DOMINANT™
Opto Technologies
Innovating Illumination

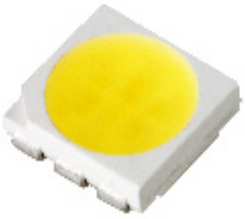
DATA SHEET :

Maxi DomiLED™

InGaN White : DBWWW-DJG

DomiLED™

With the intense colors that seem to glow with energy and its significant brightness, DomiLED™ white LED is a highly reliable design device. Its dynamic nature makes it perfect choice for lighthing applications, office and home applications and standard industrial applications.



Features:

> Super high brightness surface mount LED.
> Large light emitting window of 4.5mm diameter.
> 120° viewing angle.
> Compact package outline (LxWxH) of 5.3 x 5.2 x 1.4mm.
> Qualified according to JEDEC moisture sensitivity Level 2.
> Compatible to IR reflow soldering.
> Environmental friendly; RoHS compliance.

Applications:

> Lighting: garden light, architecture lighting, general lighting. etc
> Backlighting (TFT LCD display), flash light, architectural lighting.

Optical Characteristics at Tj=25°C

Part Ordering Number	Color	Viewing Angle°	Luminous Intensity @ 20mA / Chip IV (mcd)		
			Min.	Typ.	Max.
DBWWW-DJG-Z4Z5-R	White	120	5000.0	6000.0	7000.0
DBWWW-DJG-Z5Z6-R	White	120	6000.0	7000.0	8000.0

NOTE
1. All part number above comes in a quantity of 1000 units per reel.
2. Luminous intensity is measured with an accuracy of ± 11%.
3. Color binning is carried for all units as per the color binning table. Only one color group is allowed for each reel.

Electrical Characteristics at Tj=25°C

Part Number	Vf @ If = 20 mA / Chip		
	Min. (V)	Typ. (V)	Max. (V)
DBWWW-DJG	2.9	3.2	3.5

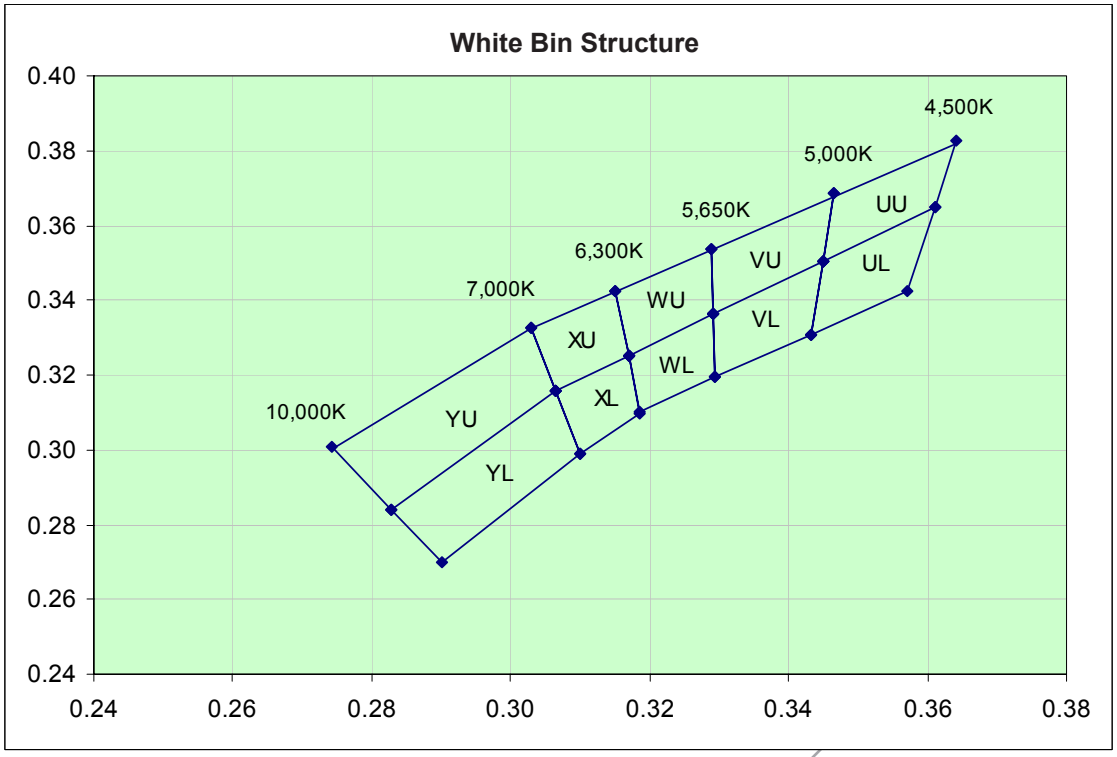
Forward Voltage, Vf is measured with an accuracy of ± 0.1 V.

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current *1	20	mA
Peak pulse current; (tp ≤ 10μs, Duty cycle = 0.1) *1	100	mA
Reverse voltage *1	Not designed for reverse bias	V
ESD threshold (HBM)	1000	V
LED junction temperature *1	125	˚C
Operating temperature	-40 … +100	˚C
Storage temperature	-40 … +100	˚C

*1 Rating is based on individual chip.

