

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 bi-color 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.
- > Consumer Appliances: LCD illumination as in PDAs, LCD TV.
- > Communication: indicator and backlight in mobilephone.
- > Display: full color display video notice board.
- > Industrial: white goods (eg: Oven, microwave, etc.).



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 #1			Chip #2		
				Min.	Typ.	Max.	Min.	Typ.	Max.
DMSG-CJS-PQ+PQ-1	Super-red, 632nm	Green, 570nm	120	45.0	71.5	112.5	45.0	71.5	112.5
DMSG-CJS-QR+PQ-1	Super-red, 632nm	Green, 570nm	120	71.5	112.5	180.0	45.0	71.5	112.5
DMSY-CJS-QR+ST-1	Super-red, 632nm	Yellow, 587nm	120	71.5	112.5	180.0	180.0	285.0	450.0
DMST-CJS-PQ+RS-1	Super-red, 632nm	True Green, 525nm	120	45.0	71.5	112.5	112.5	180.0	285.0
DMSB-CJS-PQ+RS-1	Super-red, 632nm	Blue, 470nm	120	45.0	71.5	112.5	112.5	180.0	285.0
DMRY-CJS-RS+RS-1	Red, 625nm	Yellow, 587nm	120	112.5	180.0	285.0	112.5	180.0	285.0
DMRG-CJS-RS+QR-1	Red, 625nm	Green, 570nm	120	112.5	180.0	285.0	71.5	112.5	180.0
DMRG-SJS-RS+QR-1	Red, 625nm	Green, 570nm	120	112.5	180.0	285.0	71.5	112.5	180.0
DMRT-CJS-RS+RS-1	Red, 625nm	True Green, 525nm	120	112.5	180.0	285.0	112.5	180.0	285.0
DMAY-SJS-ST+ST-1	Amber, 615nm	Yellow, 587nm	120	180.0	285.0	450.0	180.0	285.0	450.0
DMOT-CJS-RS+RS-1	Orange, 605nm	True Green, 525nm	120	112.5	180.0	285.0	112.5	180.0	285.0
DMYB-CJS-RS+PQ-1	Yellow, 587nm	Blue, 470nm	120	112.5	180.0	285.0	45.0	71.5	112.5
DMYT-CJS-RS+RS-1	Yellow, 587nm	True Green, 525nm	120	112.5	180.0	285.0	112.5	180.0	285.0
DMGY-CJS-PQ+RS-1	Green, 570nm	Yellow, 587nm	120	45.0	71.5	112.5	112.5	180.0	285.0

NOTE

1. DMXX comes in a quantity of 2000 units per reel.
2. Luminous intensity is measured with an accuracy of ± 11%.
4. Vf binning is available. Binning scheme as per table below. Please request for special part numbers.

Electrical Characteristics at Tj=25°C

	Vf @ If = 20mA	
	Typ. (V)	Max. (V)
Super-red, Red, Amber, Orange, Yellow, Green	2.00	2.45
True Green, Blue	3.60	4.00

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

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	Red, Amber, Orange, Yellow, Green; AlInGaP=30; True Green, Blue; InGaN=20	mA
Peak pulse current; (tp ≤ 10µs, Duty cycle = 0.005)	Red, Amber, Orange, Yellow, Green; AlInGaP=1000; True Green, Blue; InGaN=200	mA
Reverse voltage	Red, Amber, Orange, Yellow, Green; AlInGaP=12; True Green, Blue; InGaN=5	V
ESD threshold (HBM)	2	kV
LED junction temperature	125	°C
Operating temperature	-40 ... +100	°C
Storage temperature	-40 ... +100	°C

Wavelength Grouping at Tj=25°C

Color	Group	Wavelength distribution (nm)
Super-red	Full	625 - 640
Red	Full	620 - 630
Amber	Full	610 - 621
	W	610 - 615
	X	615 - 621
Orange	Full	600 - 612
	W	600 - 603
	X	603 - 606
	Y	606 - 609
	Z	609 - 612
Yellow	Full	582 - 594
	W	582 - 585
	X	585 - 588
	Y	588 - 591
	Z	591 - 594
True Green	Full	520 - 536
	W	520 - 524
	X	524 - 528
	Y	528 - 532
	Z	532 - 536
Green	Full	564.5 - 576.5
	W	564.5 - 567.5
	X	567.5 - 570.5
	Y	570.5 - 573.5
	Z	573.5 - 576.5
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)	
	Chip #1	Chip #2
PP	45.0...71.5	45.0...71.5
PQ	45.0...71.5	71.5...112.5
PR	45.0...71.5	112.5...180.0
PS	45.0...71.5	180.0...285.0
QQ	71.5...112.5	71.5...112.5
QP	71.5...112.5	45.0...71.5
QR	71.5...112.5	112.5...180.0
QS	71.5...112.5	180.0...285.0
RR	112.5...180.0	112.5...180.0
RS	112.5...180.0	180.0...285.0
RP	112.5...180.0	45.0...71.5
RQ	112.5...180.0	71.5...112.5
SS	180.0...285.0	180.0...285.0
SP	180.0...285.0	45.0...71.5
SQ	180.0...285.0	71.5...112.5
SR	180.0...285.0	112.5...180.0
ST	180.0...285.0	180.0...285.0
TT	285.0...450.0	285.0...450.0
TS	285.0...450.0	180.0...285.0

