

DomiLED[™]

Synonymous with function and performance, the 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 surface mount LED.
- > Based on InGaN / Sapphire technology.
- > 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.
- > Environmental friendly; RoHS compliance.



Applications:

- > Communication: indicator and backlight in mobilephone.
- > Display: full color display video notice board.
- > Industry: white goods (eg: Oven, microwave, etc.).



Optical Characteristics at Tj=25°C

Part Ordering Number	Color	Viewing Angle°	Luminous Intensity @ 20mA IV (mcd)		
			Min.	Typ.	Max.
DDB-DJS-ST2-1	Blue, 470nm	120	180.0	285.0	450.0
DDT-DJS-VW2-1	True Green, 525nm	120	715.0	1125.0	1800.0
●DDB-DJS-RS2-1	Blue, 470nm	120	112.5	180.0	285.0
●DDT-DJS-UV2-1	True Green, 525nm	120	450.0	715.0	1125.0

●Not for new design

NOTE

1. All part number above comes in a quantity of 2000 units per reel.
2. Other luminous intensity groups are also available upon request.
3. Luminous intensity is measured with an accuracy of ± 11%.
4. Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each reel.

Electrical Characteristics at Tj=25°C

Part Number	Vf @ If = 20mA			Vr @ Ir = 10uA
	Min. (V)	Typ. (V)	Max. (V)	Min. (V)
DDB	3.0	3.2	3.8	5
DDT	3.0	3.4	4.0	5

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

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	20	mA
Peak pulse current; (tp ≤ 10µs, Duty cycle = 0.005)	200	mA
Reverse voltage	5	V
ESD threshold (HBM)	500	V
LED junction temperature	100	°C
Operating temperature	-40 ... +85	°C
Storage temperature	-40 ... +85	°C
Power dissipation (at room temperature)	80	mW

Wavelength Grouping at Tj=25°C

Color	Group	Wavelength distribution (nm)
DDB; Blue	Full	464 - 476
	W	464 - 468
	X	468 - 472
	Y	472 - 476
DDT; True Green	Full	520 - 536
	W	520 - 524
	X	524 - 528
	Y	528 - 532
	Z	532 - 536

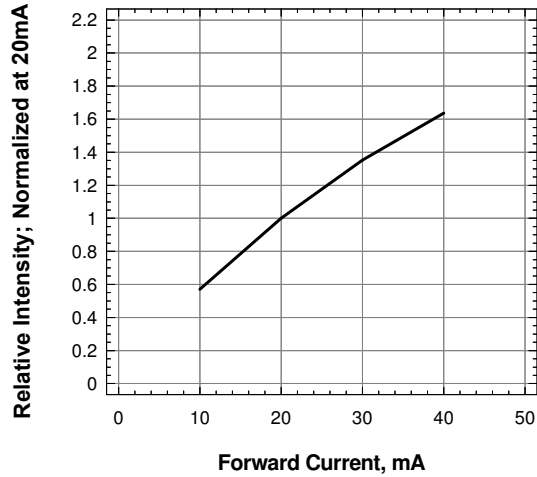
Dominant wavelength is measured with an accuracy of ± 1 nm.

Luminous Intensity Group at Tj=25°C

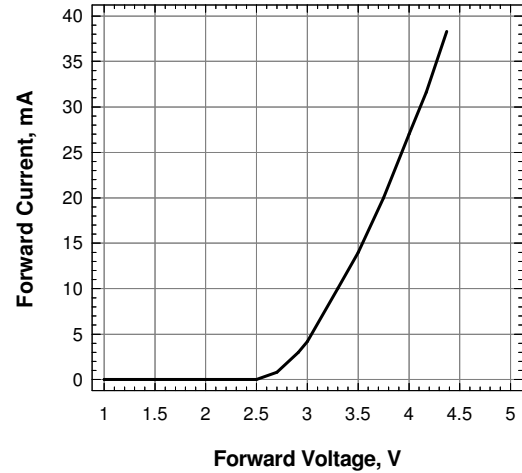
Brightness Group	Luminous Intensity @ IV (mcd)
R1	112.5...140.0
R2	140.0...180.0
S1	180.0...224.0
S2	224.0...285.0
T1	285.0...355.0
T2	355.0...450.0
U1	450.0...560.0
U2	560.0...715.0
V1	715.0...900.0
V2	900.0...1125.0
W1	1125.0...1400.0
W2	1400.0...1800.0

