DOMINANT™ Semiconductors
Innovating Illumination

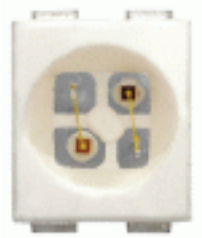
DATA SHEET:

Multi DomiLED™

Bi-Color

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.
> Industry: white goods (eg: Oven, microwave, etc.).



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Part Ordering Number	Color, λ_{dom} (nm) Chip #1	Chip #2	Viewing Angle°	Luminous Intensity @ IF = 20mA IV (mcd) Chip #1	Chip #2
DMSG-CJS-PQ+PQ-1	Super-red,	Green,	**120**	**45.0 - 112.5**	**45.0 - 112.5**
• DMSG-CJS-PP	632nm	570nm		45.0 - 71.5	45.0 - 71.5
• DMSG-CJS-PQ				45.0 - 71.5	71.5 - 112.5
• DMSG-CJS-QP				71.5 - 112.5	45.0 - 71.5
• DMSG-CJS-QQ				71.5 - 112.5	71.5 - 112.5
DMSG-CJS-QR+PQ-1	Super-red,	Green,	**120**	**71.5 - 180.0**	**45.0 - 112.5**
• DMSG-CJS-QP	632nm	570nm		71.5 - 112.5	45.0 - 71.5
• DMSG-CJS-QQ				71.5 - 112.5	71.5 - 112.5
• DMSG-CJS-RP				112.5 - 180.0	45.0 - 71.5
• DMSG-CJS-RQ				112.5 - 180.0	71.5 - 112.5
DMST-CJS-PQ+RS-1	Super-red,	True Green,	**120**	**45.0 - 180.0**	**112.5 - 285.0**
• DMST-CJS-PR	632nm	525nm		45.0 - 71.5	112.5 - 180.0
• DMST-CJS-PS				45.0 - 71.5	180.0 - 285.0
• DMST-CJS-QR				71.5 - 112.5	112.5 - 180.0
• DMST-CJS-QS				71.5 - 112.5	180.0 - 285.0
DMRG-SJS-RS+QR-1	Red,	Green,	**120**	**112.5 - 285.0**	**71.5 - 180.0**
• DMRG-SJS-RQ	625nm	570nm		112.5 - 180.0	71.5 - 112.5
• DMRG-SJS-RR				112.5 - 180.0	112.5 - 180.0
• DMRG-SJS-SQ				180.0 - 285.0	71.5 - 112.5
• DMRG-SJS-SR				180.0 - 285.0	112.5 - 180.0
DMAY-SJS-ST+ST-1	Amber,	Yellow,	**120**	**180.0 - 450.0**	**180.0 - 450.0**
• DMAY-SJS-SS	615nm	587nm		180.0 - 285.0	180.0 - 285.0
• DMAY-SJS-ST				180.0 - 285.0	285.0 - 450.0
• DMAY-SJS-TS				285.0 - 450.0	180.0 - 285.0
• DMAY-SJS-TT				285.0 - 450.0	285.0 - 450.0
DMYB-CJS-RS+PQ-1	Yellow,	Blue,	**120**	**112.5 - 285.0**	**45.0 - 112.5**
• DMYB-CJS-RP	587nm	470nm		112.5 - 180.0	45.0 - 71.5
• DMYB-CJS-RQ				112.5 - 180.0	71.5 - 112.5
• DMYB-CJS-SP				180.0 - 285.0	45.0 - 71.5
• DMYB-CJS-SQ				180.0 - 285.0	71.5 - 112.5

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.

Wavelength Grouping

Color	Group	Wavelength distribution (nm)
Super-red	Full	625 - 640
Red	Full	620 - 630
Amber	Full	610 - 621
	W	610 - 615
	X	615 - 621
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 - 480
	W	464 - 468
	X	468 - 472
	Y	472 - 476

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

Electrical Characteristics at Ta=25˚C

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

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

Vf Binning (Optional)

