

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 using thin film 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 IR reflow soldering.
- > Environmental friendly; RoHS compliance.



Applications:

- > Display: full color display video notice board.



Optical Characteristics at Tj=25°C

Part Ordering Number	Color	Viewing Angle°	Luminous Intensity @ 20mA IV (mcd)		
			Min.	Typ.	Max.
DDR-CJE-RS2-1	Red, 625nm	120	112.5	180.0	285.0
DDY-CJE-ST2-1	Yellow, 587nm	120	180.0	285.0	450.0
DDT-UJE-UV2-1	True Green, 525nm	120	450.0	715.0	1125.0
DDB-UJE-RS1-1	Blue, 470nm	120	112.5	180.0	224.0
● DDR-SJE-Q2R-1	Red, 625nm	120	90.0	140.0	180.0
● DDY-SJE-S2T-1	Yellow, 587nm	120	224.0	355.0	450.0
● DDT-SJE-ST2-1	True Green, 525nm	120	180.0	285.0	450.0
● DDB-SJE-PQ2-1	Blue, 470nm	120	45.0	71.5	112.5

● **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.
5. An optional Vf binning is also available upon request. Binning scheme is as per following table.

Electrical Characteristics at Tj=25°C

Part Number	Vf @ If = 20mA		Vr @ Ir = 10uA
	Typ. (V)	Max. (V)	Min. (V)
DDR-CJE, DDY-CJE	1.9	2.3	12
DDR-SJE, DDY-SJE	1.8	2.3	12
DDB-SJE, DDB-UJE	3.2	3.8	5
DDT-SJE, DDT-UJE	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	AllInGaP: 30; InGaN: 20	mA
Peak pulse current; (tp ≤ 10μs, Duty cycle = 0.005)	AllInGaP: 1000; InGaN: 200	mA
Reverse voltage	AllInGaP: 12; InGaN: 5	V
ESD threshold (HBM)	2000	V
LED junction temperature	125	°C
Operating temperature	-40 ... +100	°C
Storage temperature	-40 ... +100	°C
Power dissipation (at room temperature)	AllInGaP: 75; InGaN: 85	mW

Wavelength Grouping at Tj=25°C

Color	Group	Wavelength distribution (nm)
DDR; Red	Full	620 - 630
DDY; Yellow	Full	582 - 594
	W	582 - 585
	X	585 - 588
	Y	588 - 591
	Z	591 - 594
DDT; True Green	Full	520 - 536
	W	520 - 524
	X	524 - 528
	Y	528 - 532
	Z	532 - 536
DDB; Blue	Full	464 - 476
	W	464 - 468
	X	468 - 472
	Y	472 - 476

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

Luminous Intensity Group at Tj=25°C

Brightness Group	Luminous Intensity @ IV (mcd)
Q1	71.5...90.0
Q2	90.0...112.5
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

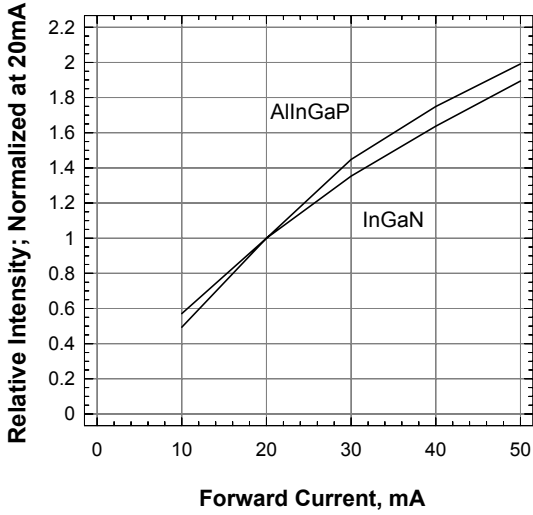
Luminous intensity is measured with an accuracy of ± 11%.

Vf Bining (Optional)

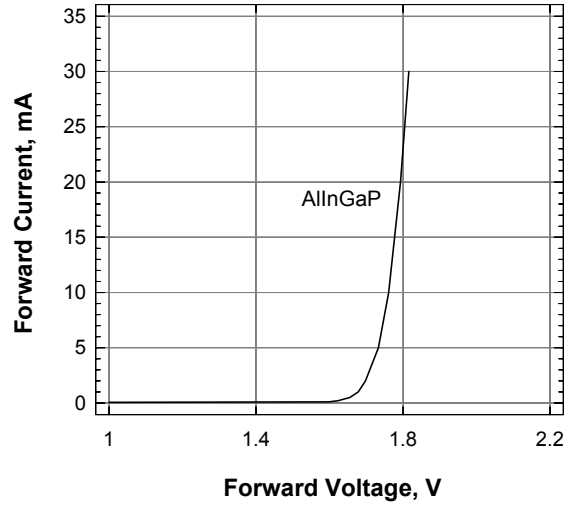
Vf @ If = 20mA	Forward Voltage (V) InGaN	Forward Voltage (V) AlInGaP
00	3.05 ... 3.35	-
01	3.35 ... 3.65	1.55 ... 1.85
02	3.65 ... 3.95	1.85 ... 2.15
03	3.95 ... 4.45	2.15 ... 2.45

Forward Voltage, Vf is measured with an accuracy of ± 0.1V.
 Please consult sales and marketing for special part number to incorporate Vf binning.

