

Multi DomiLED[™]

Synonymous with function and performance, the Multi DomiLED[™] series is perfectly suited for a variety of cross-industrial applications due to its small package outline, durability and superior brightness.



Features:

- > High brightness tri-color surface mount LED.
- > Black coated top surface to enhance contrast.
- > Large light emitting window.
- > 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.



Optical Characteristics at Tj = 25°C

Part Ordering Number	Color, λ_{dom} (nm)			Viewing Angle	Luminous Intensity @ IF = 20mA IV (mcd)		
	Chip #1	Chip #2	Chip #3		Chip #1	Chip #2	Chip #3
DBRTB-DJB-U3U4+V2W1+S2T1-CS0488	Red 625nm	True Green 528nm	Blue 468nm	120	500.0 - 700.0	900.0 - 1400.0	224.0 - 355.0

NOTE:

1. Reel comes in a quantity of 1000 units per reel.
2. Luminous intensity is measured with an accuracy of $\pm 11\%$.
3. All electrical and optical data are measured at room temperature; Ta = Tj = 25°C.

Electrical Characteristics at Tj=25°C

	Min. (V)	Vf @ If = 20mA	
		Typ. (V)	Max. (V)
Red	2.00	2.20	2.50
True Green	3.00	3.20	3.60
Blue	3.00	3.20	3.60

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

Absolute Maximum Ratings

Maximum Value		
DC forward current	Red; AlInGaP=30; True Green, Blue; InGaN=25	mA
Peak pulse current; ($t_p \leq 10\mu s$, Duty cycle = 0.1)	Red ; AlInGaP=100; True Green, Blue; InGaN=100	mA
Reverse voltage	Red; AlInGaP=5; True Green, Blue; InGaN= Not for reverse bias	V
ESD threshold (HBM)	2000	V
LED junction temperature	125	°C
Operating temperature	-40 ... +100	°C
Storage temperature	-40 ... +100	°C

Wavelength Grouping at $T_j = 25^\circ C$

Color	Group	Wavelength distribution (nm)
Red	Full	619 - 629
True Green	Full	520 - 535
	A	520 - 525
	B	525 - 530
	C	530 - 535
Blue	Full	465 - 475
	A	465 - 470
	B	470 - 475

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

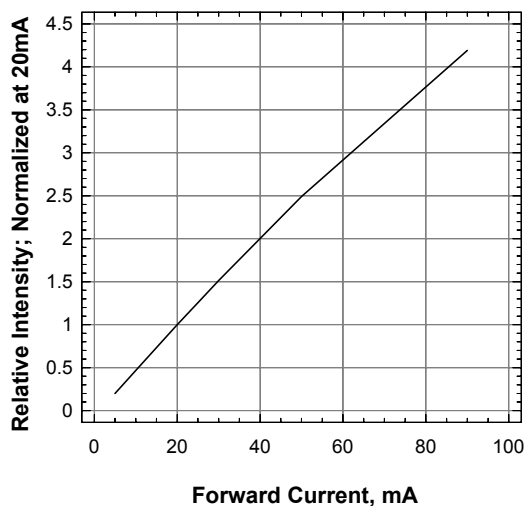
Luminous Intensity Group at Tj=25°C

Only one IV group is allowed for each chip within reel.

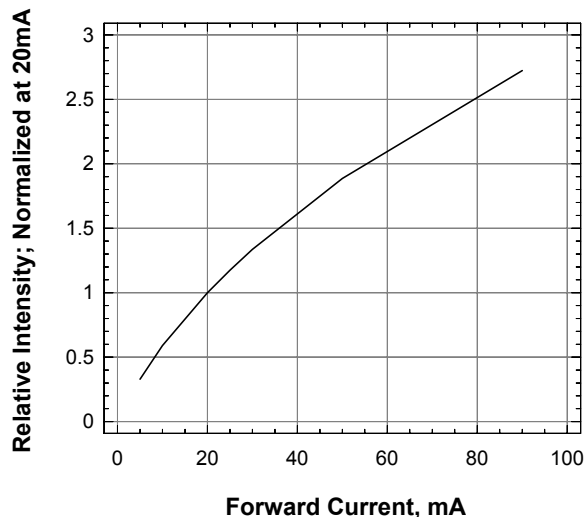
Brightness Group	Luminous Intensity @ IV (mcd)		
	Chip #1	Chip #2	Chip #3
U3V2S2	500.0...590.0	900.0...1125.0	224.0...285.0
U3V2T1	500.0...590.0	900.0...1125.0	285.0...355.0
U3W1S2	500.0...590.0	1125.0...1400.0	224.0...285.0
U3W1T1	500.0...590.0	1125.0...1400.0	285.0...355.0
U4V2S2	590.0...700.0	900.0...1125.0	224.0...285.0
U4V2T1	590.0...700.0	900.0...1125.0	285.0...355.0
U4W1S2	590.0...700.0	1125.0...1400.0	224.0...285.0
U4W1T1	590.0...700.0	1125.0...1400.0	285.0...355.0