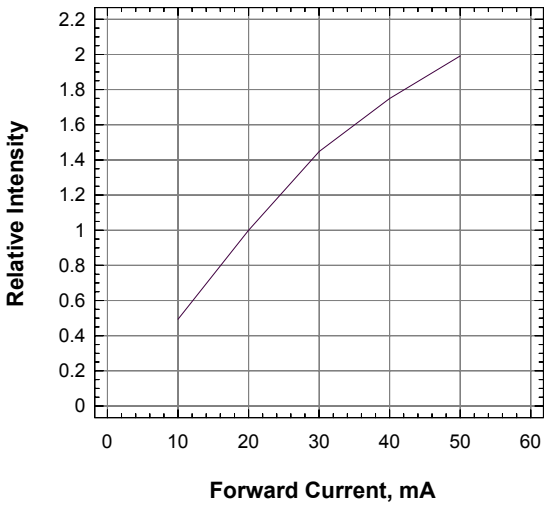
Vf Bin @ 20mA	Red, Amber,Yellow, Green; AlInGaP (V)	True Green, Blue; InGaN (V)
00	1.25 ... 1.55	3.05 ... 3.35
01	1.55 … 1.85	3.35 … 3.65
02	1.85 … 2.15	3.65 … 3.95
03	2.15 … 2.45	3.95 … 4.25
04	2.45 ... 2.75	4.25 ...4.55

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

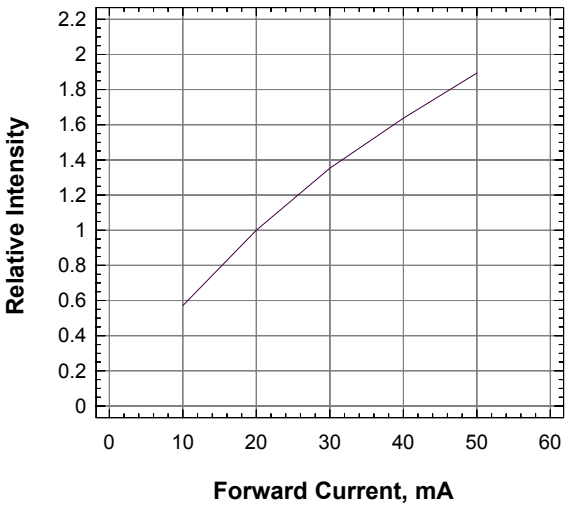
Absolute Maximum Ratings

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

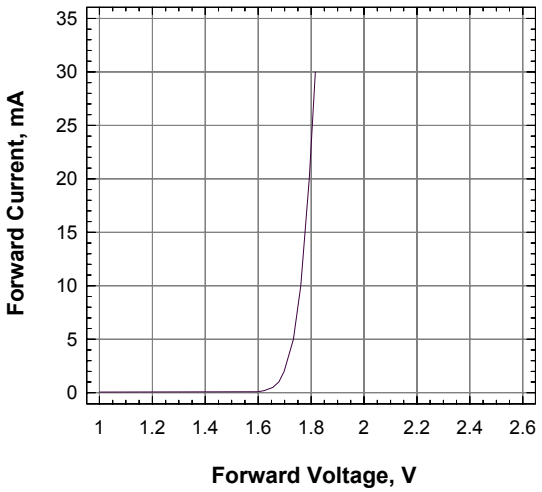
Relative Intensity Vs Forward Current (AS AlInGaP)



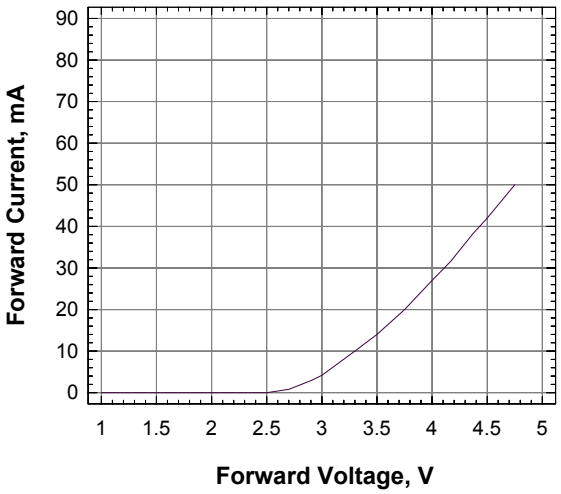
Relative Intensity Vs Forward Current (InGaN)



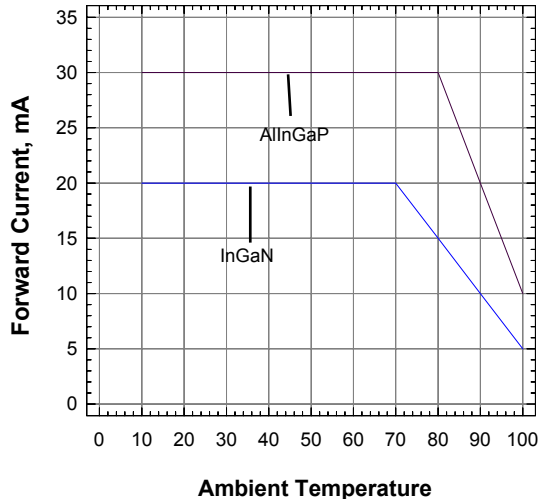
Forward Current Vs Forward Voltage (AS AlInGaP)



