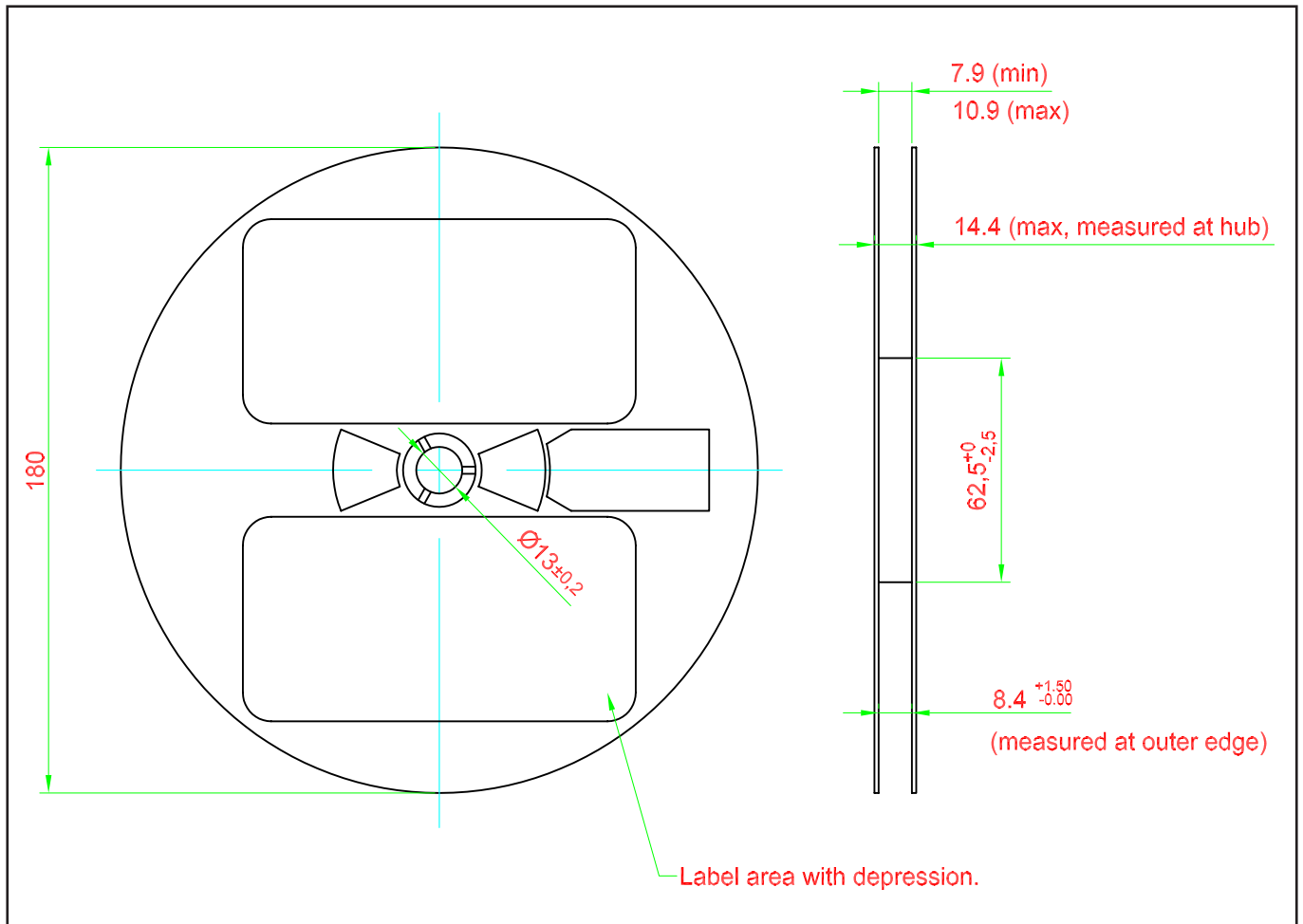
200 mm min. for $\varnothing 330$ reel.