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

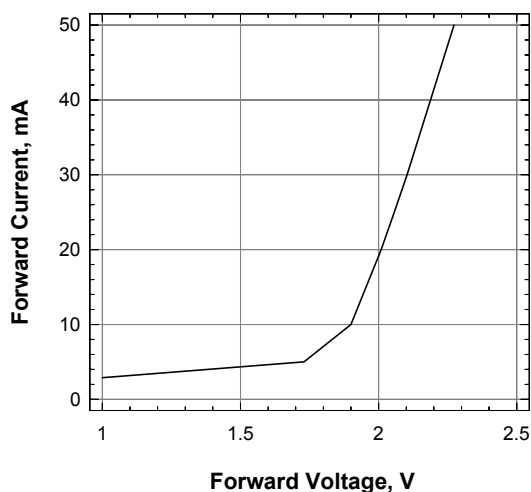
Relative Intensity Vs Forward Current (Red)



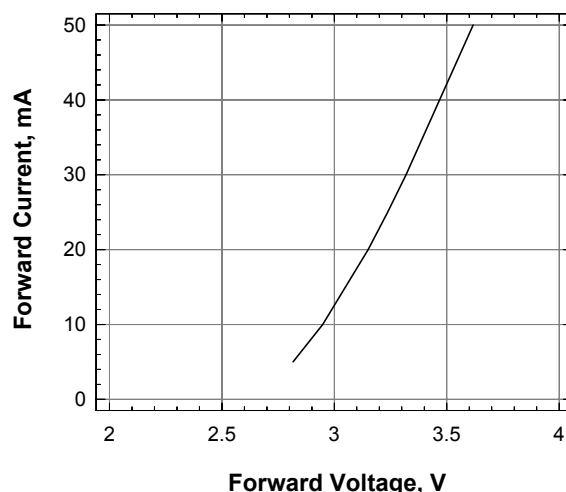
Relative Intensity Vs Forward Current (Blue and True Green)



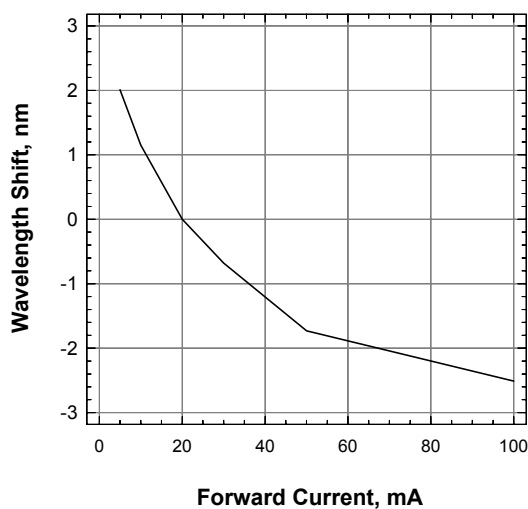
Forward Current Vs Forward Voltage (Red)



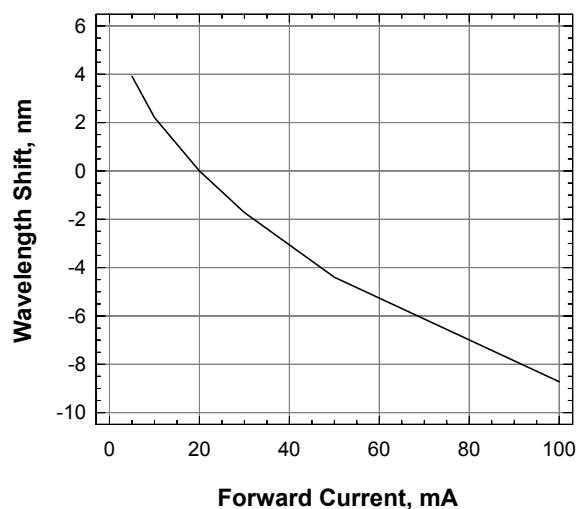
Forward Current Vs Forward Voltage (Blue and True Green)