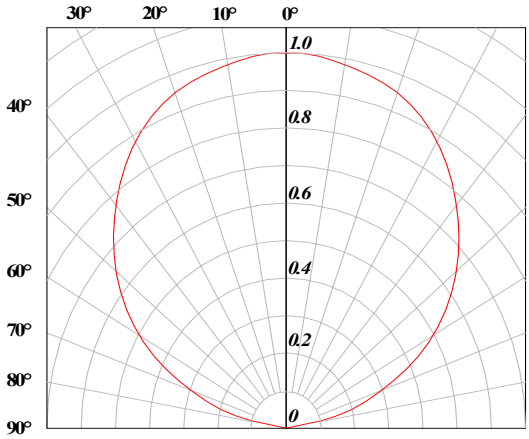
Forward Current Vs Forward Voltage (InGaN)



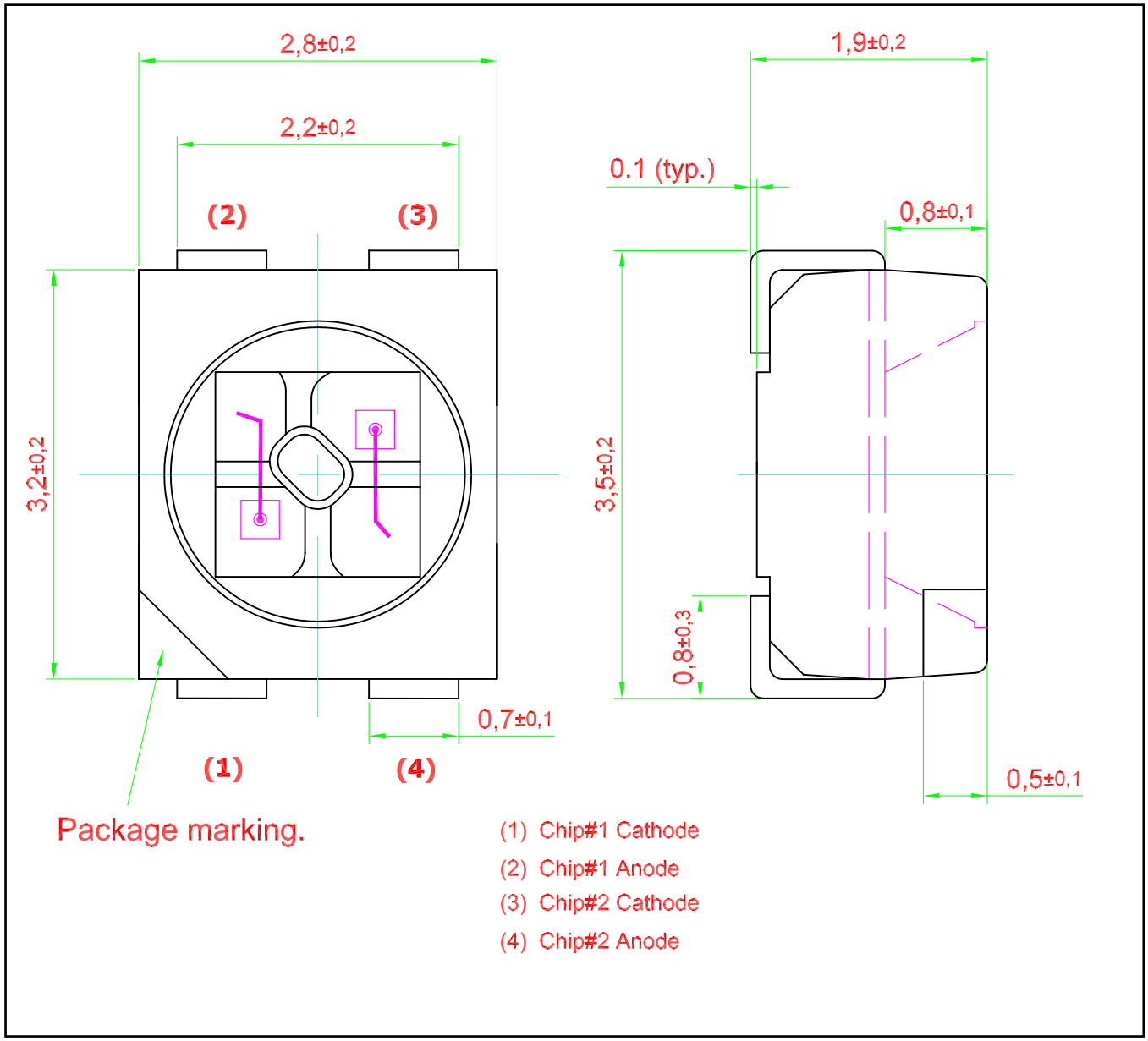