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

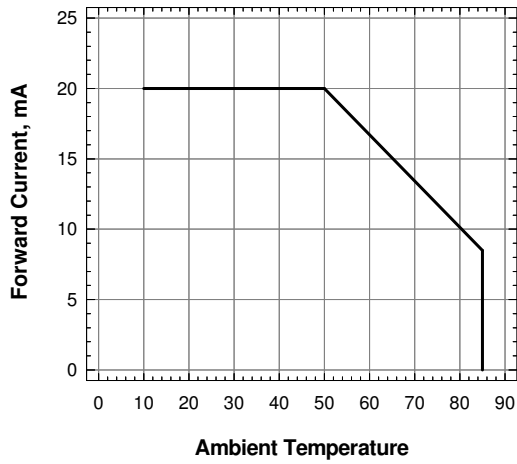
Relative Luminous Intensity Vs. Forward Current



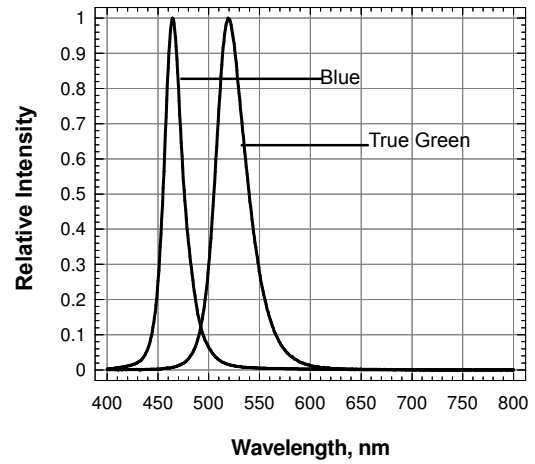
Forward Current Vs. Forward Voltage



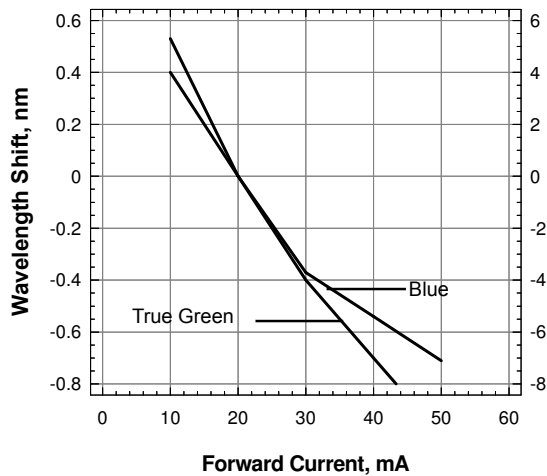