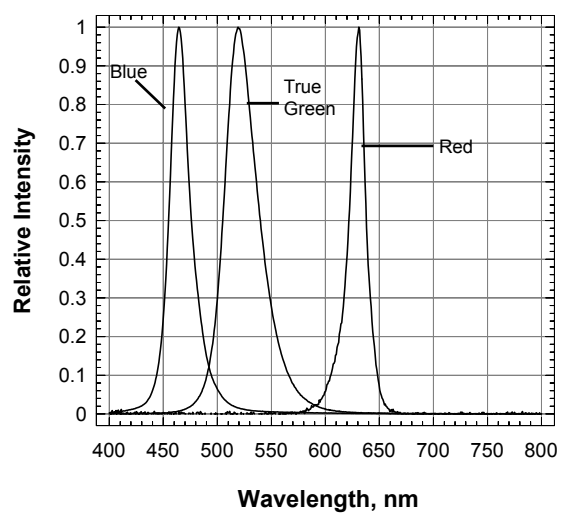
Wavelength Shift Vs Forward Current (Blue)



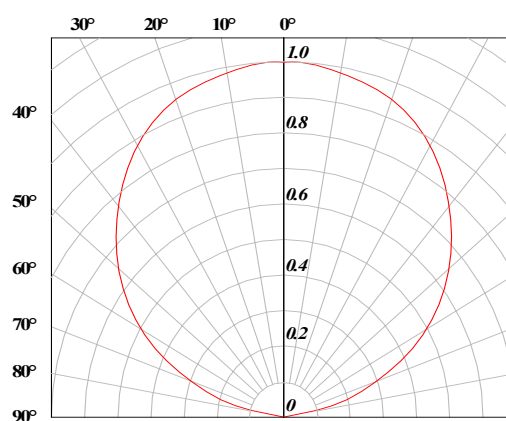
Wavelength Shift Vs Forward Current (True Green)