DBWWW-DJG, White Color Grouping

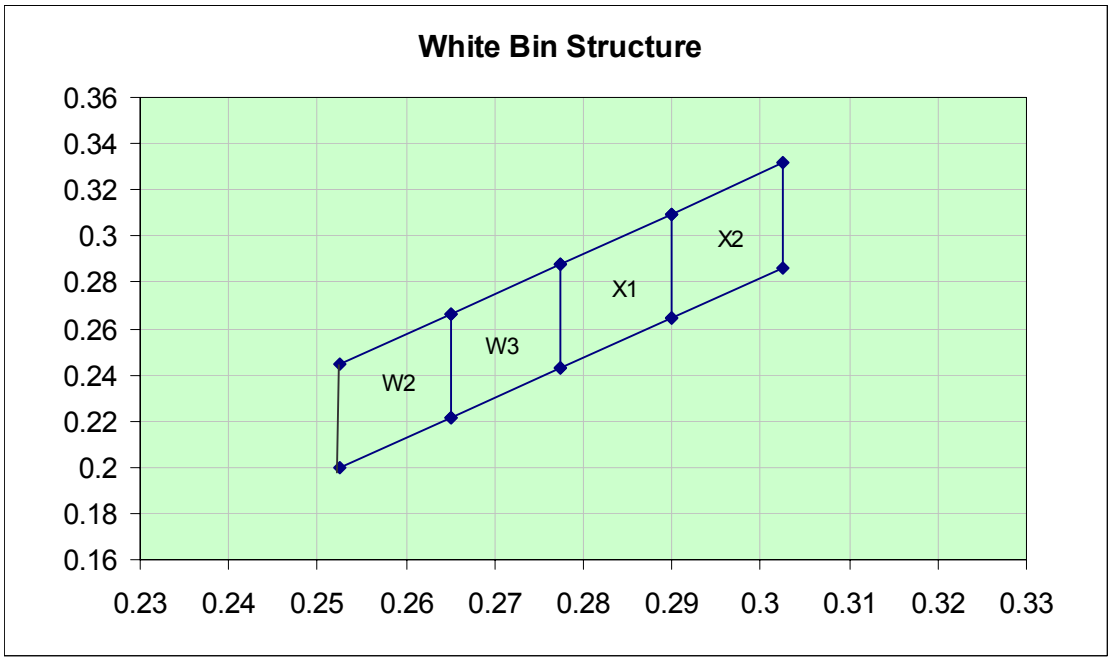


Chromaticity coordinate groups are measured with an accuracy of ± 0.01.

Bin		1	2	3	4
YU	Cx	0.274	0.283	0.307	0.303
	Cy	0.301	0.284	0.316	0.333
YL	Cx	0.283	0.290	0.310	0.307
	Cy	0.284	0.270	0.299	0.316
XU	Cx	0.303	0.307	0.317	0.315
	Cy	0.333	0.316	0.325	0.343
XL	Cx	0.307	0.310	0.319	0.317
	Cy	0.316	0.299	0.310	0.325
WU	Cx	0.315	0.317	0.329	0.329
	Cy	0.343	0.325	0.336	0.354
WL	Cx	0.317	0.319	0.329	0.329
	Cy	0.325	0.310	0.319	0.336
VU	Cx	0.329	0.329	0.345	0.347
	Cy	0.354	0.336	0.350	0.368
VL	Cx	0.329	0.329	0.343	0.345
	Cy	0.336	0.319	0.331	0.350
UU	Cx	0.347	0.345	0.361	0.364
	Cy	0.368	0.350	0.365	0.383
UL	Cx	0.345	0.343	0.357	0.361
	Cy	0.350	0.331	0.343	0.365

Dominant color coordinate is measured with an accuracy of ± 0.01.

DBWWW-DJG, White Color Grouping



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

Bin		1	2	3	4
W2	Cx	0.2525	0.2650	0.2650	0.2525
	Cy	0.1998	0.2215	0.2665	0.2448
W3	Cx	0.2650	0.2775	0.2775	0.2650
	Cy	0.2215	0.2431	0.2881	0.2665
X1	Cx	0.2775	0.2900	0.2900	0.2775
	Cy	0.2431	0.2648	0.3098	0.2881
X2	Cx	0.2900	0.3025	0.3025	0.2900
	Cy	0.2648	0.2864	0.3314	0.3098

Dominant color coordinate is measured with an accuracy of ± 0.01.

Luminous Intensity Group at Tj=25˚C

Brightness Group	Luminous Intensity IV (mcd)	Luminous Flux (lm) Typ.
Z4	5000.0 ... 6000.0	15.5
Z5	6000.0 ... 7000.0	18.3
Z6	7000.0 ... 8000.0	21.1

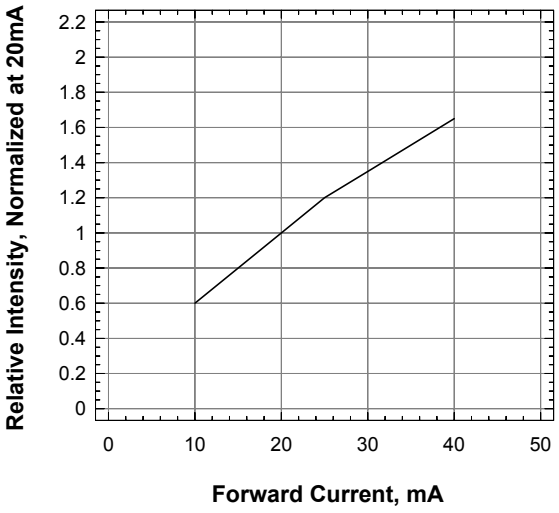
Luminous intensity is measured with an accuracy of ± 11%.