Maximum Forward Current Vs. Temperature



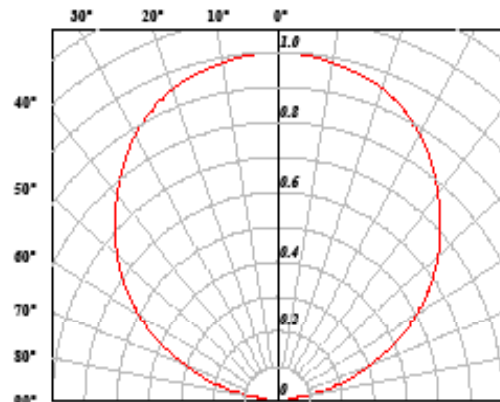
Relative Intensity Vs. Wavelength



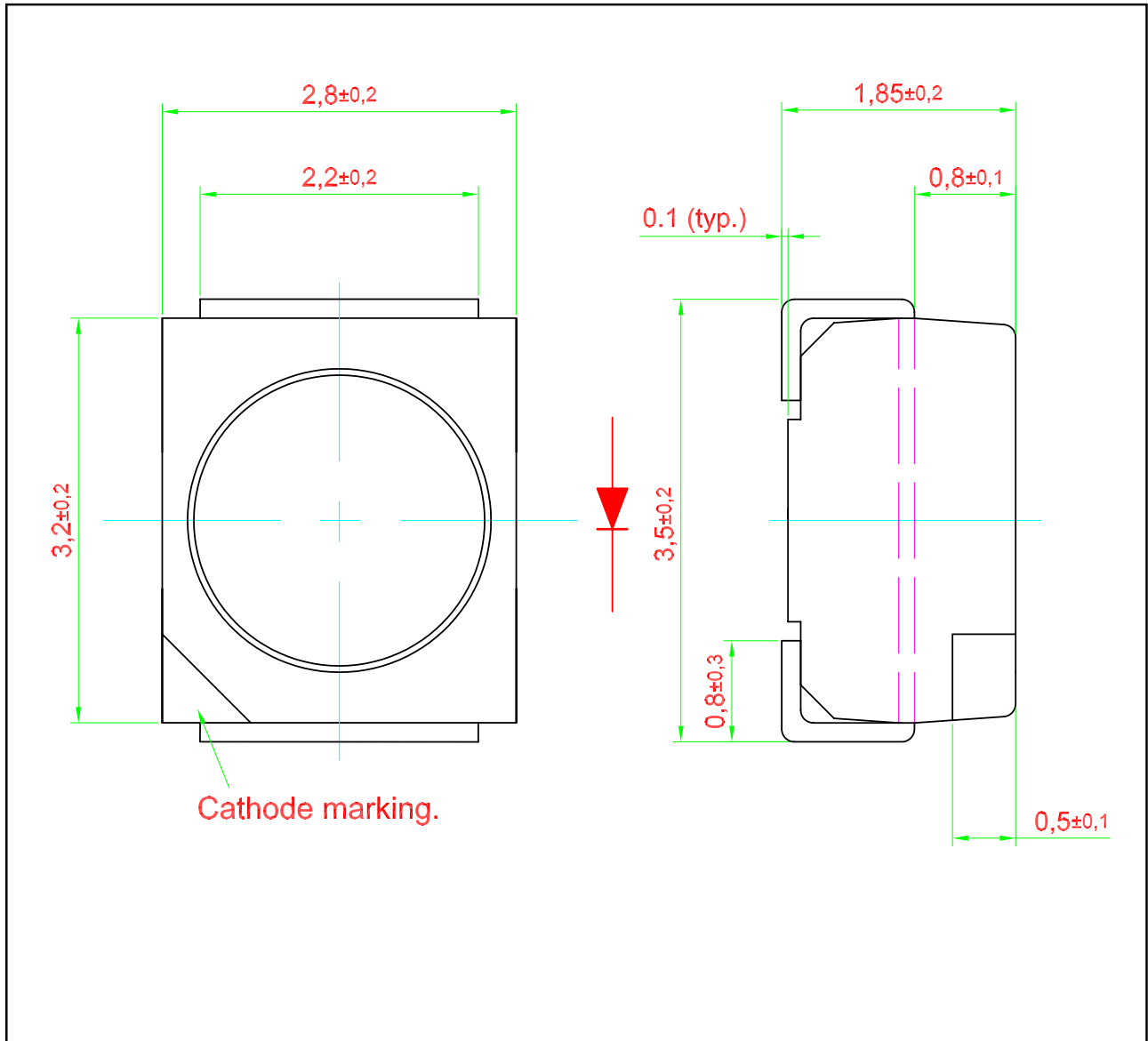
Wavelength Shift Vs. Forward Current



Radiation Pattern



DomiLED™ • InGaN : DDx-DJx Package Outlines