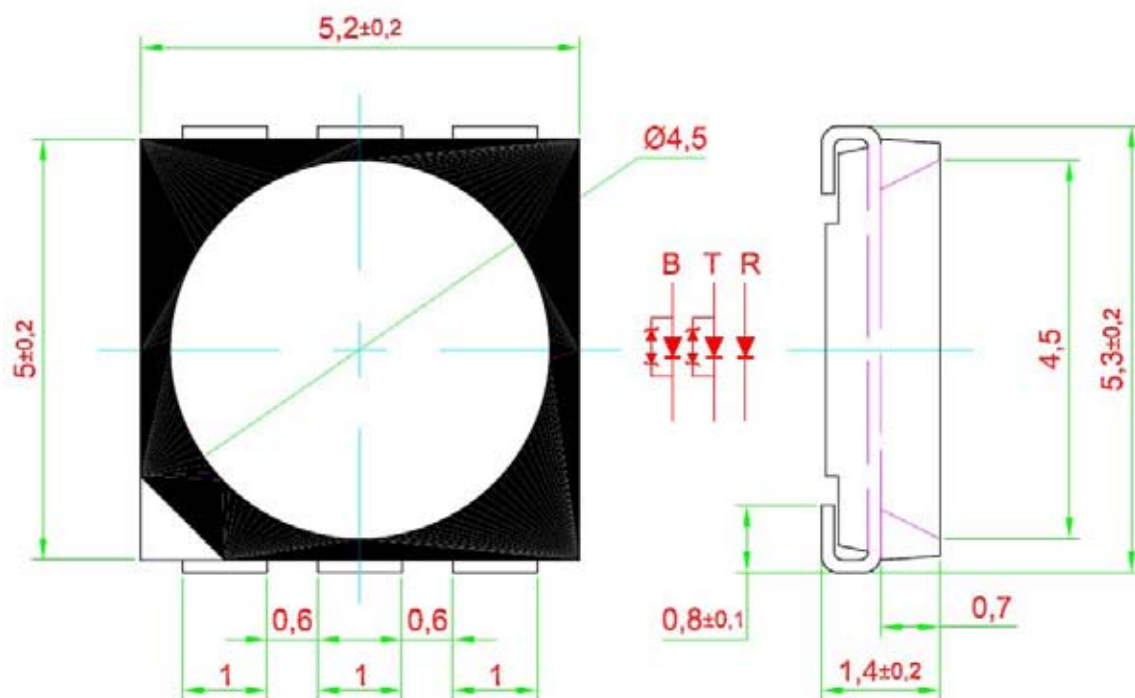
Relative Intensity vs Wavelength



Radiation Pattern



Maxi DomiLED™ : DBRTB-DJB-U3U4+V2W1+S2T1-CS0488 Package Outlines

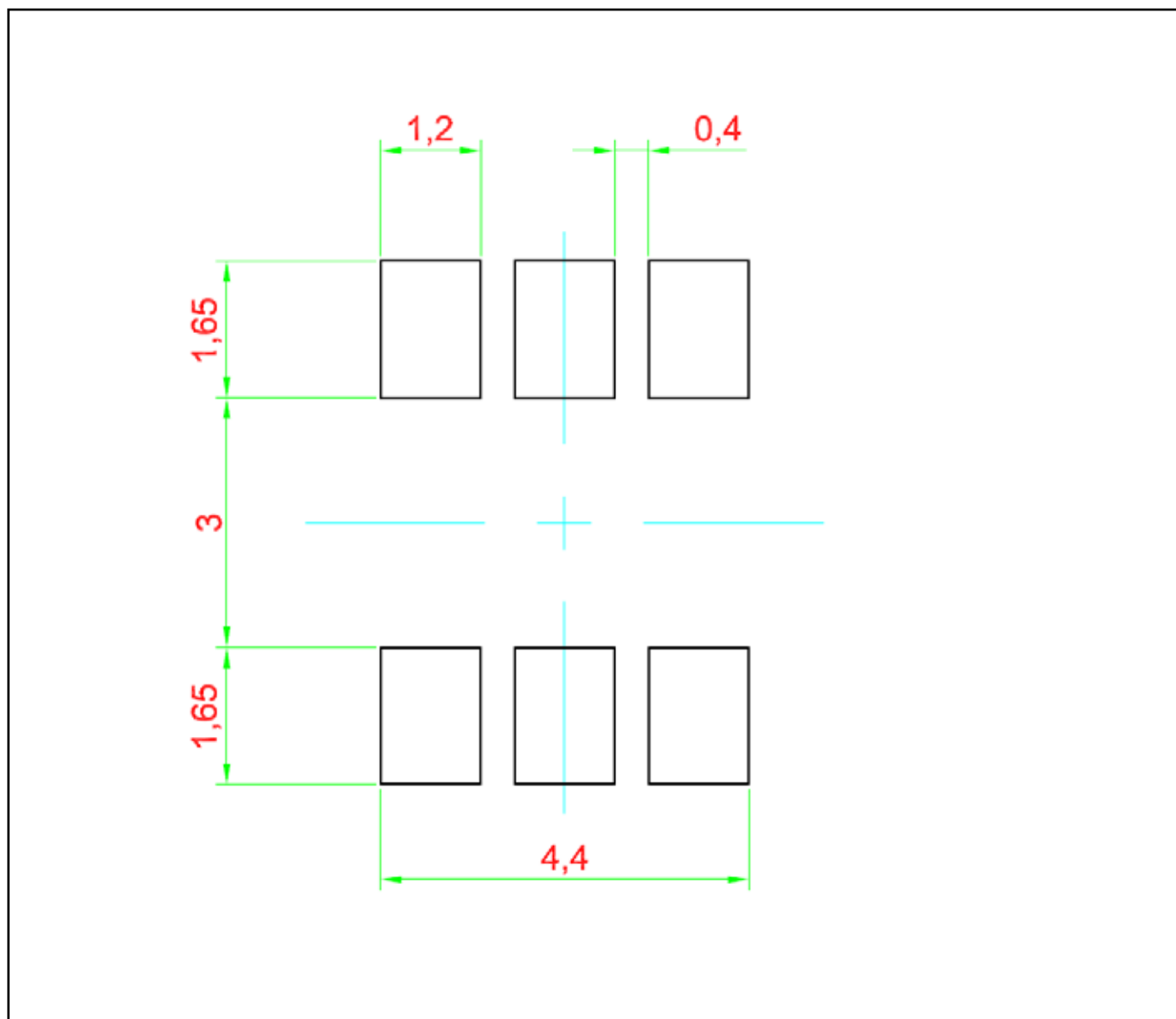


Materials

Material	
Lead Frame	Cu Alloy With Ag Plating
Housing	High temperature resistant plastic, PPA
Encapsulant	Silicone resin
Lead-finishing	Ag Plating