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

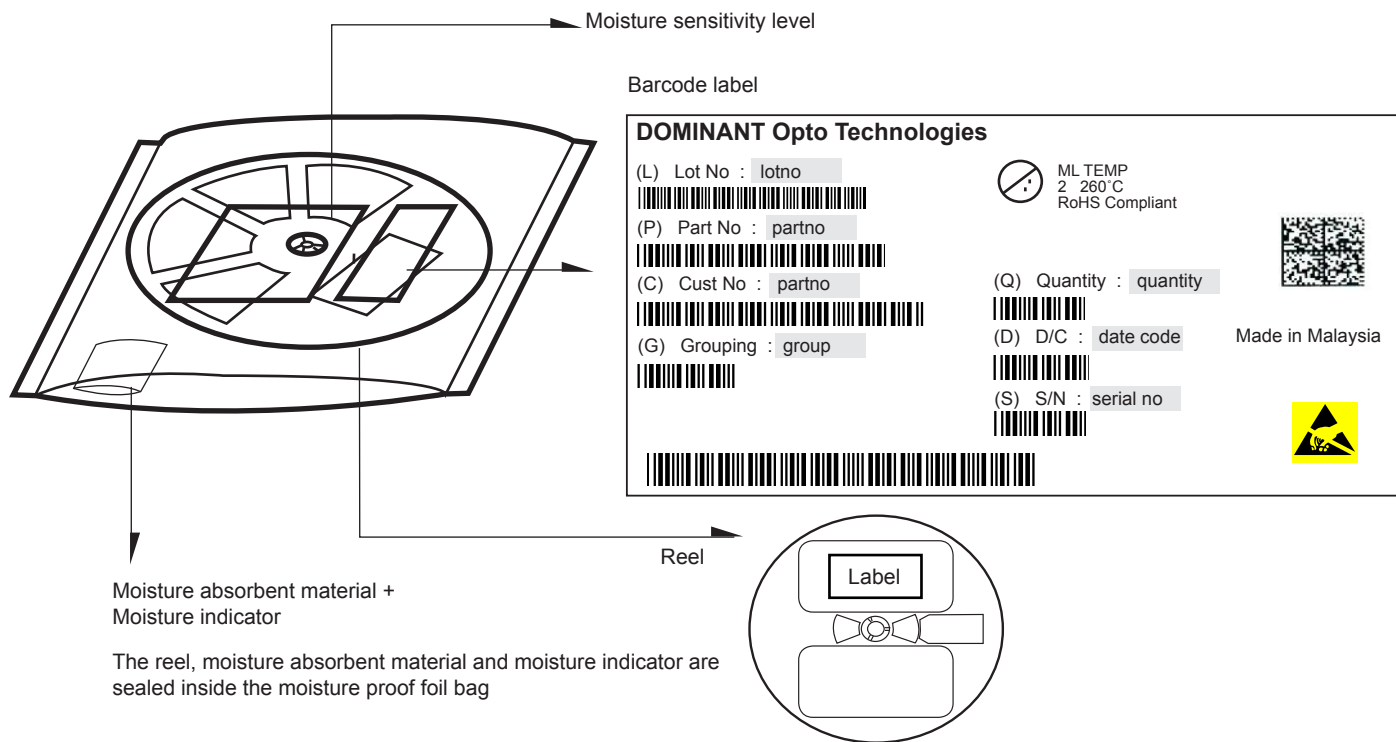
960 mm min. for $\varnothing 330$ reel.