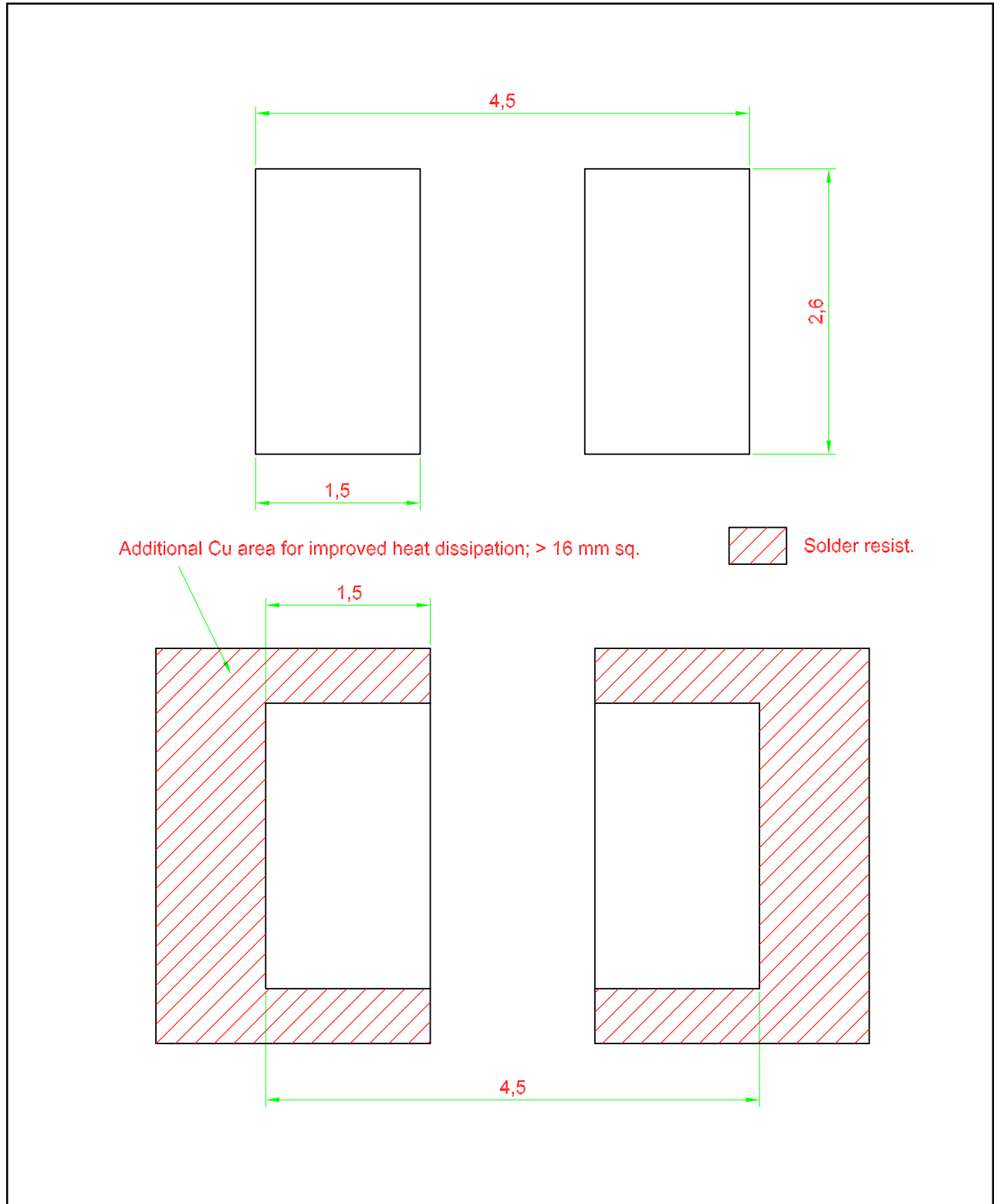


Materials

Materials	
Lead Frame	Copper alloy
Housing	High temperature resistant plastic, PPA
Encapsulant	Epoxy
Lead-finishing	Pure tin plating, Sn

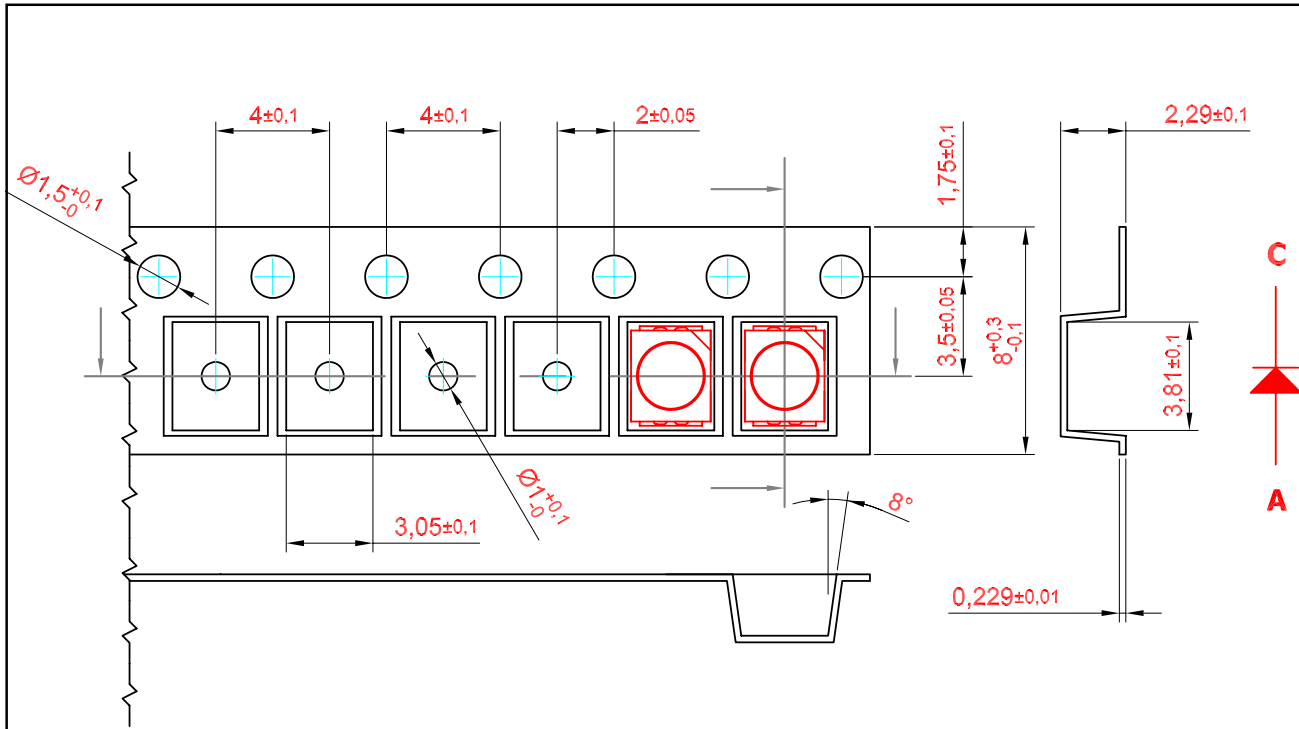
Note: Package is Pb-free.