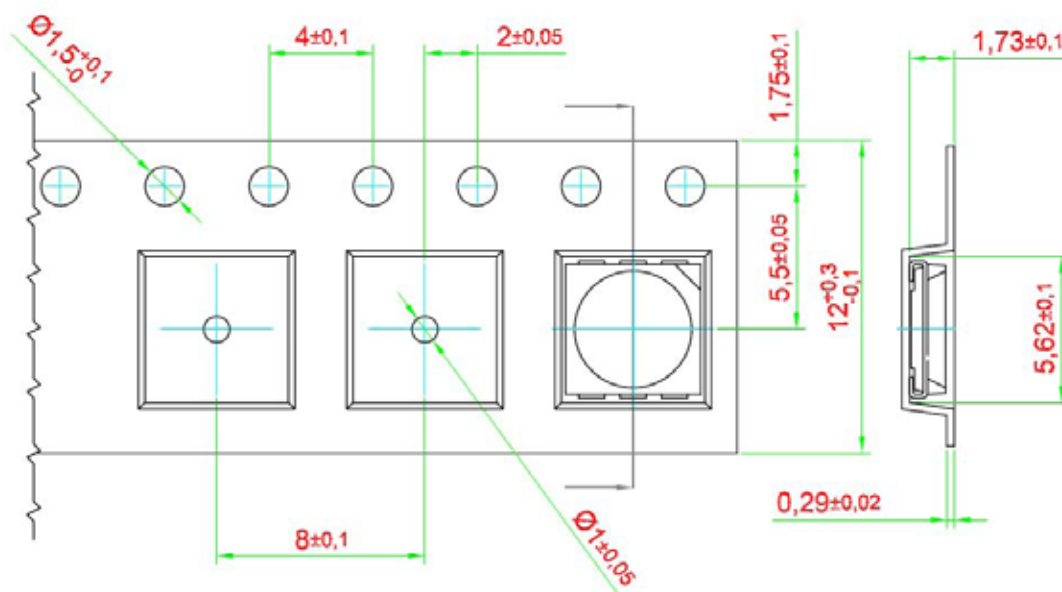
Note: Package is Pb-free.