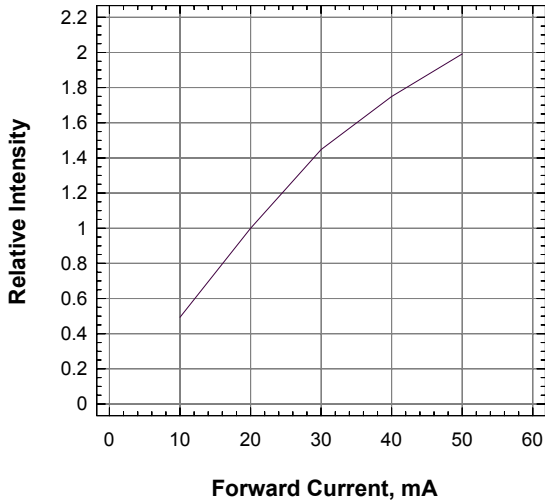
Luminous intensity is measured with an accuracy of ± 11%.

Vf Binning (Optional) at Tj=25°C

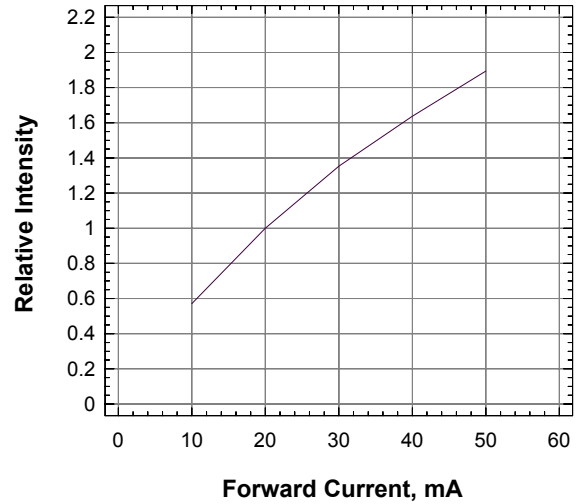
Vf Bin @ 20mA	Red, Amber, OrangeYellow, Green; AlInGaP	True Green, Blue; InGaN (V)
00	1.25 ... 1.55	3.05 ... 3.35
01	1.55 ... 1.85	3.35 ... 3.65
02	1.85 ... 2.15	3.65 ... 3.95
03	2.15 ... 2.45	3.95 ... 4.25
04	2.45 ... 2.75	4.25 ...4.55

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

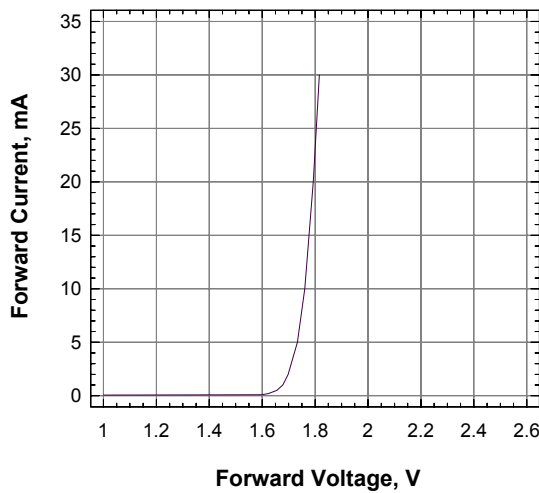
Relative Intensity Vs Forward Current (AS AlInGaP)



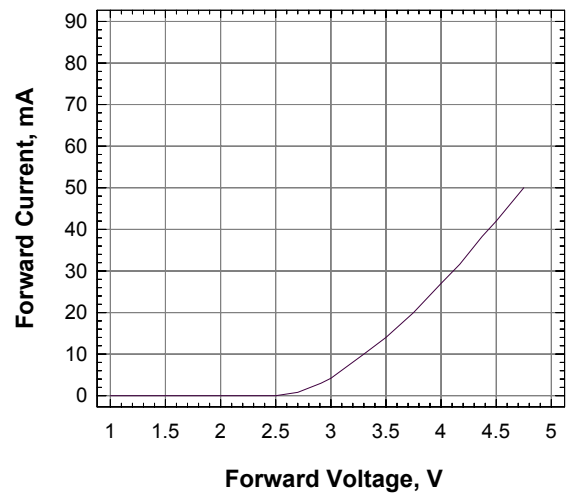
Relative Intensity Vs Forward Current (InGaN)



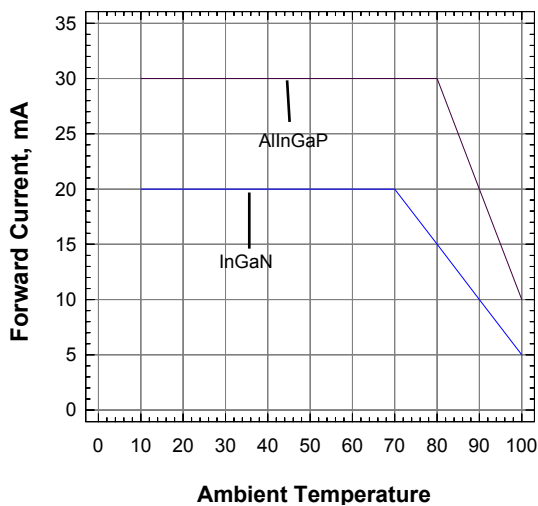
Forward Current Vs Forward Voltage (AS AlInGaP)