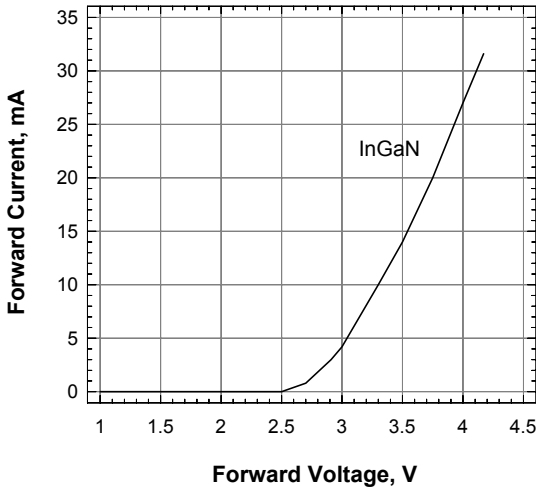
Relative Luminous Intensity Vs Forward Current



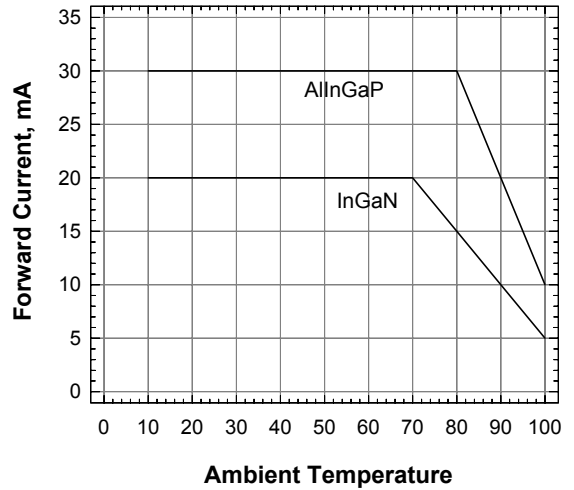
Forward Current Vs Forward Voltage



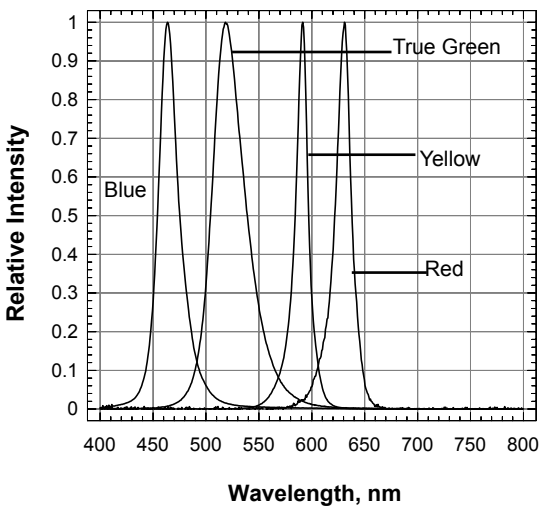
Forward Current Vs Forward Voltage