Vf Binning

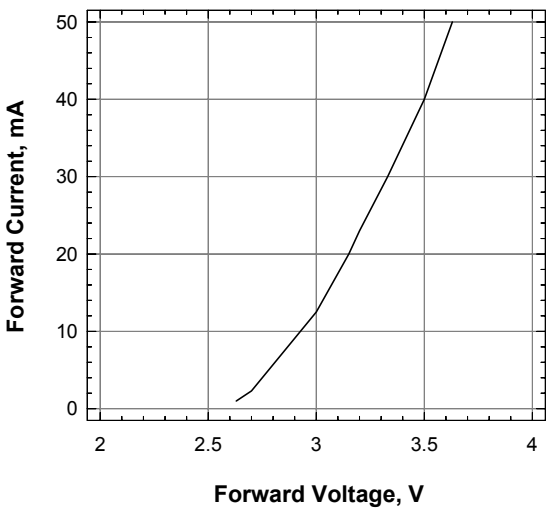
Vf Bin	Forward Voltage (V)
V1	2.90 ... 3.00
V2	3.00 ... 3.10
V3	3.10 ... 3.20
V4	3.20 ... 3.30
V5	3.30 ... 3.40
V6	3.40 ... 3.50

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

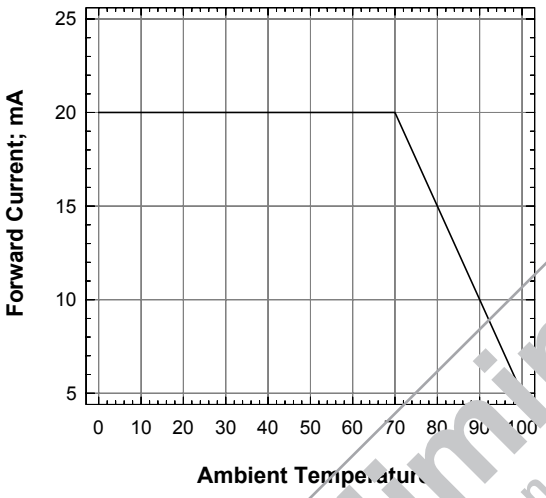
Relative Intensity Vs Forward Current