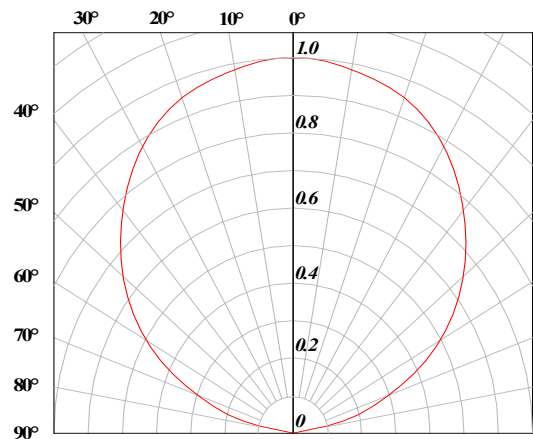
Forward Current Vs Forward Voltage (InGaN)



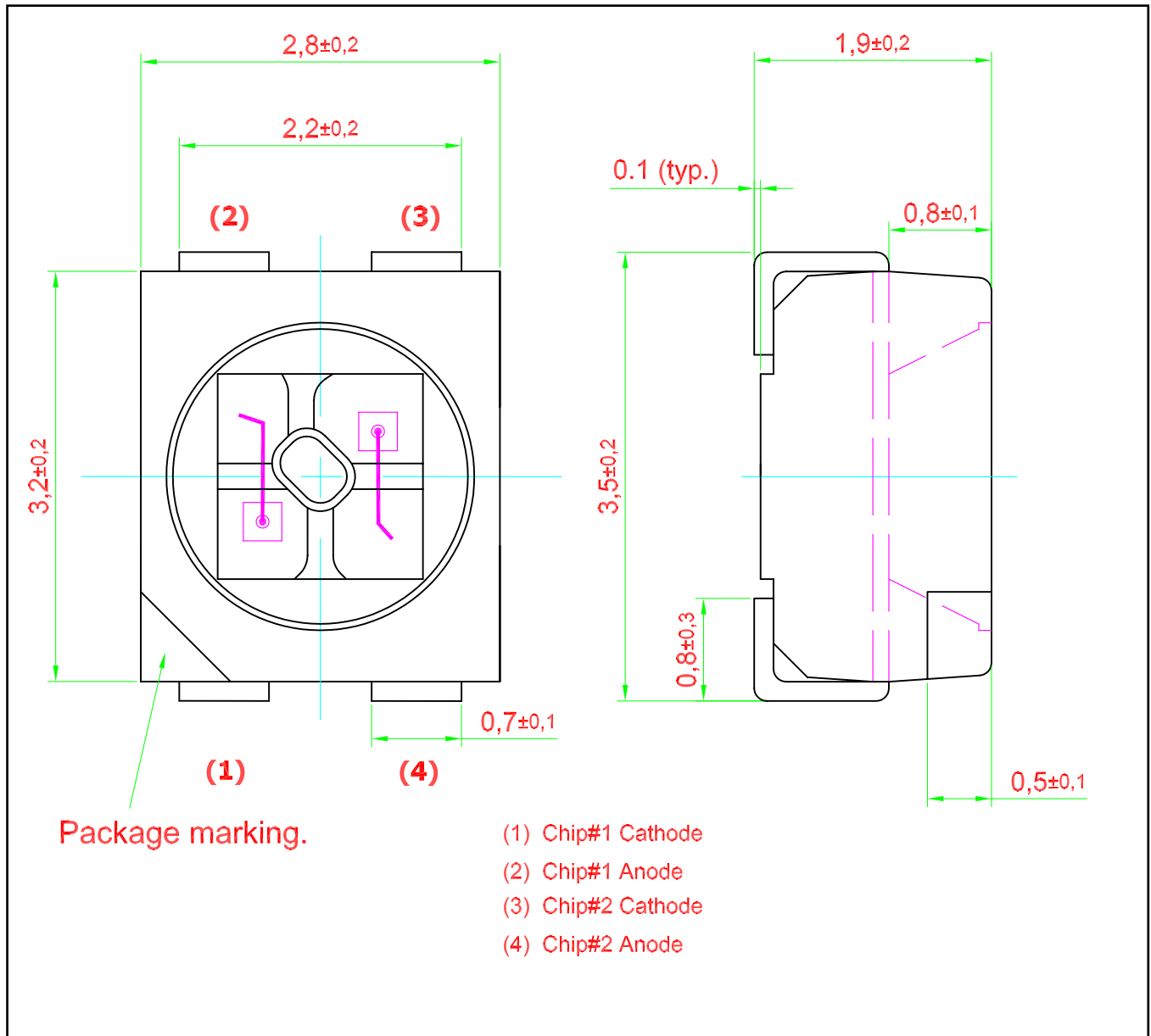