Recommended Solder Pad



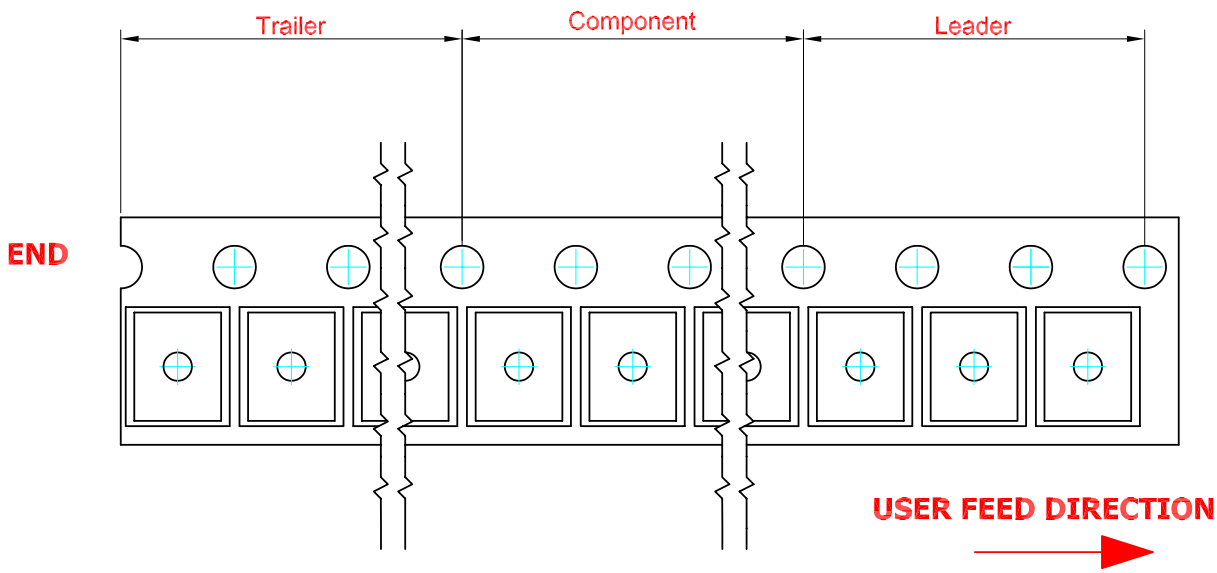
Taping and orientation

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

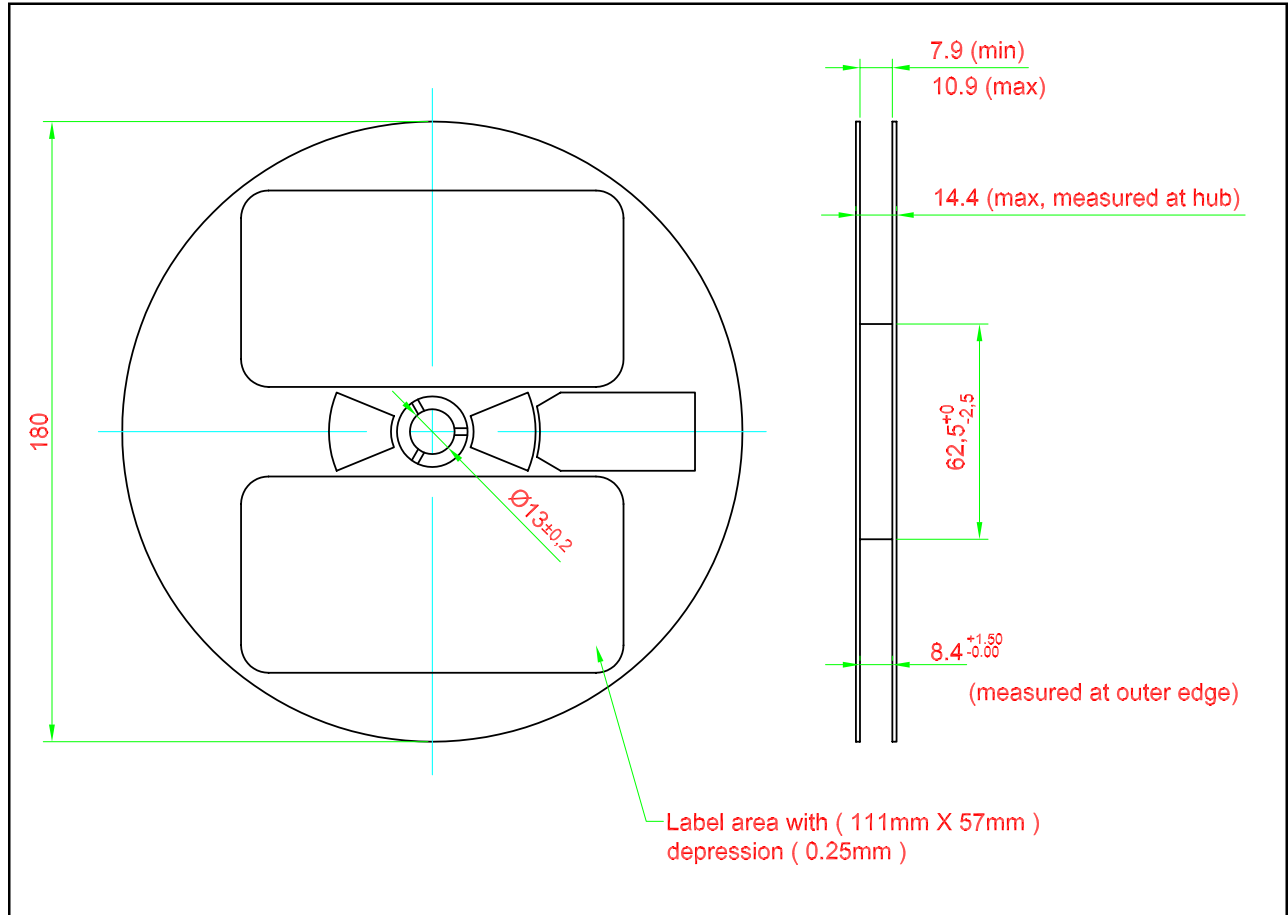