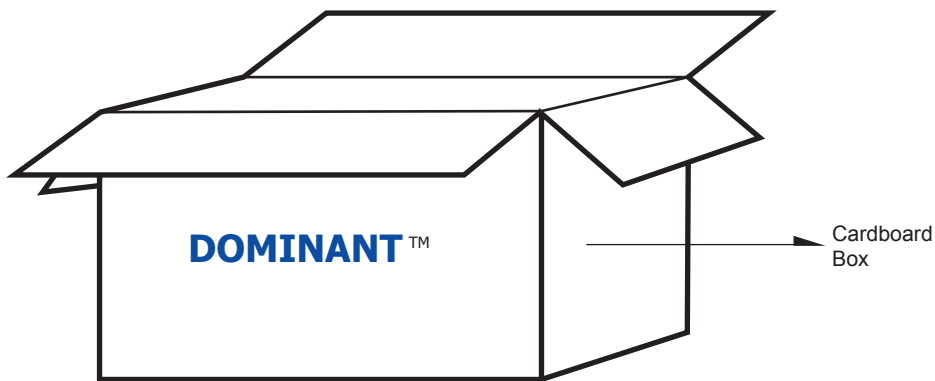
Packaging Specification



Packaging Specification



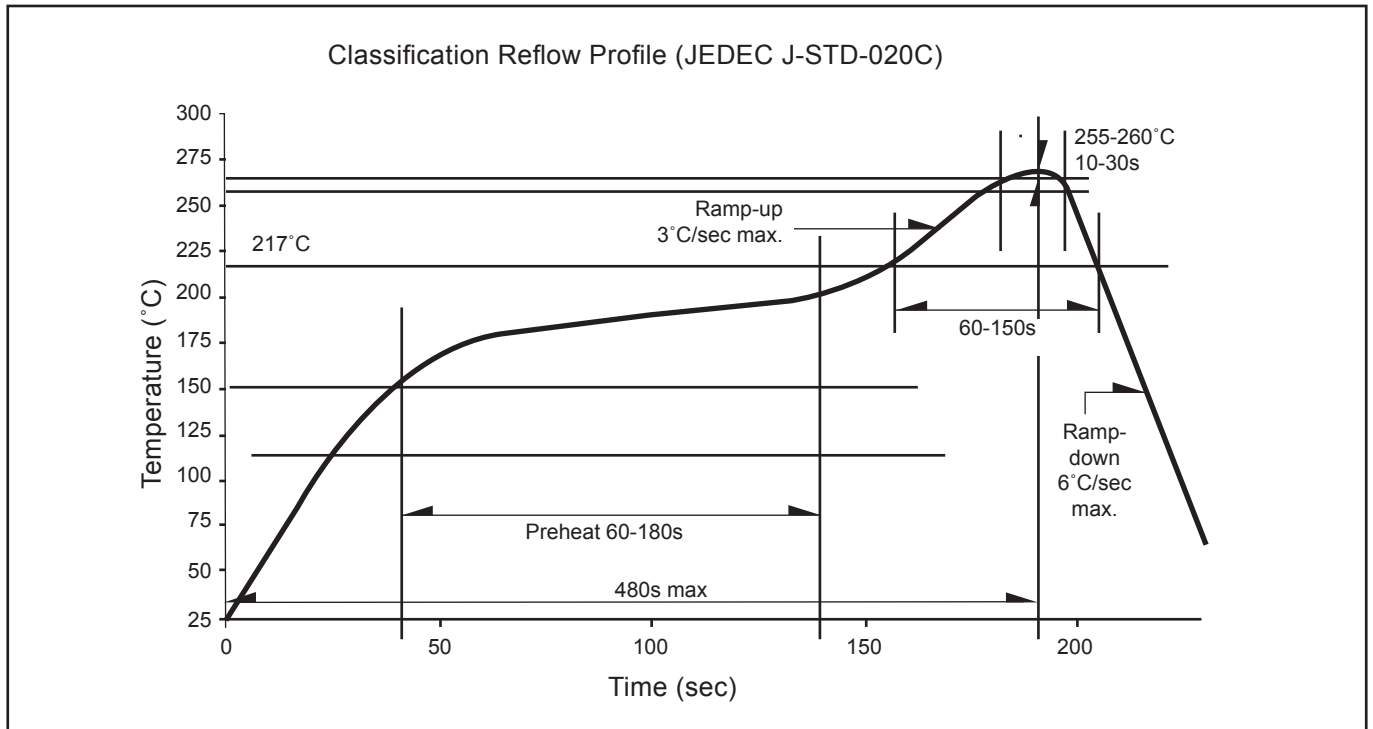
	Average 1pc Power DomiLED	1 completed bag (2000pcs)
Weight (gram)	0.034	240 ± 10



For Power 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	05 Apr 2012
2	Update Thermal Resistance	13 Mar 2013
2	Update Operating Temperature and Storage Temperature	19 Aug 2013
2	Add new partno: DWW-LJG-XY1-1	05 Sep 2013
2	Typo error on Vf	23 Jan 2014
2	Not for new design: DWW-LJG-W2X-1	20 Jun 2014
5	Add Graph: Chromaticity Coordinate Shift	01 Oct 2014
3, 4, 7, 11	Update Color Bin Structure Update Notes in Package Outline Update Package Specification	02 Jun 2016

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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