Maximum Current Vs Temperature



Radiation Pattern



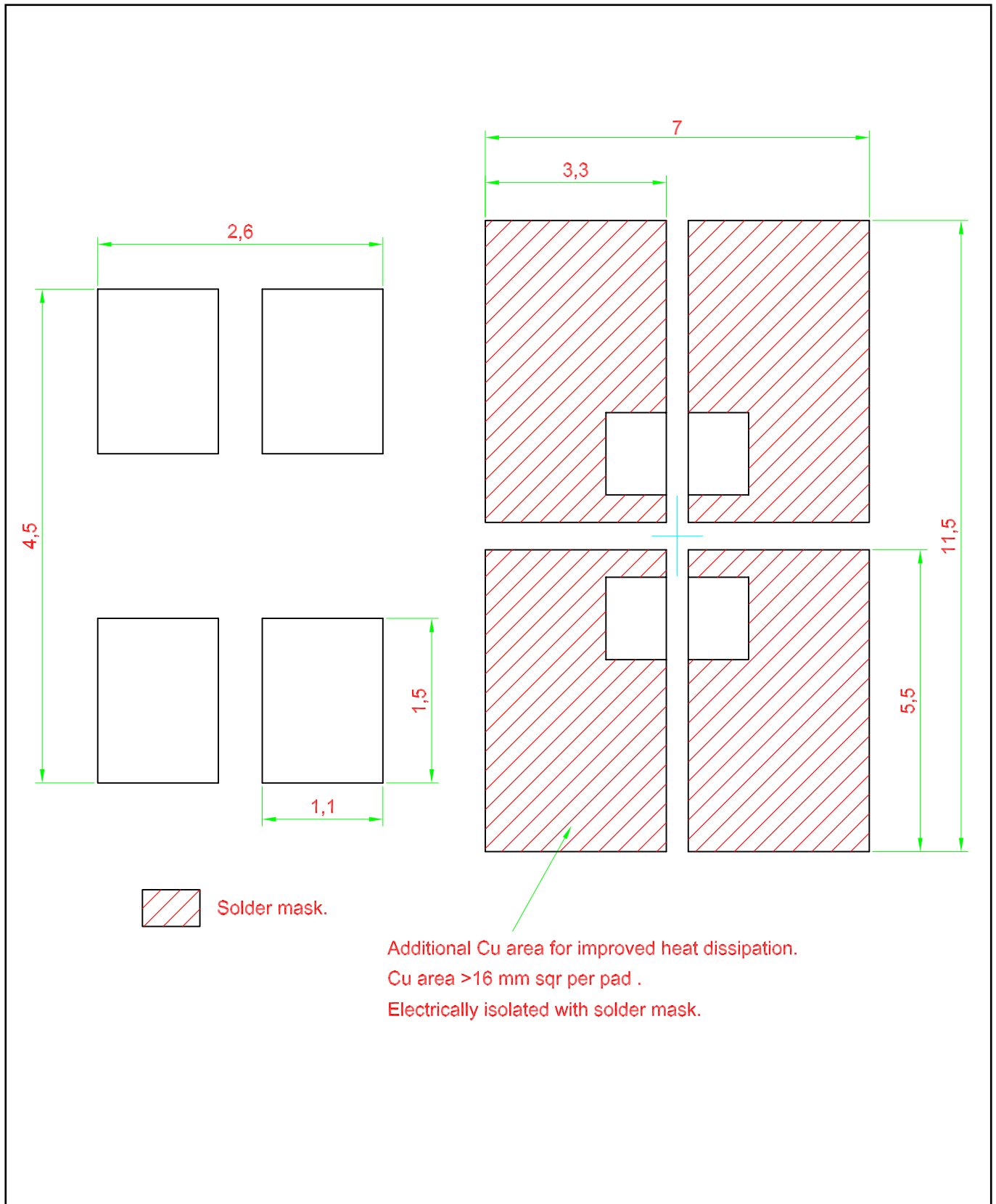
Multi DomiLED™ • Bi-Color Package Outlines