Recommended Solder Pad

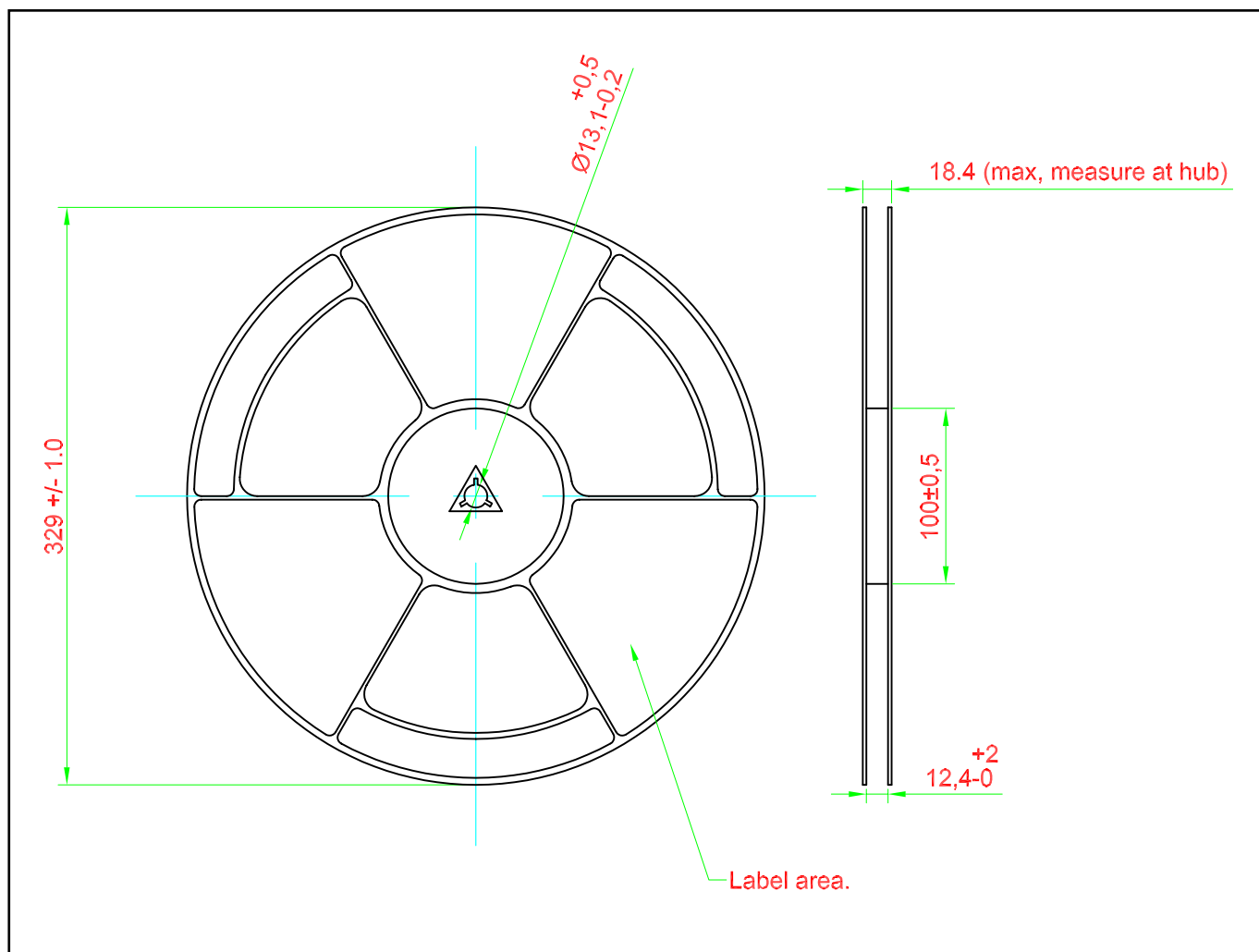


Taping and orientation

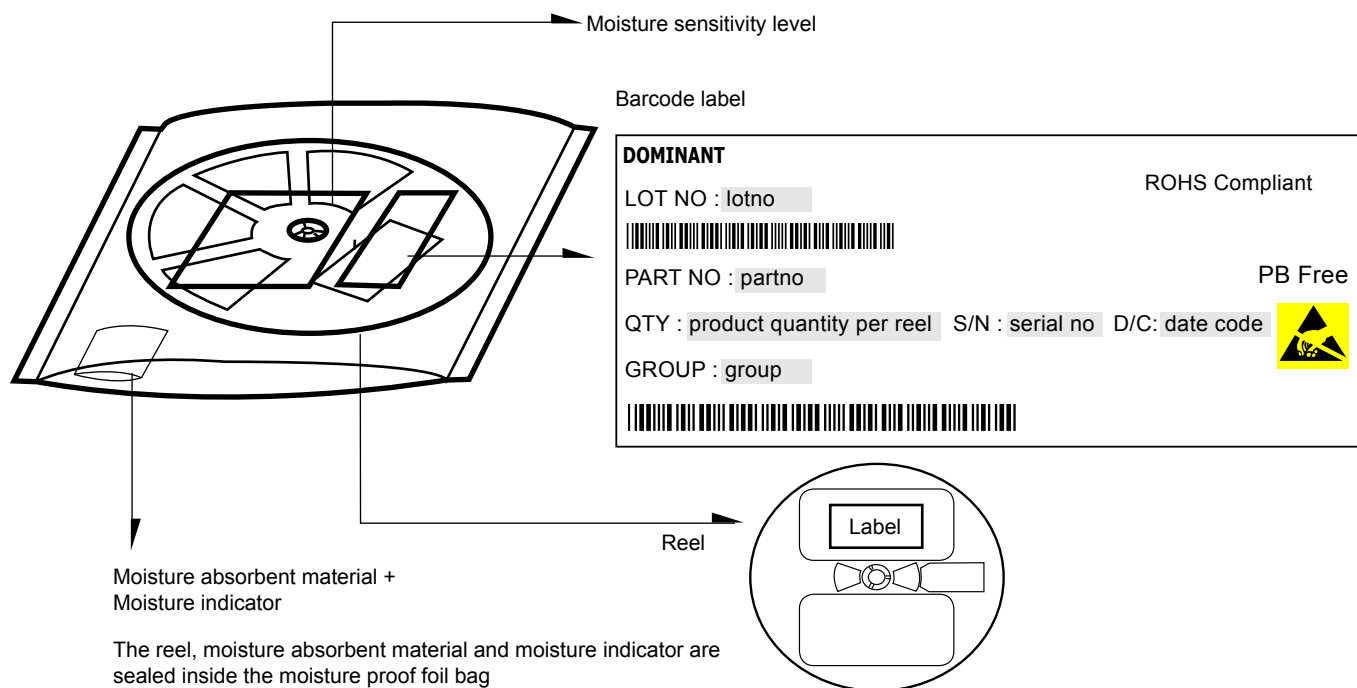
- Reels come in quantity of 1000 units.
- Reel diameter is 180 mm.