200 mm min. for $\varnothing 180$ reel.
200 mm min. for $\varnothing 330$ reel.

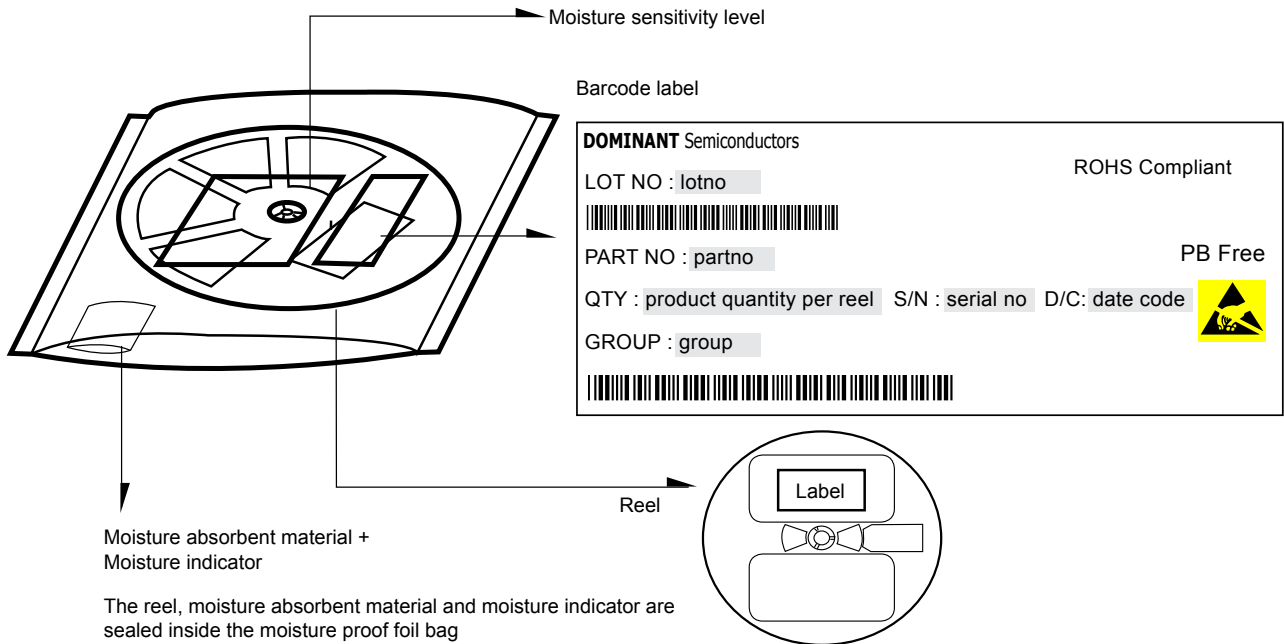
480 mm min. for $\varnothing 180$ reel.
960 mm min. for $\varnothing 330$ reel.