Material

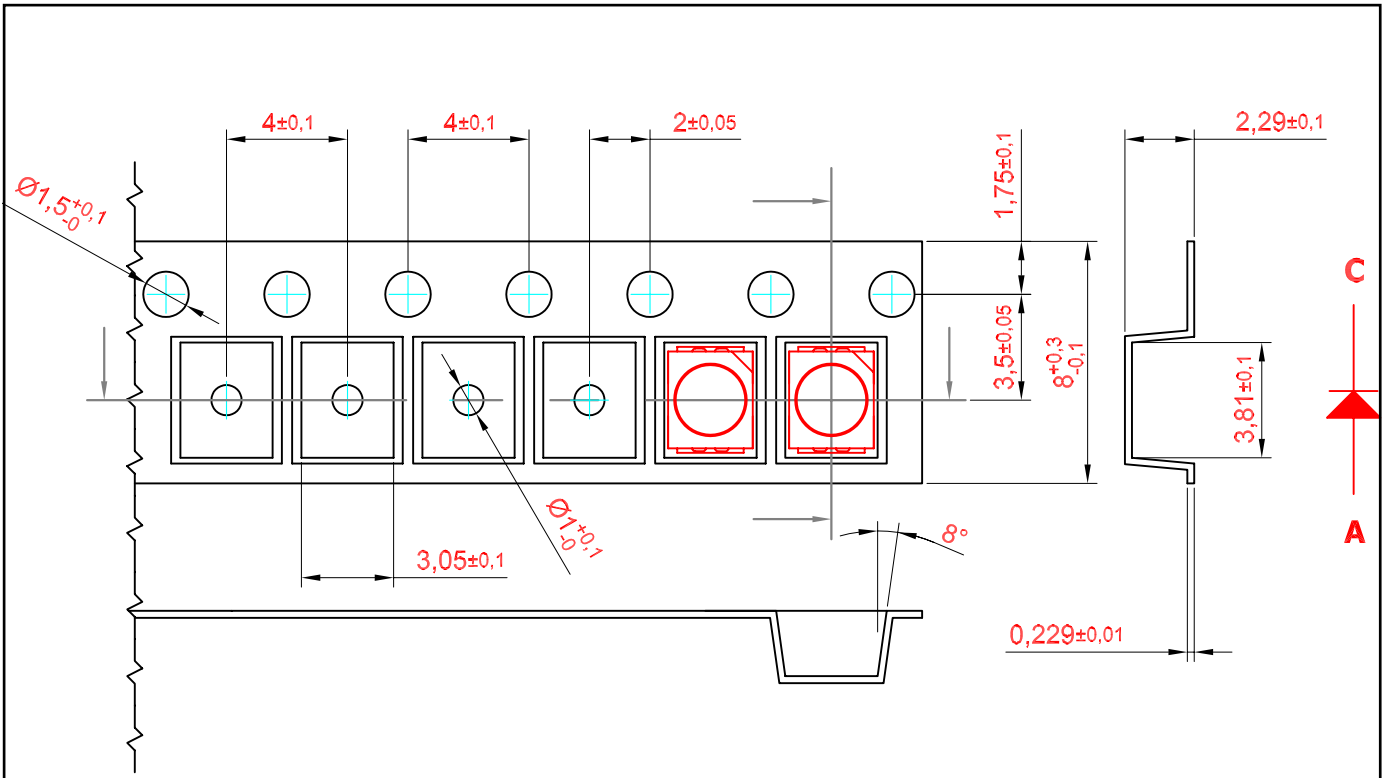
Material	
Lead-frame	Cu Alloy With Ag Plating
Package	High Temperature Resistant Plastic, PPA
Encapsulant	Epoxy
Soldering Leads	Sn Plating