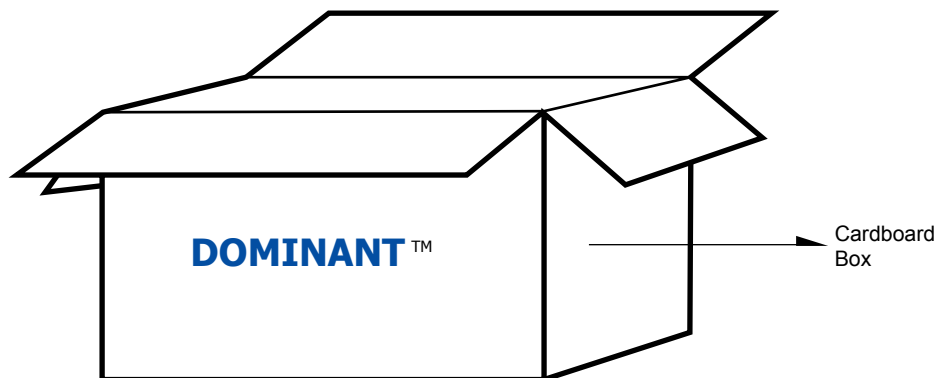
Packaging Specification



Packaging Specification



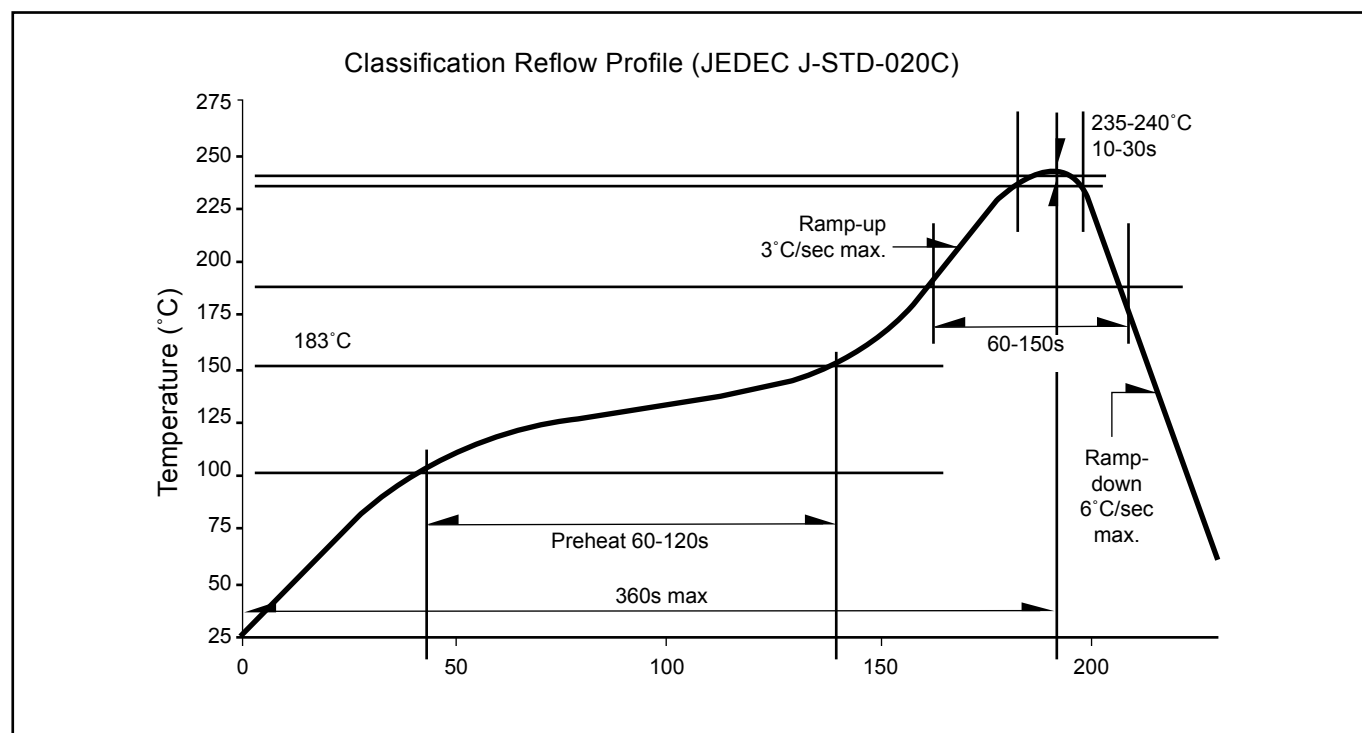
	Average 1pc Maxi DomiLED	1 completed bag (1000pcs)
Weight (gram)	0.044	166 ± 10