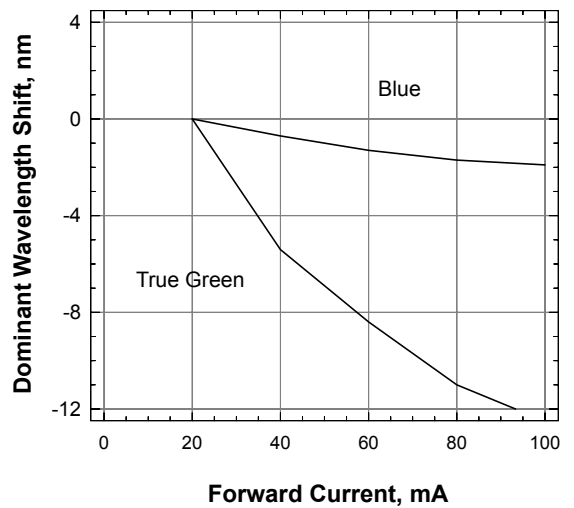
Forward Current Vs Temperature



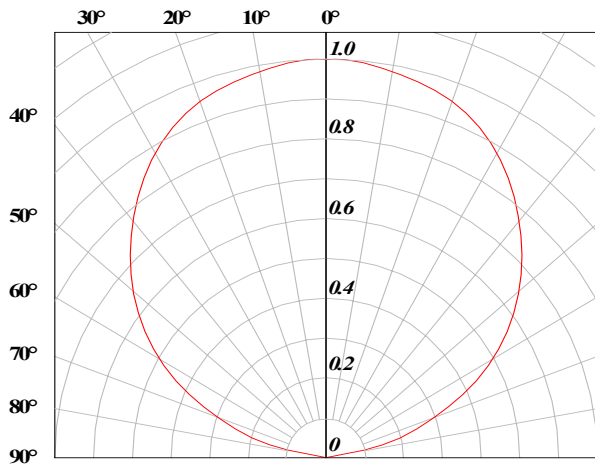
Relative Intensity Vs Wavelength



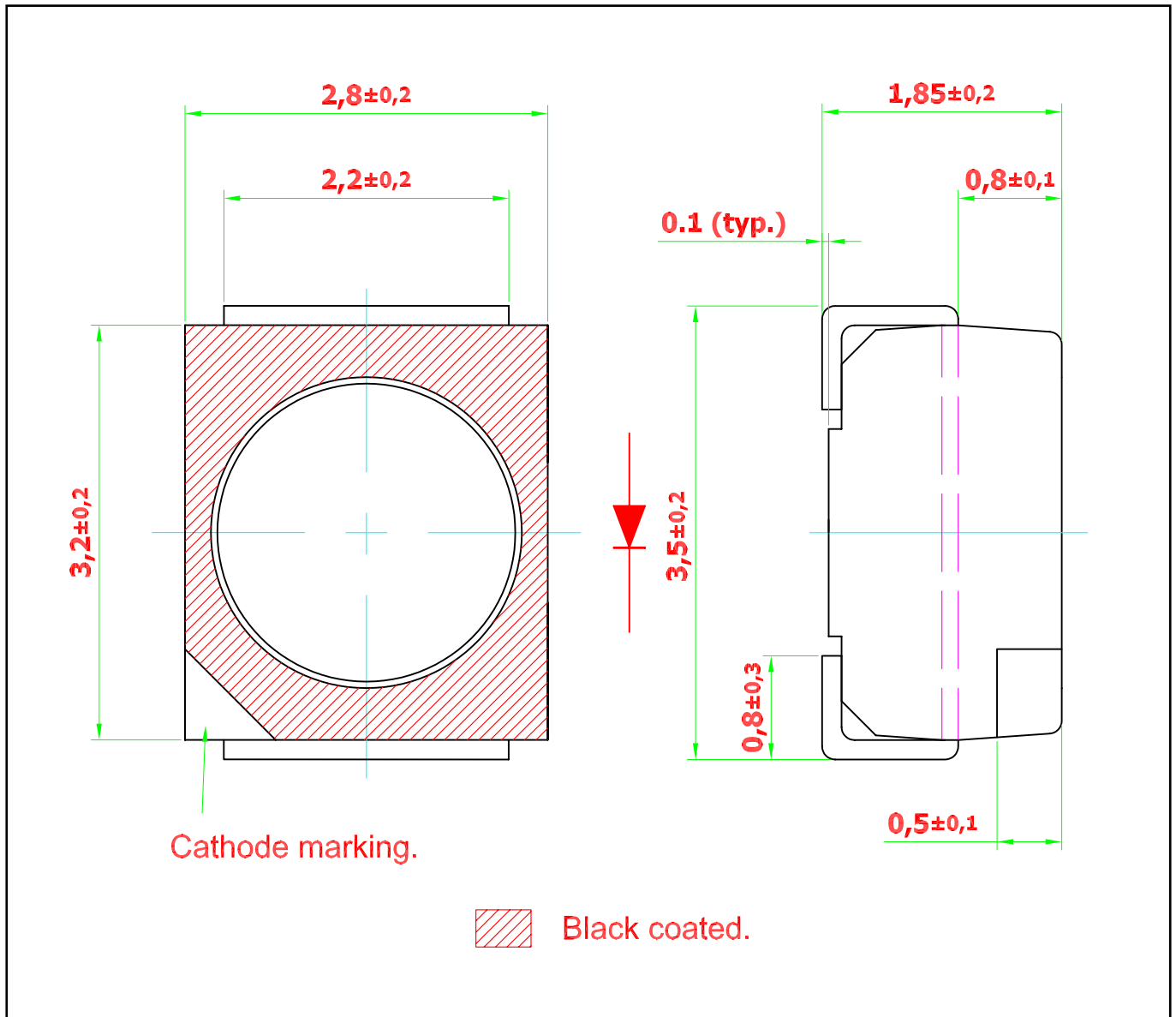
Dominant Wavelength Shift Vs Forward Current