Recommended Solder Pad



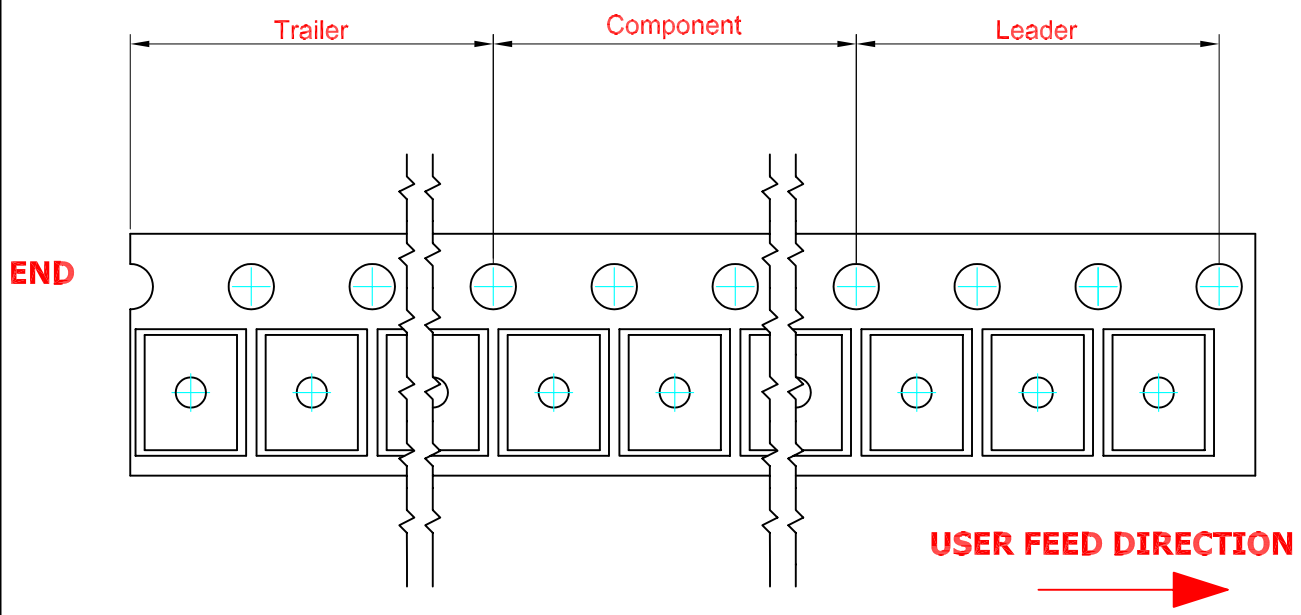
Taping and orientation

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

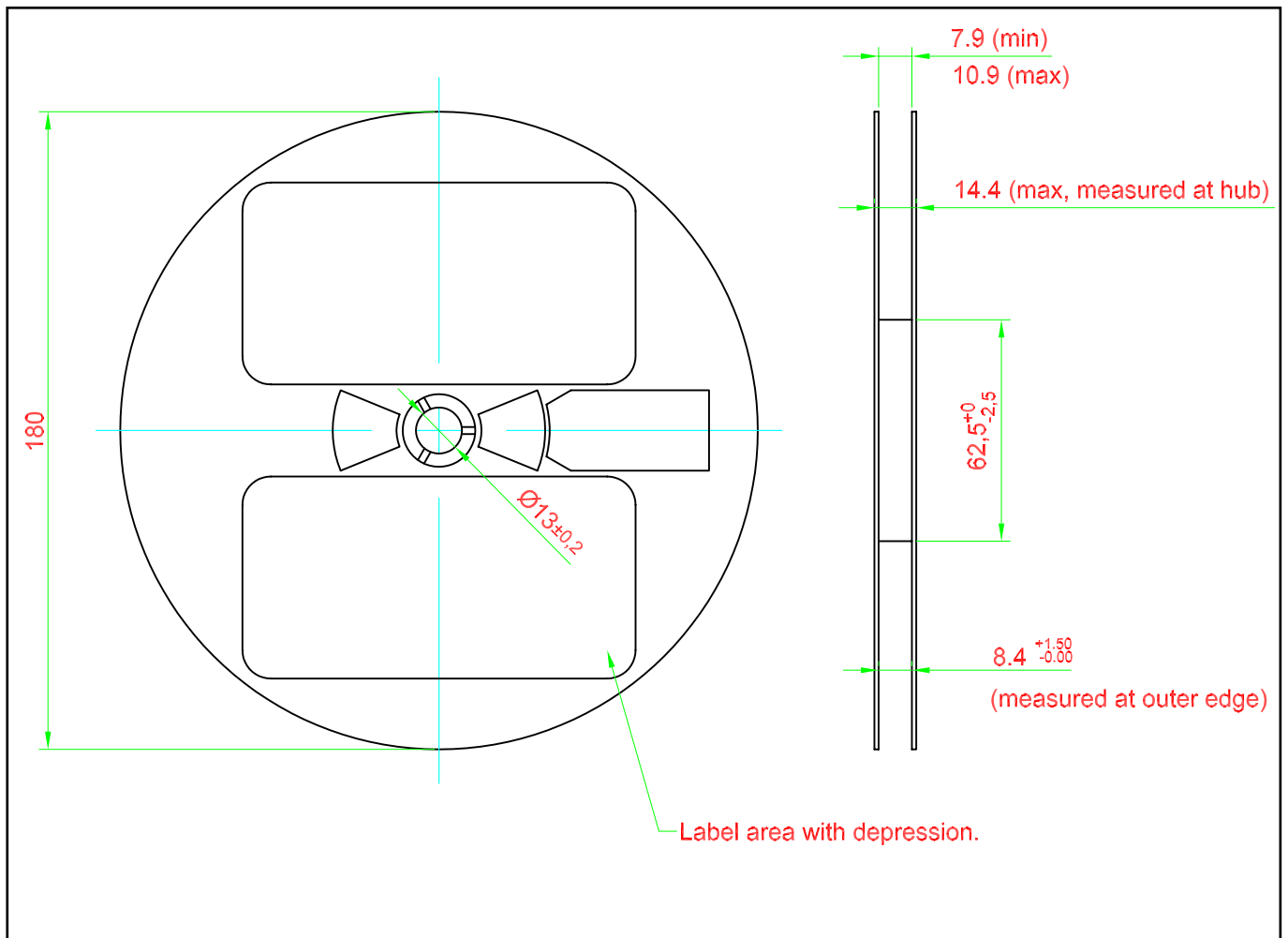


200 mm min. for $\varnothing 180$ reel.
200 mm min. for $\varnothing 330$ reel.