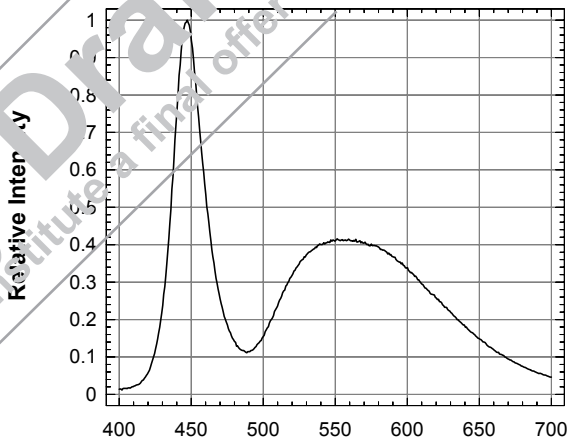
Forward Current Vs Forward Voltage



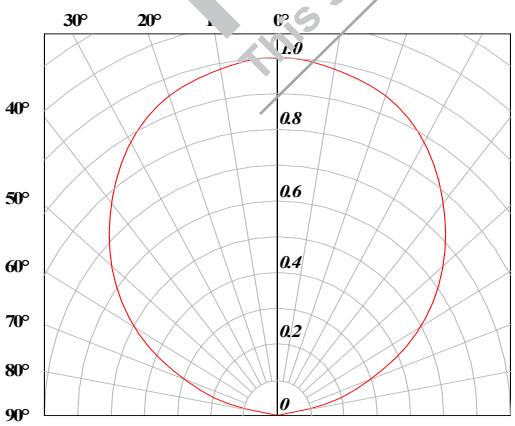
Maximum Current Vs Ambient Temperature



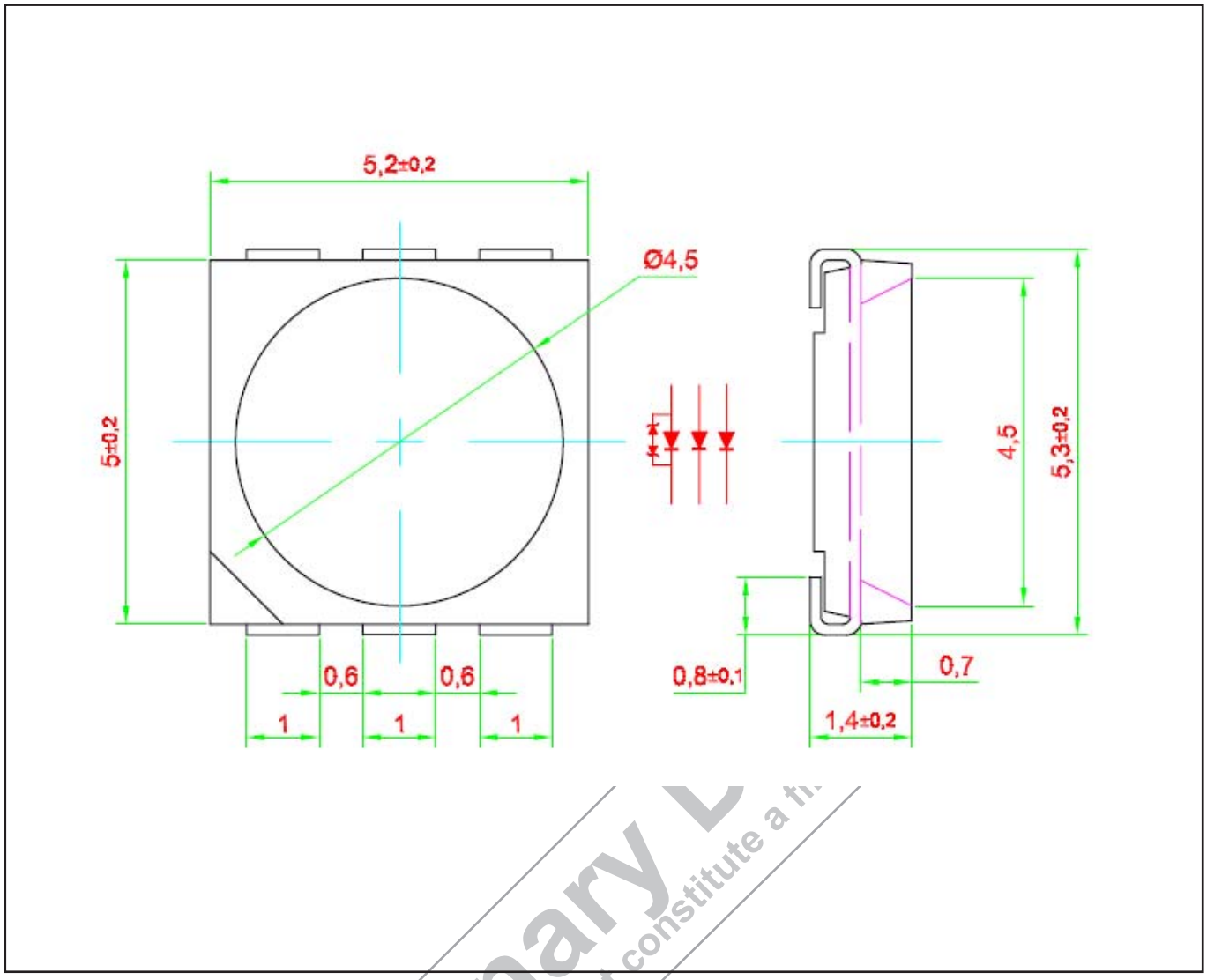
Relative Intensity Vs Wavelength



Radiation Pattern



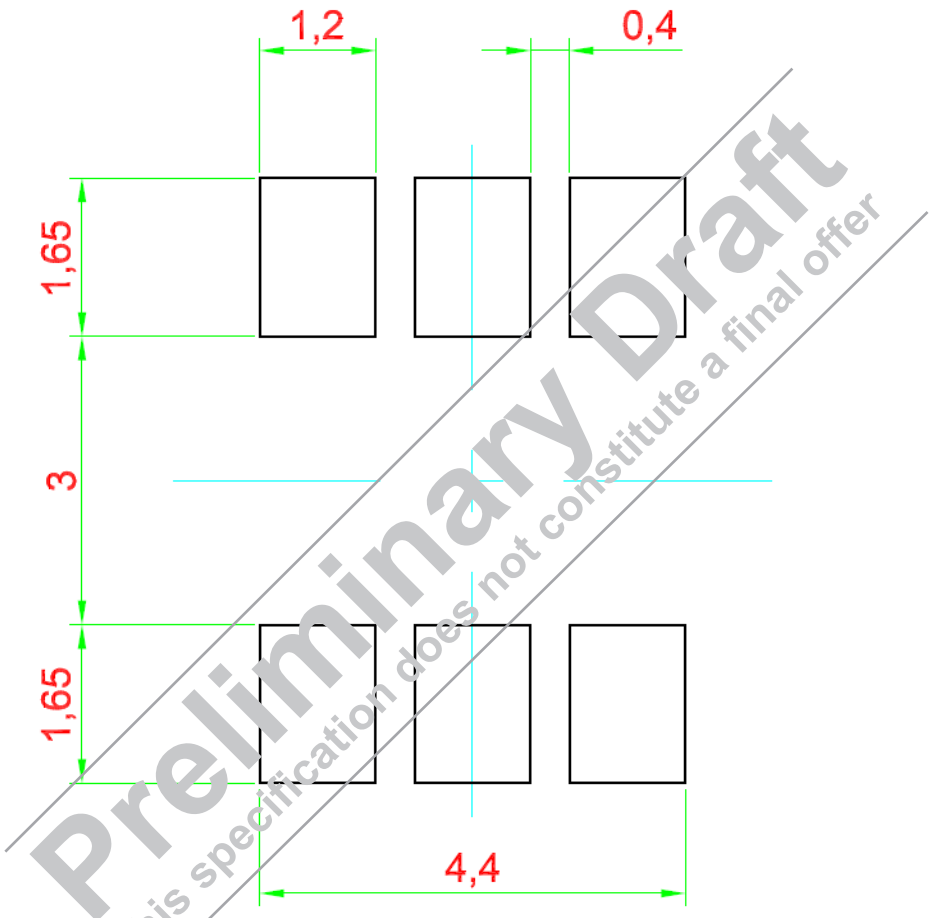
DomiLED™ • InGaN White : DBWWW-DJG Package Outlines