Radiation Pattern



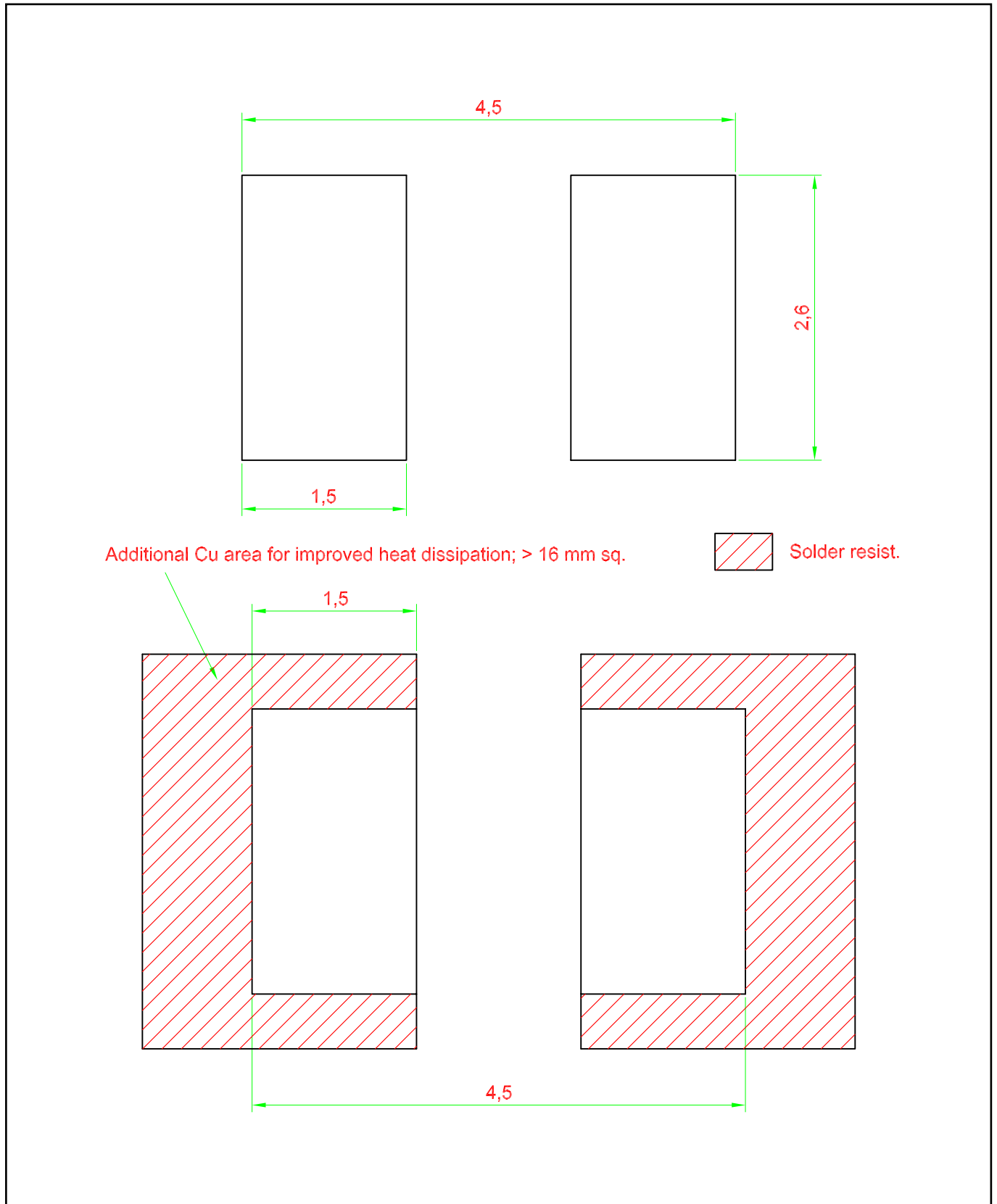
DomiLED™ • Colored Resin : DDx-xJE Package Outlines



Material

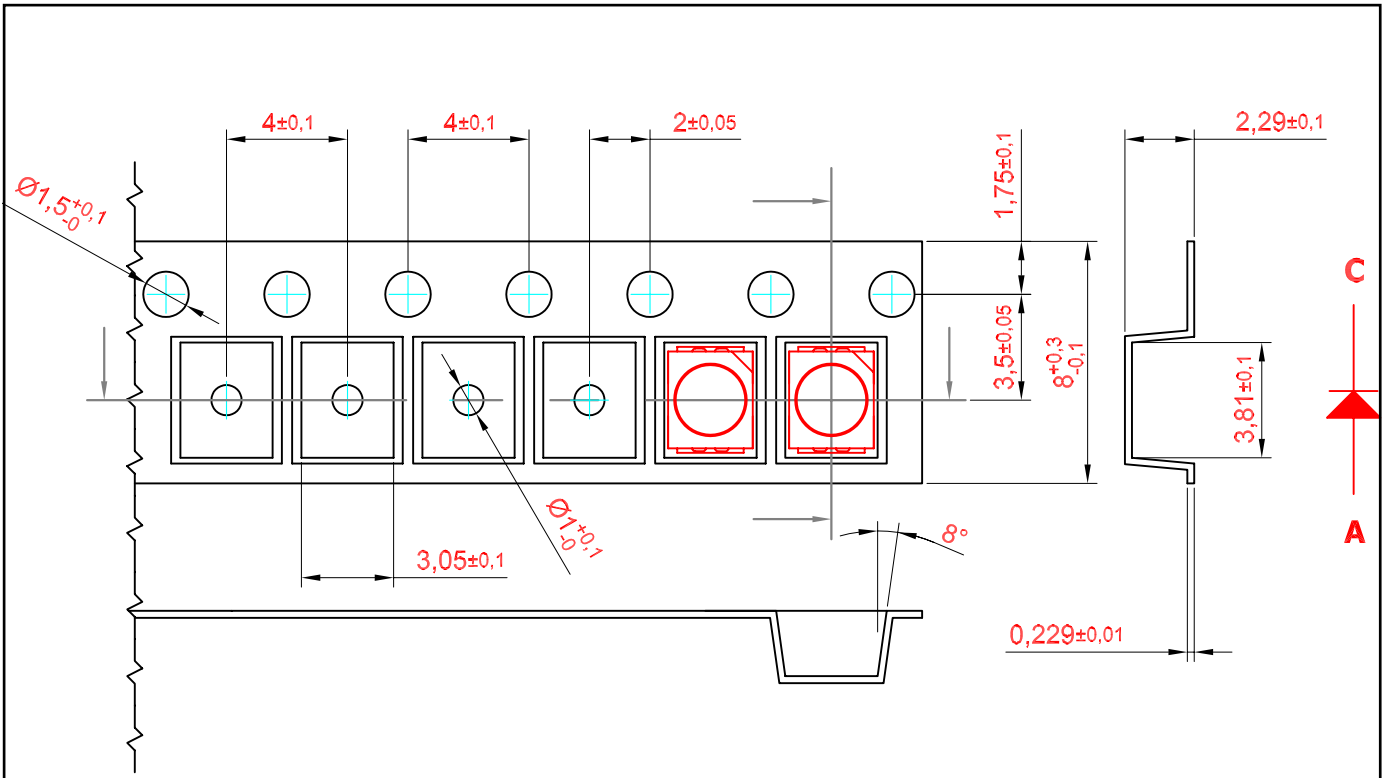
Material	
Lead-frame	Cu Alloy With Ag Plating
Package	High Temperature Resistant Plastic, PPA
Encapsulant	Epoxy
Soldering Leads	Sn-Sn Plating