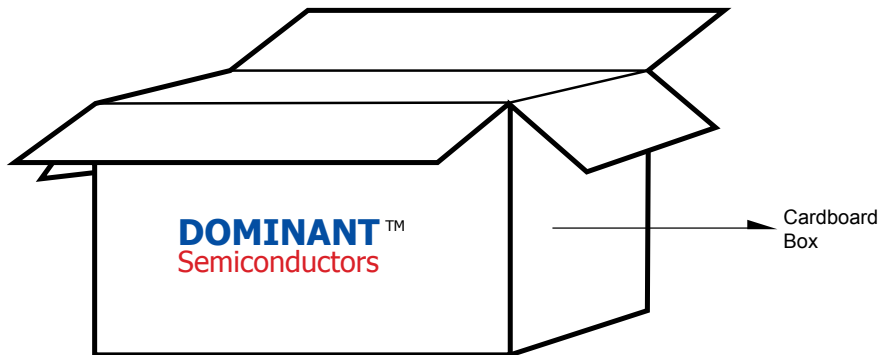
Packaging Specification



Packaging Specification



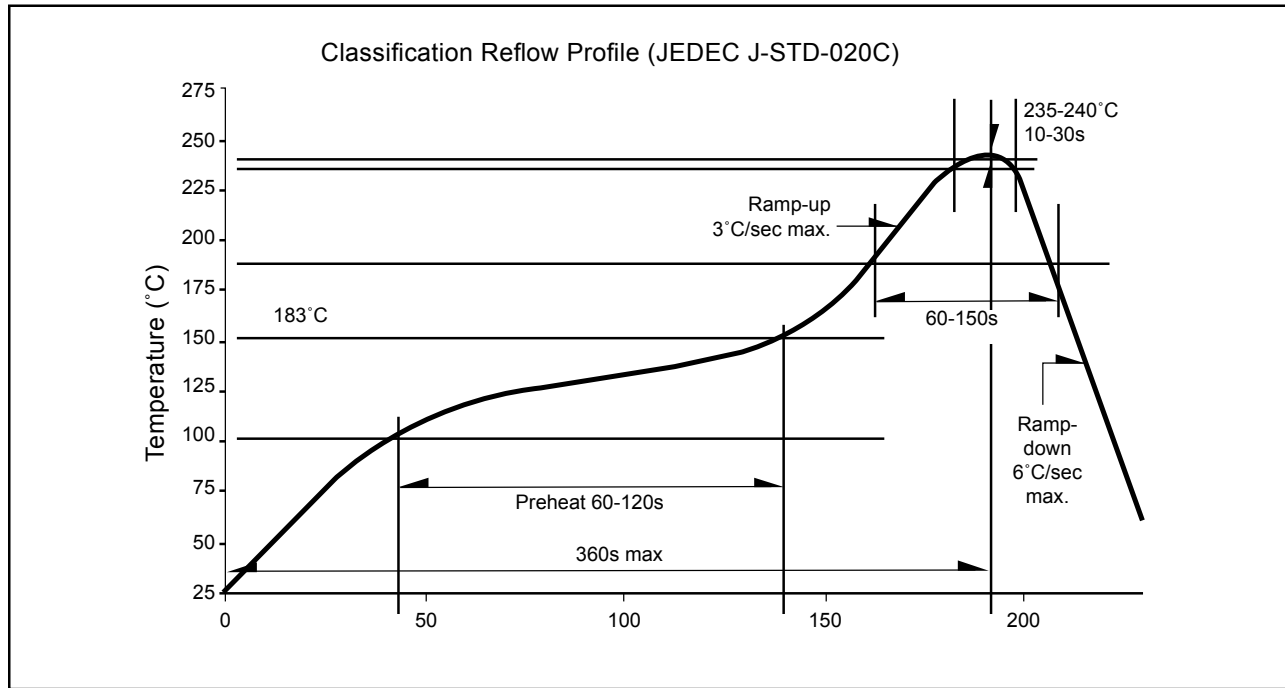
	Average 1pc DomiLED/Multi DomiLED	1 completed bag (2000pcs)
Weight (gram)	0.034	190 ± 10