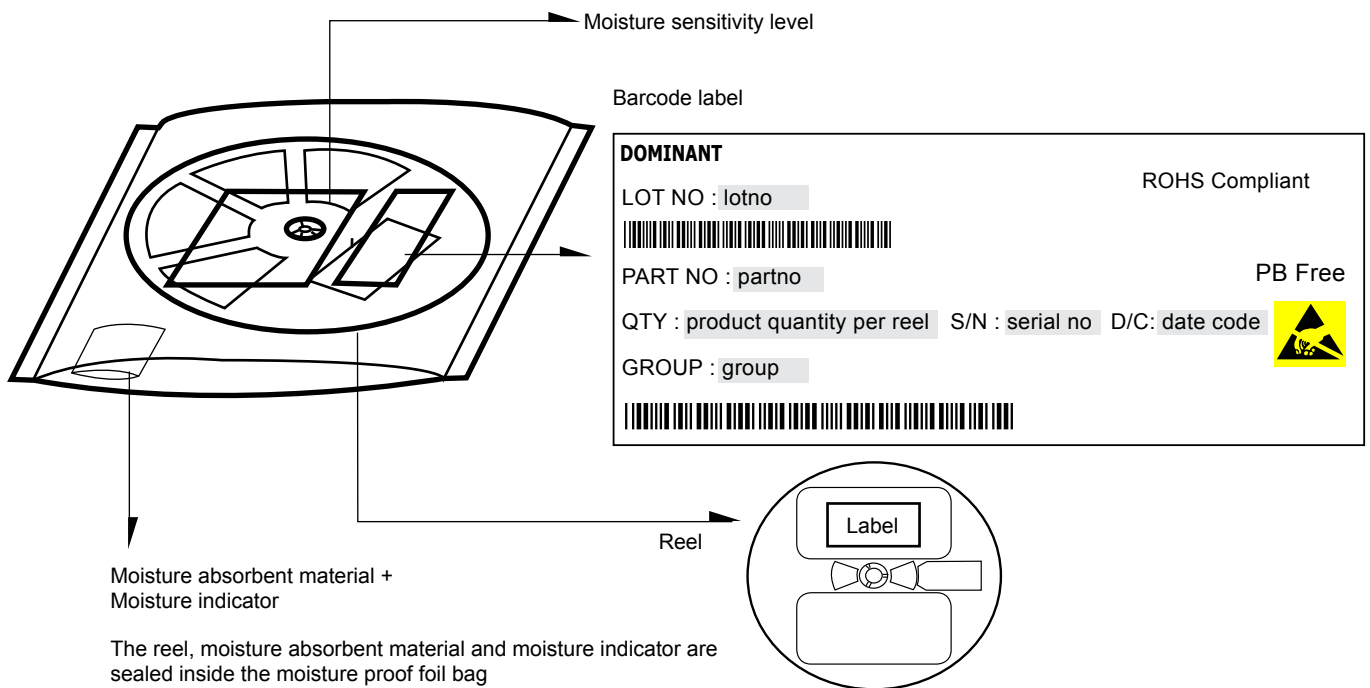
480 mm min. for $\varnothing 180$ reel.
960 mm min. for $\varnothing 330$ reel.



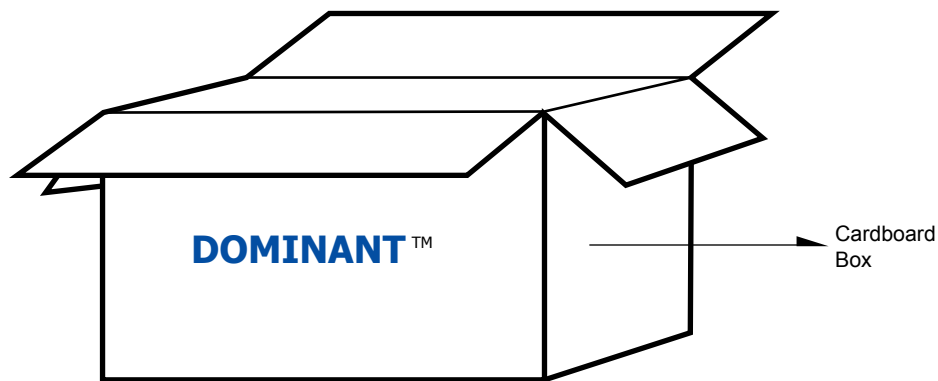
Packaging Specification



Packaging Specification



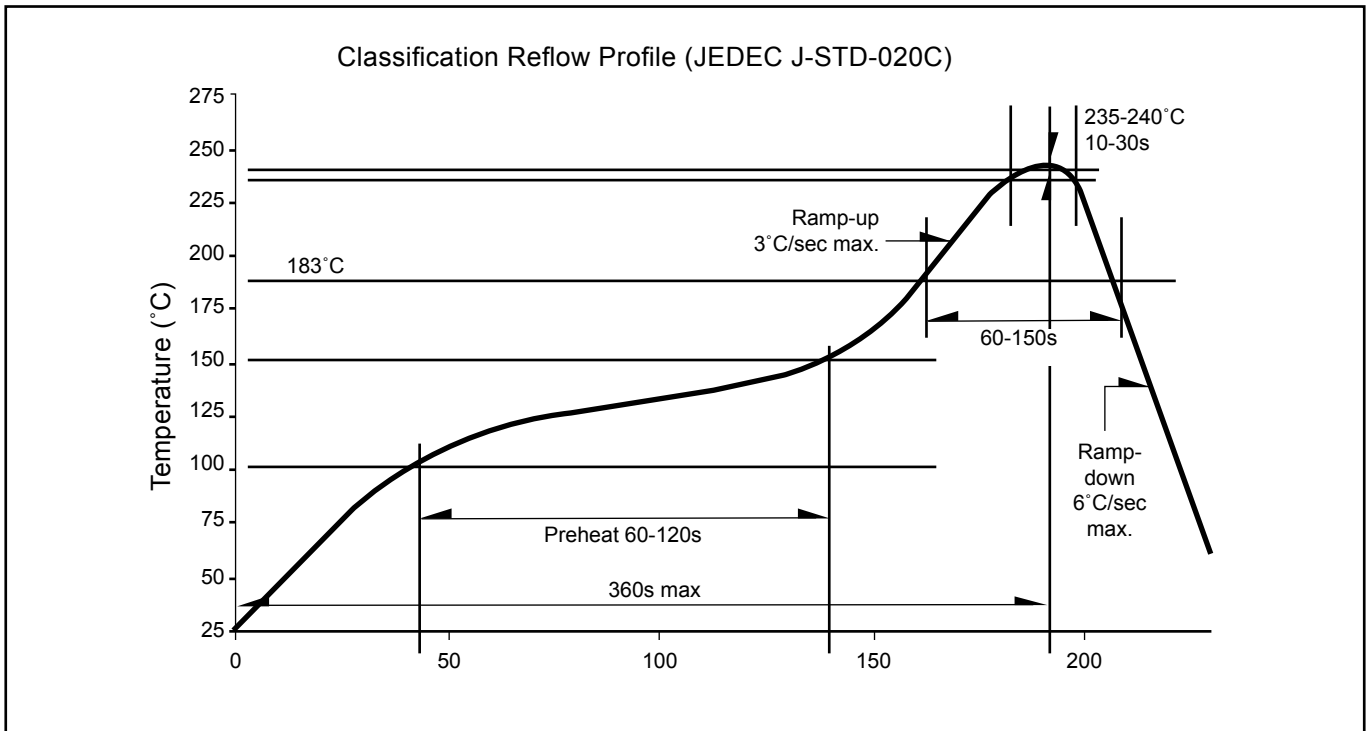
	Average 1pc DomiLED/Multi DomiLED	1 completed bag (2000pcs)
Weight (gram)	0.034	190 ± 10