Recommended Solder Pad



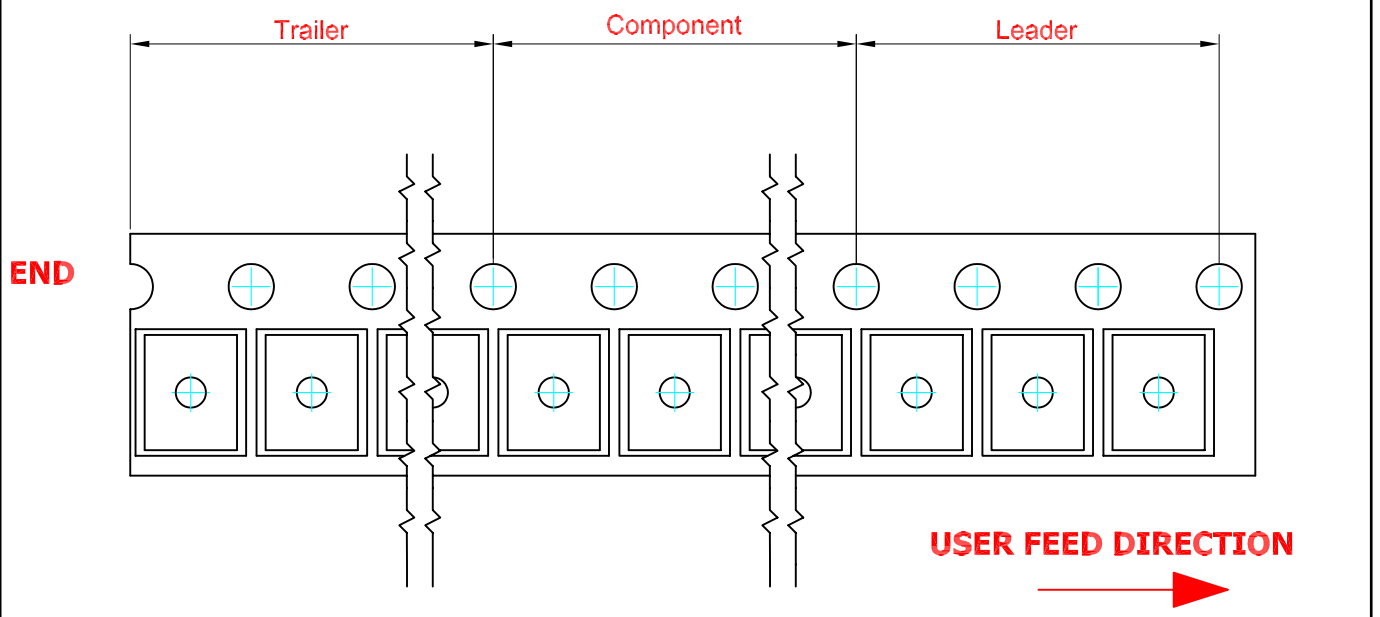
Taping and orientation

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

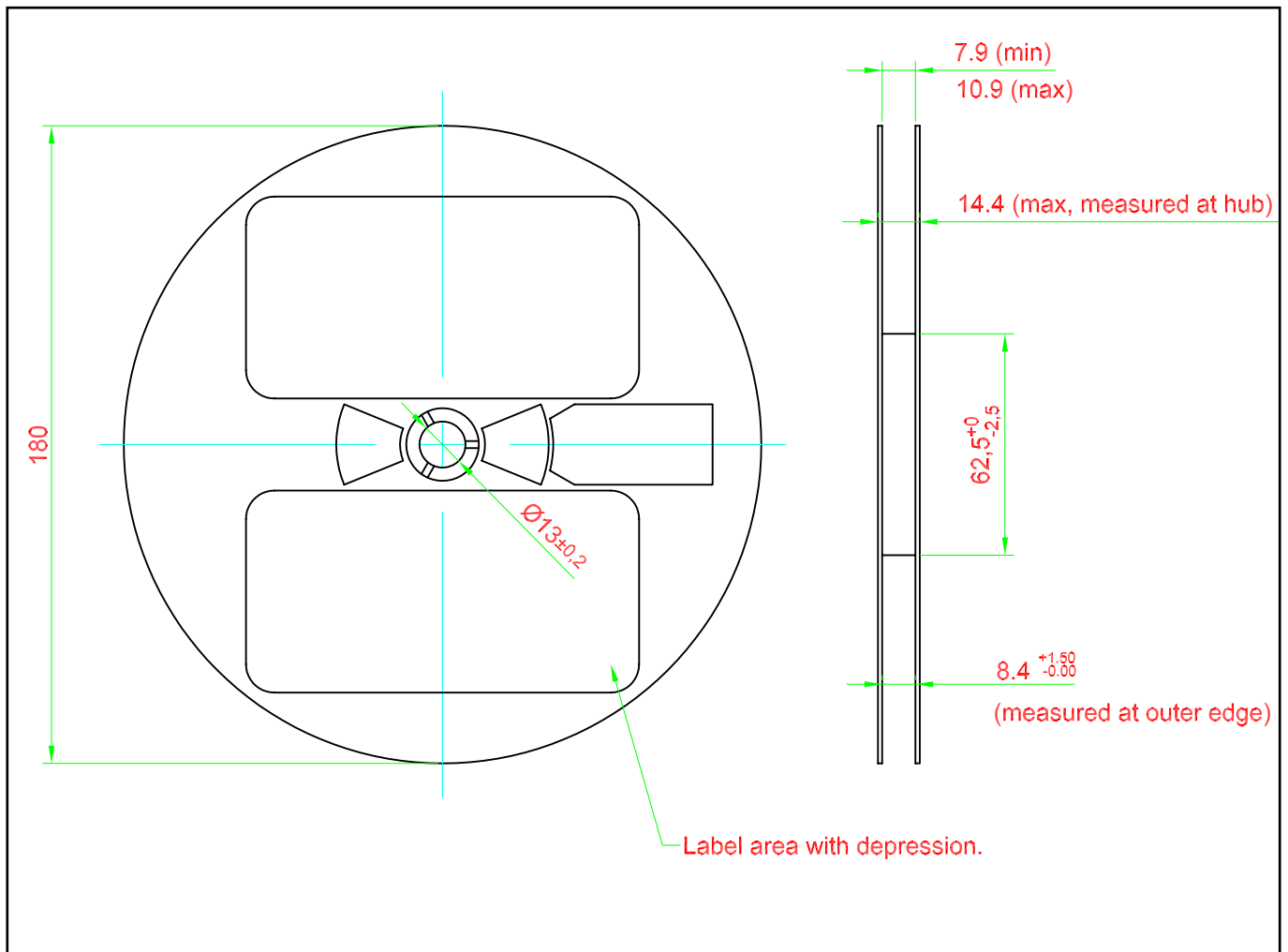