Material

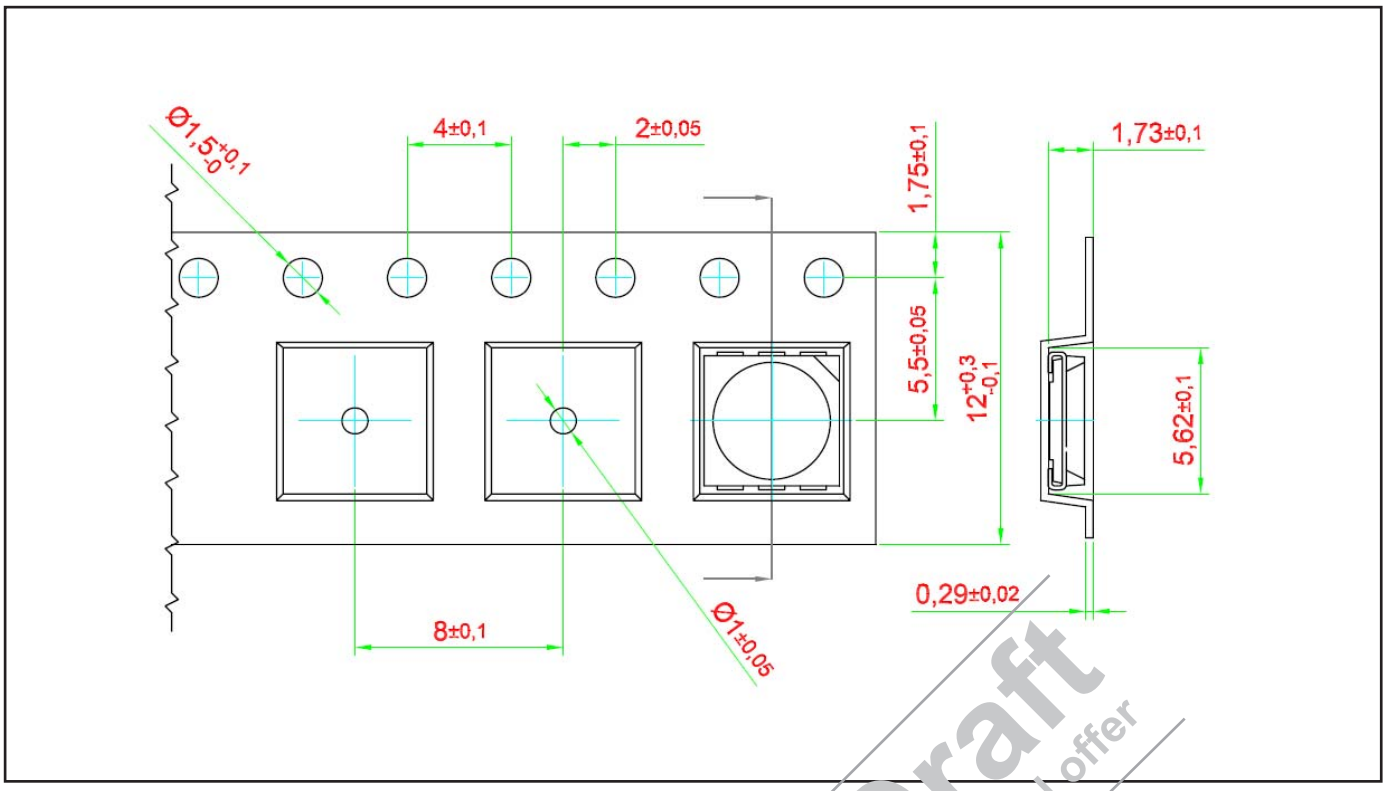
	Material
Lead-frame	Cu Alloy With Ag Plating
Package	High Temperature Resistant Plastic, PPA
Encapsulant	Silicone Resin
Soldering Leads	Ag Plating