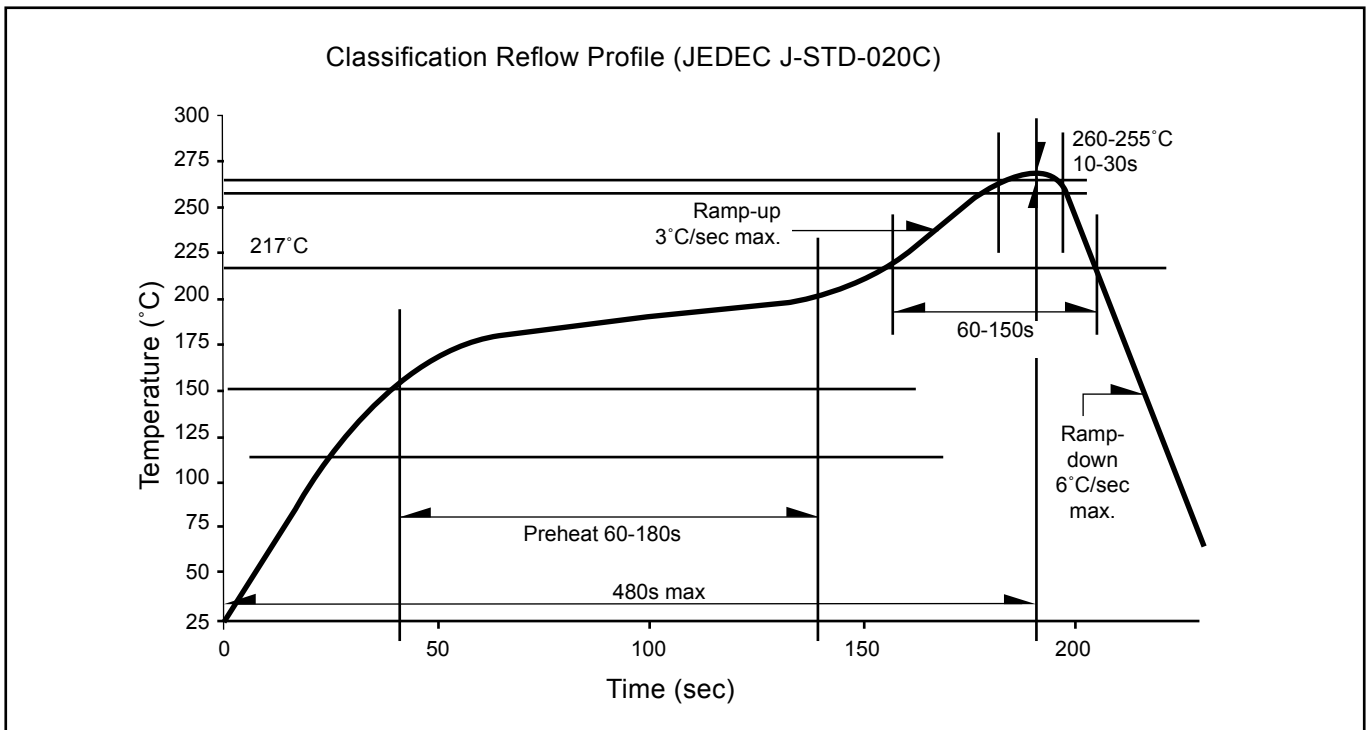
For Multi DomiLED™

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
3	Add new partno: DMRT-CJS-RS+RS-1	13 May 2008
2	Add new partno: DMGY-CJS-PQ+RS-1	23 Oct 2008
2	Add new partno: DMRG-CJS-RS+QR-1	16 Jan 2009
2	Add new partno: DMSY-CJS-QR+ST-1	28 Sep 2009
2	Add new partno: DMSB-CJS-PQ+RS-1	05 Nov 2009
-	Update company name	04 May 2010
2	Add new partno: DMYT-CJS-RS+RS-1	29 Jul 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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