200 mm min. for $\varnothing 180$ reel.
 200 mm min. for $\varnothing 330$ reel.

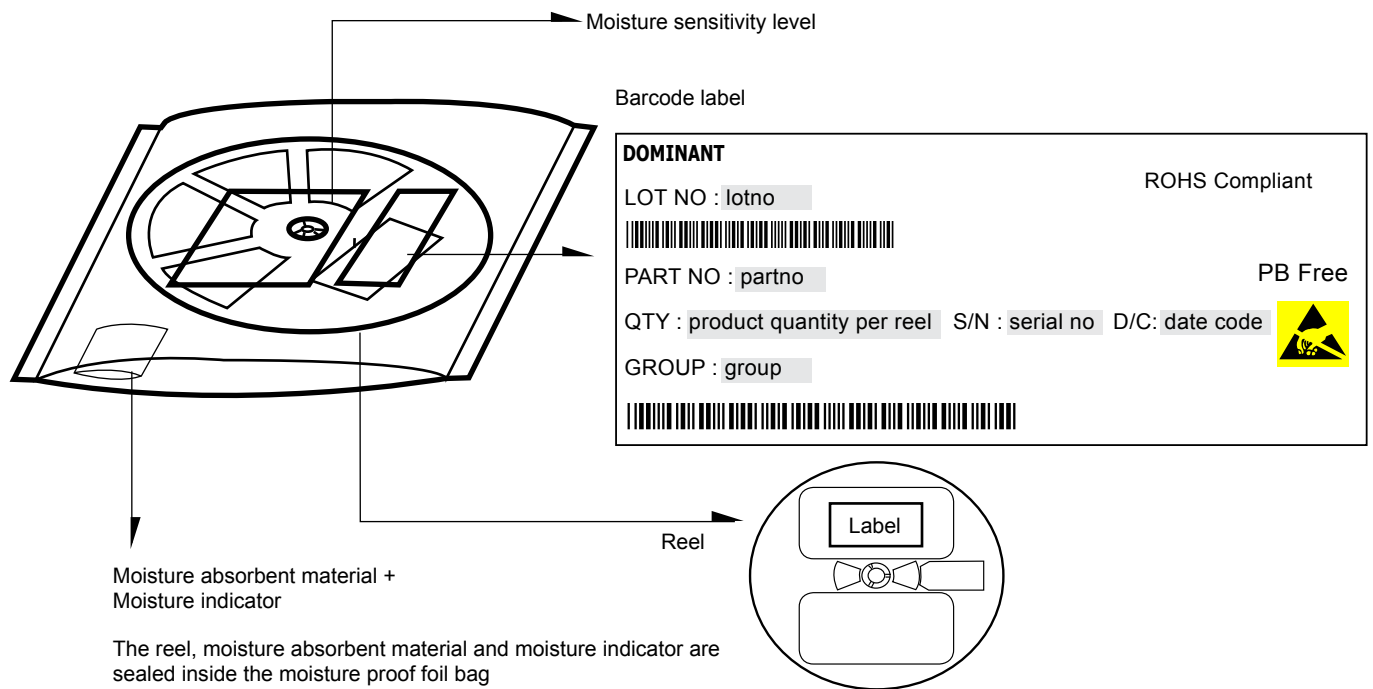
480 mm min. for $\varnothing 180$ reel.
 960 mm min. for $\varnothing 330$ reel.