Recommended Solder Pad

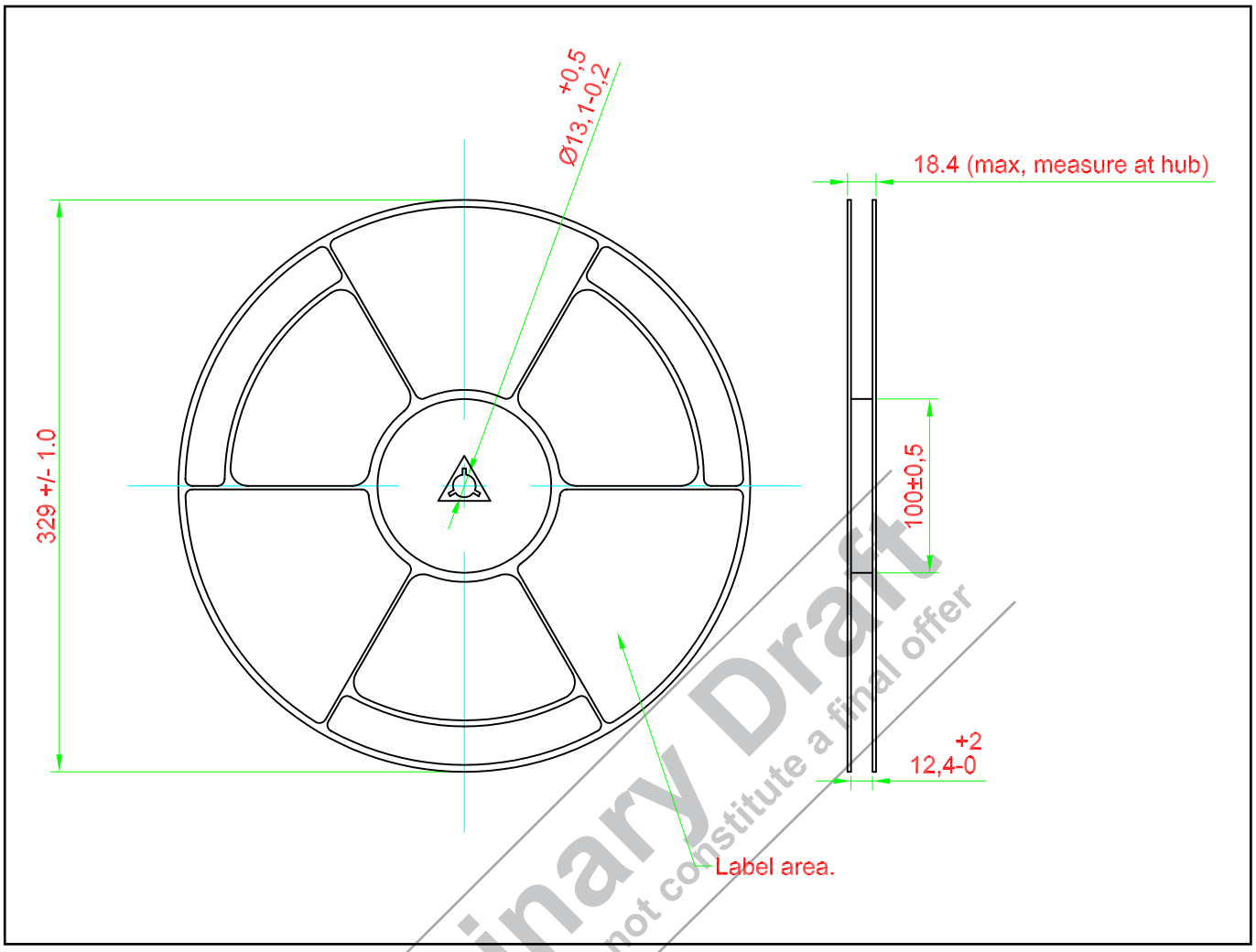


Taping and orientation

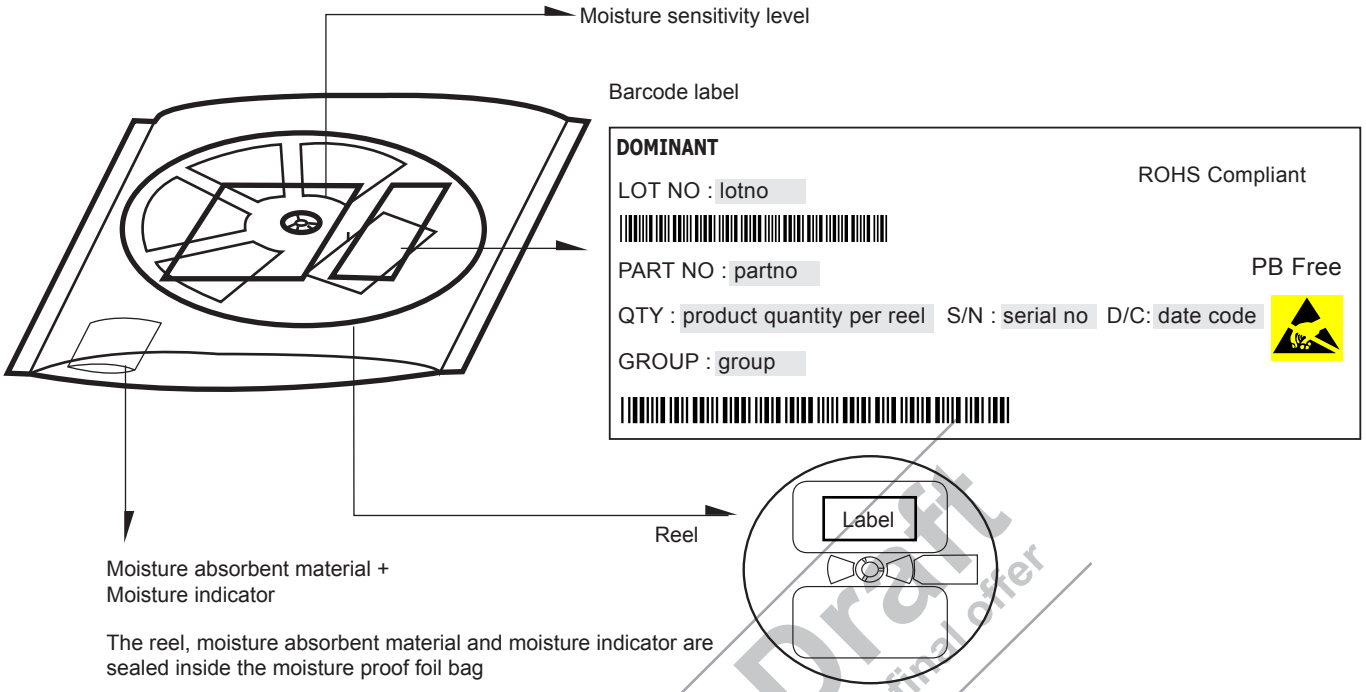
- Reels come in quantity of 1000 units.
- Reel diameter is 180 mm.