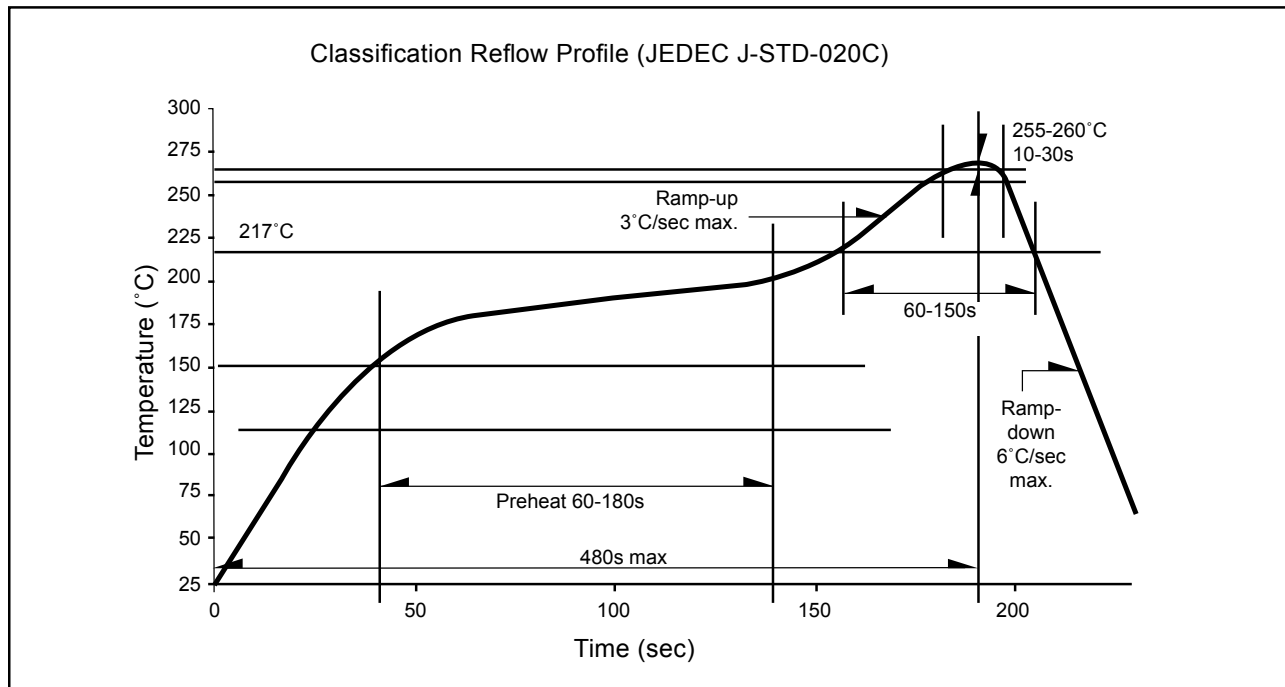
For DomiLED™

Cardboard Box Size	Dimensions (mm)	Empty Box Weight (kg)	Reel / Box	Quantity / Box (pcs)
Small	300 x 250 x 250	0.3	15 reels MAX	30,000 MAX
Large	416 x 516 x 476	1.4	96 reels MAX	192,000 MAX

Recommended Sn-Pb IR-Reflow Soldering Profile



Recommended Pb-free Soldering Profile



Revision History

Page	Subjects	Date of Modification
-	Change New Format	07 November 2006
2	Add new partno: DDB-DJS-RS2-1 DDT-DJS-UV2-1 Not for new design: DDB-DJS-QR2-1 DDT-DJS-S2U1-1	18 February 2008
2	Add new partno: DDB-DJS-ST2-1 DDT-DJS-VW2-1 Not for new design: DDB-DJS-RS2-1 DDT-DJS-UV2-1	05 May 2009

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>.

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