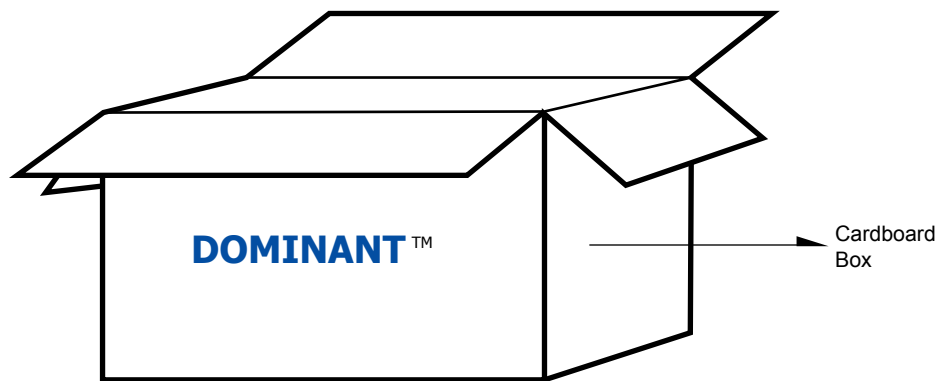
Packaging Specification



Packaging Specification



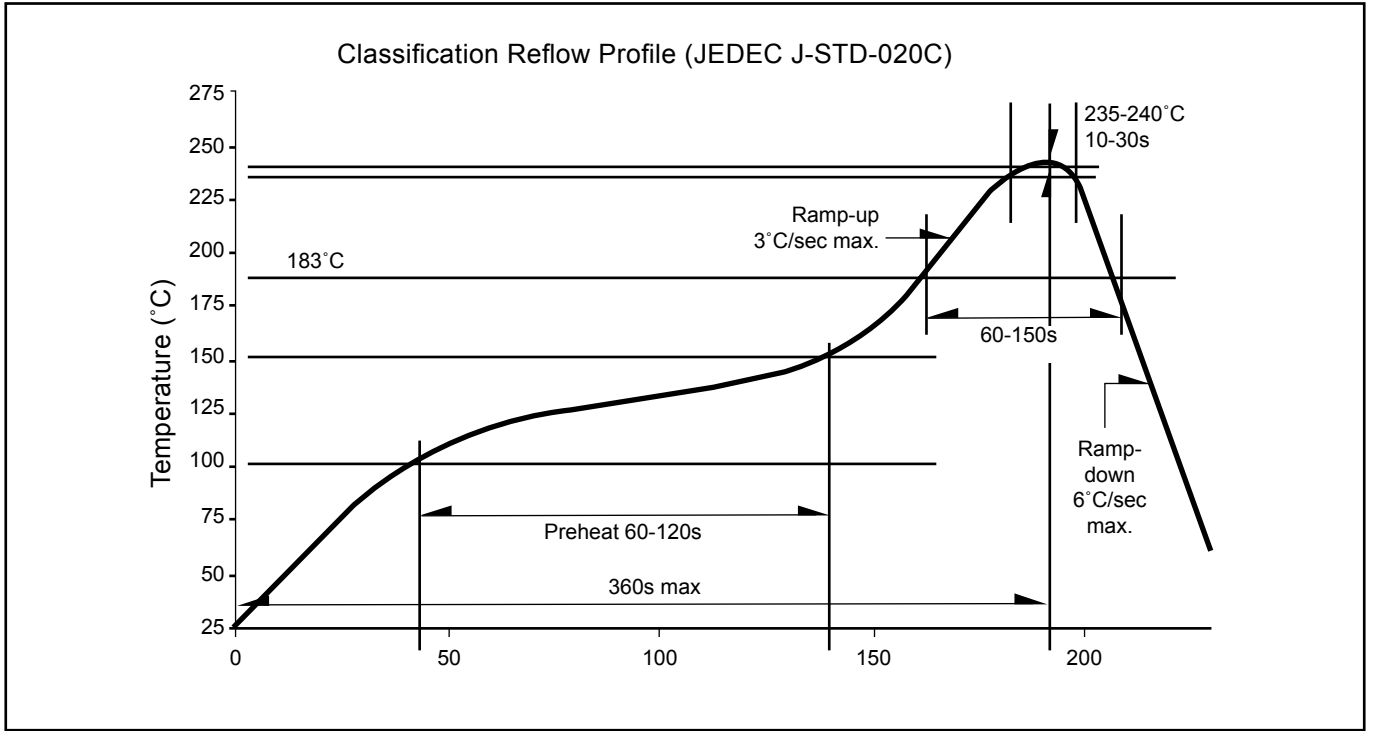
	Average 1pc DomiLED/Multi DomiLED	1 completed bag (2000pcs)
Weight (gram)	0.034	190 ± 10