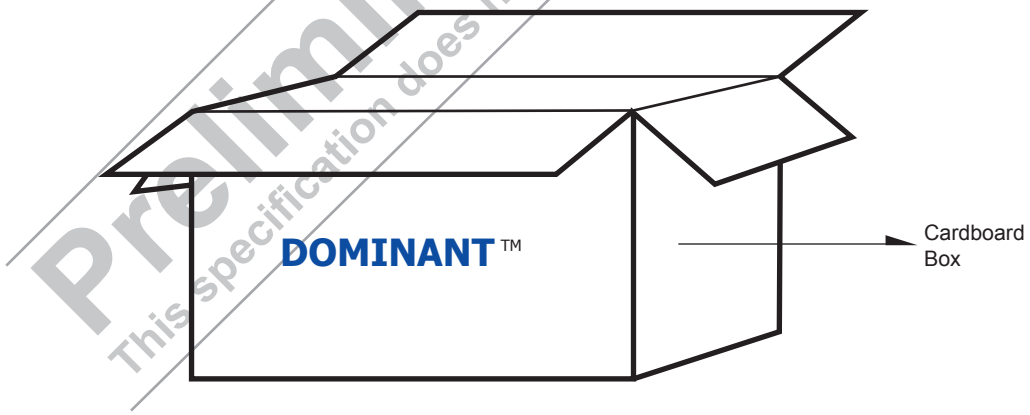
Packaging Specification



Packaging Specification



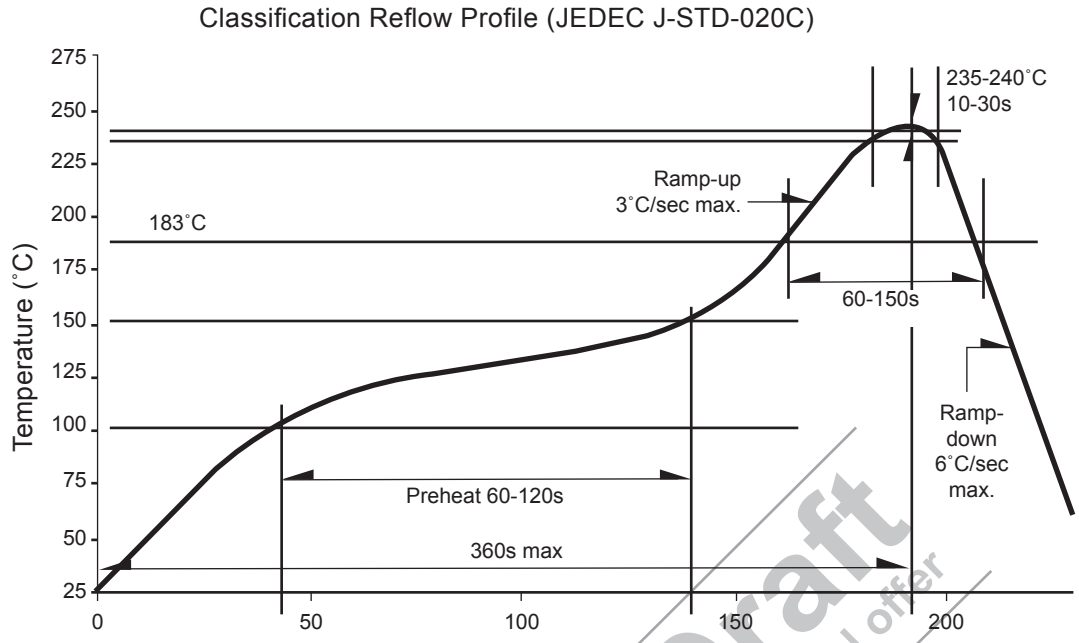
	Average 1pc Maxi DomiLED	1 completed bag (1000pcs)
Weight (gram)	**0.044**	**166 ± 10**