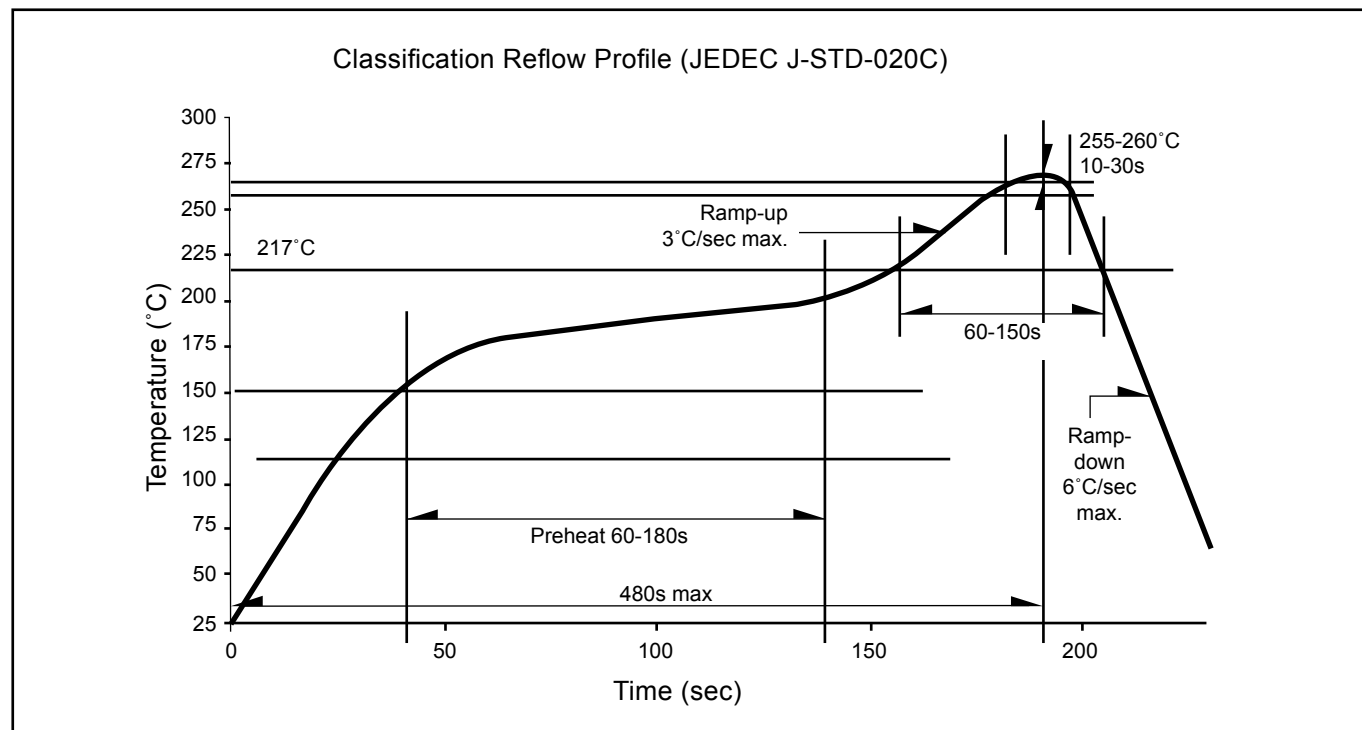
For Maxi DomiLED™

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	29 Mar 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.

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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>.

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