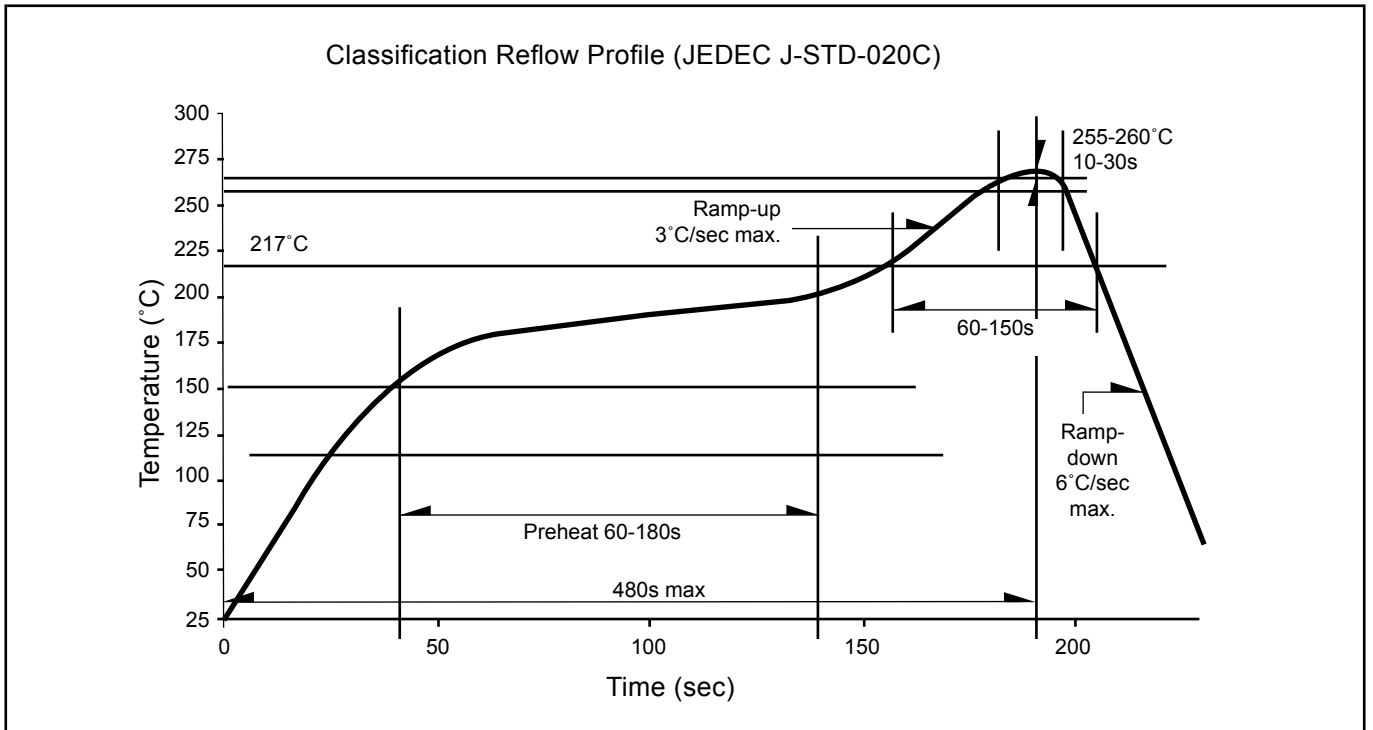
For DomiLED™

Cardboard Box Size	Dimensions (mm)	Empty Box Weight (kg)	Reel / Box	Quantity / Box (pcs)
Small	300 x 250 x 250	0.58	15 reels MAX	30,000 MAX
Large	416 x 516 x 476	1.74	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
-	New Format - Add new PartNo: DDY-CJE-ST2-1	23 Apr 2007
2	Add new partno: DDT-UJE-UV2-1 DDB-UJE-RS1-1 DDR-CJE-RS2-1 Not for new design: DDR-SJE-Q2R-1 DDY-SJE-S2T-1 DDT-SJE-ST2-1 DDB-SJE-PQ2-1	20 Feb 2008
-	Update company name	31 May 2010
2	Typo error on luminous intensity value	04 Oct 2010

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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