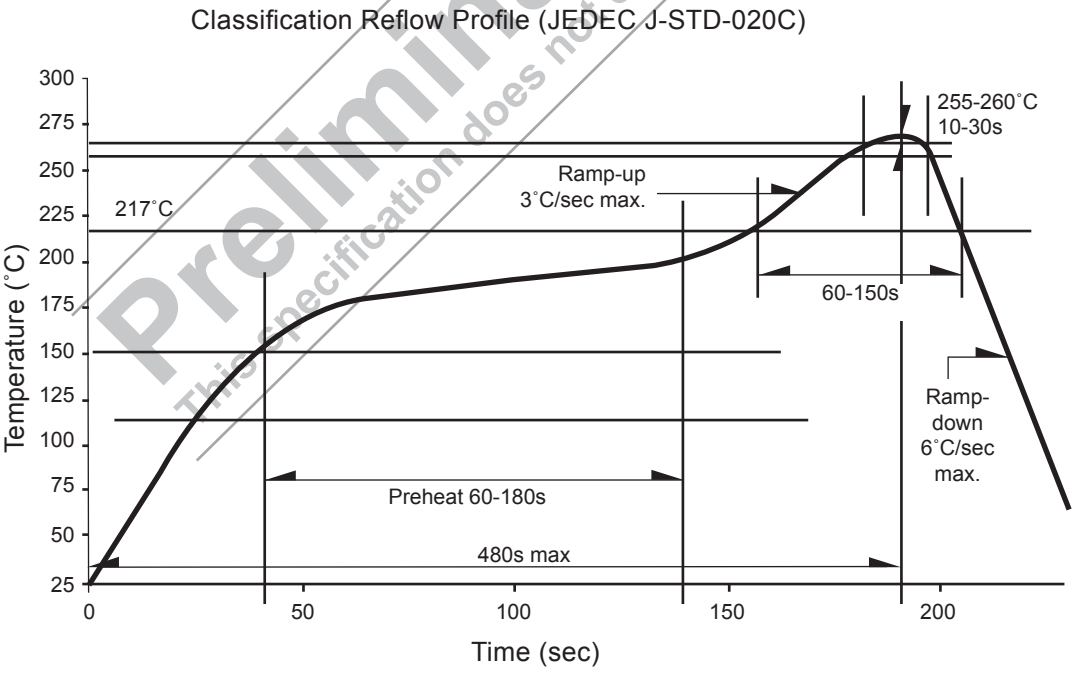
For Maxi DomiLED™

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	15,000 MAX
Large	416 x 516 x 476	1.74	96 reels MAX	96,000 MAX

Recommended Sn-Pb IR-Reflow Soldering Profile



Recommended Pb-free Soldering Profile



Revision History

Page	Subjects	Date of Modification
-	Initial Release	02 Aug 2010
5	Add Luminous flux @ Typ	15 Nov 2010
9	Typo error in reel diameter	15 Apr 2011
2	Add new partno: DBWWW-DJG-Z5Z6-R	04 Aug 2011

NOTE

All the information contained in this document is considered to be reliable at the time of publishing. However, DOMINANT Opto Technologies does not assume any liability arising out of the application or use of any product described herein.

DOMINANT Opto Technologies reserves the right to make changes to any products in order to improve reliability, function or design.

DOMINANT Opto Technologies products are not authorized for use as critical components in life support devices or systems without the express written approval from the Managing Director of DOMINANT Opto Technologies.

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.

Please contact us for more information:

Head Quarter

DOMINANT Opto Technologies 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

DOMINANT Opto Technologies Sdn. Bhd. Shanghai Representative Office

Rm 305, Hongwell International Plaza No. 1600 Zhong Shan(W) Rd, Xuhui District, Shanghai, China 200235
Tel: +86 21 5403 5655, +86 21 5403 5818 Fax: +86 21 5403 6055
E-mail: sales_china@dominant-semi.com

DOMINANT Korea Sales Office

DOMINANT Semiconductors Korea Inc.
RM 211 SUNTEAK CITY APT. 513-15 Sangdaewon-dong, Jungwon-gu, Seongnam-si, Gyeonggi-do, 462-725, Korea
Tel: +82-31-701-5203 Fax: +82-31-701-5204
E-mail: sales_korea@dominant-semi.com

DOMINANT U.S.A Sales Office

25 Rockaway Road, 08833 Lebanon, New Jersey, USA
Tel: (908) 439-9930 Cell: (908) 343-5810 Fax: (908) 439-9929
E-mail: don.wendel@dominant-semi.com

DOMINANT Europe Sales Office

DOMINANT Semiconductors Europe GmbH
Raiffeisenstr. 38, 74906 Bad Rappenau Germany
Tel: +49 (0) 7264-89010-10 / +49 (0) 7264-89010-11 Cell: +49 173-6907370 / +49 173-6907751
Fax: +49 (0) 7264-89010-29
E-mail: gerd.wachno@dominant-semi.eu; hartmut.wettengl@dominant-semi.eu

DOMINANT India Sales Office

C-11,Vasanth Business Centre #86, TTK Road, Alwarpet Chennai - 600 018, INDIA
Tel: 91-44-42030616 / 516 Cell: 91-9444920537 Fax: 91-9444920616
E-mail: pravat.behera@dominant-semi.com