Maximum Current Vs Temperature



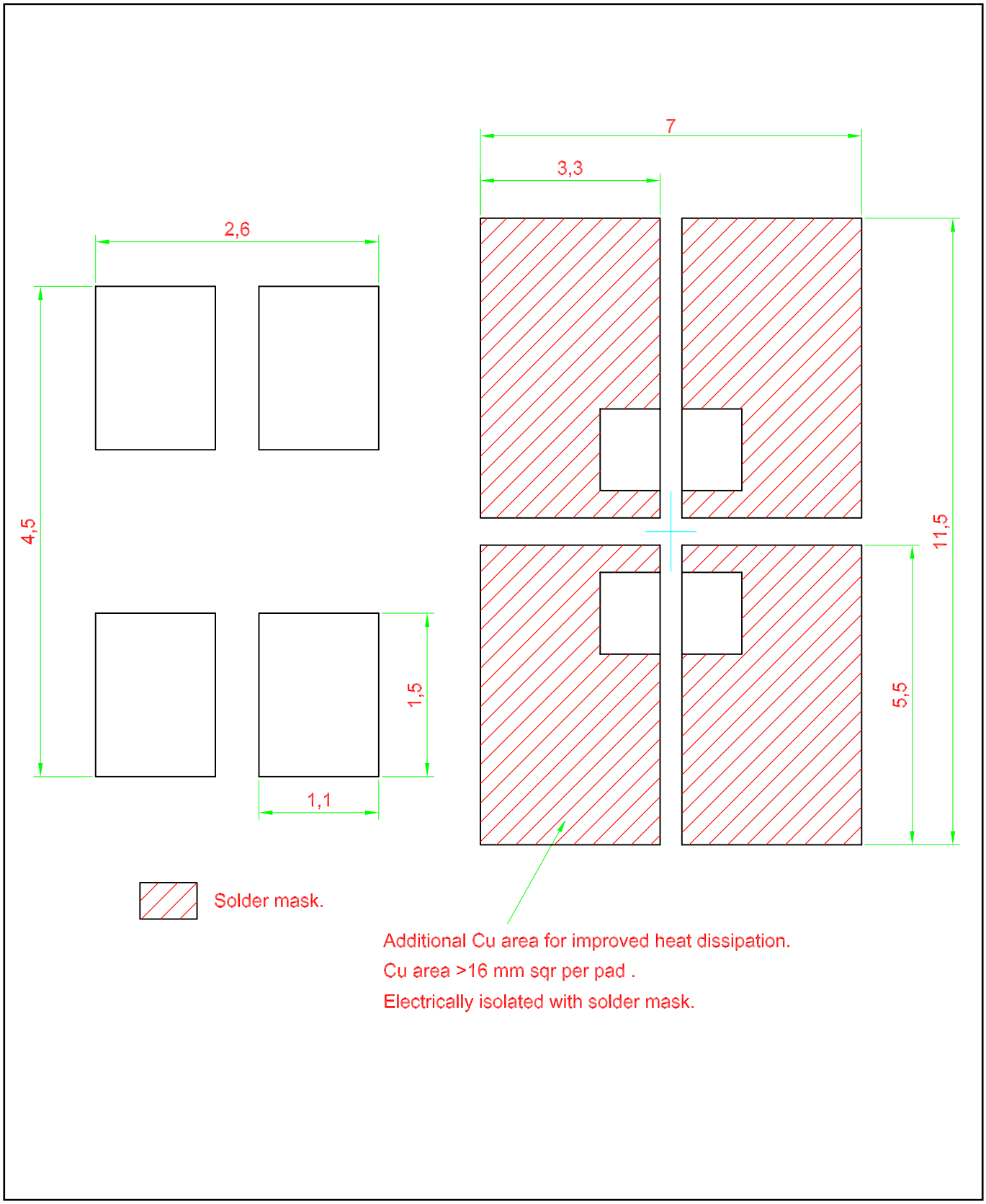
Radiation Pattern



Multi DomiLED™ • Bi-Color Package Outlines

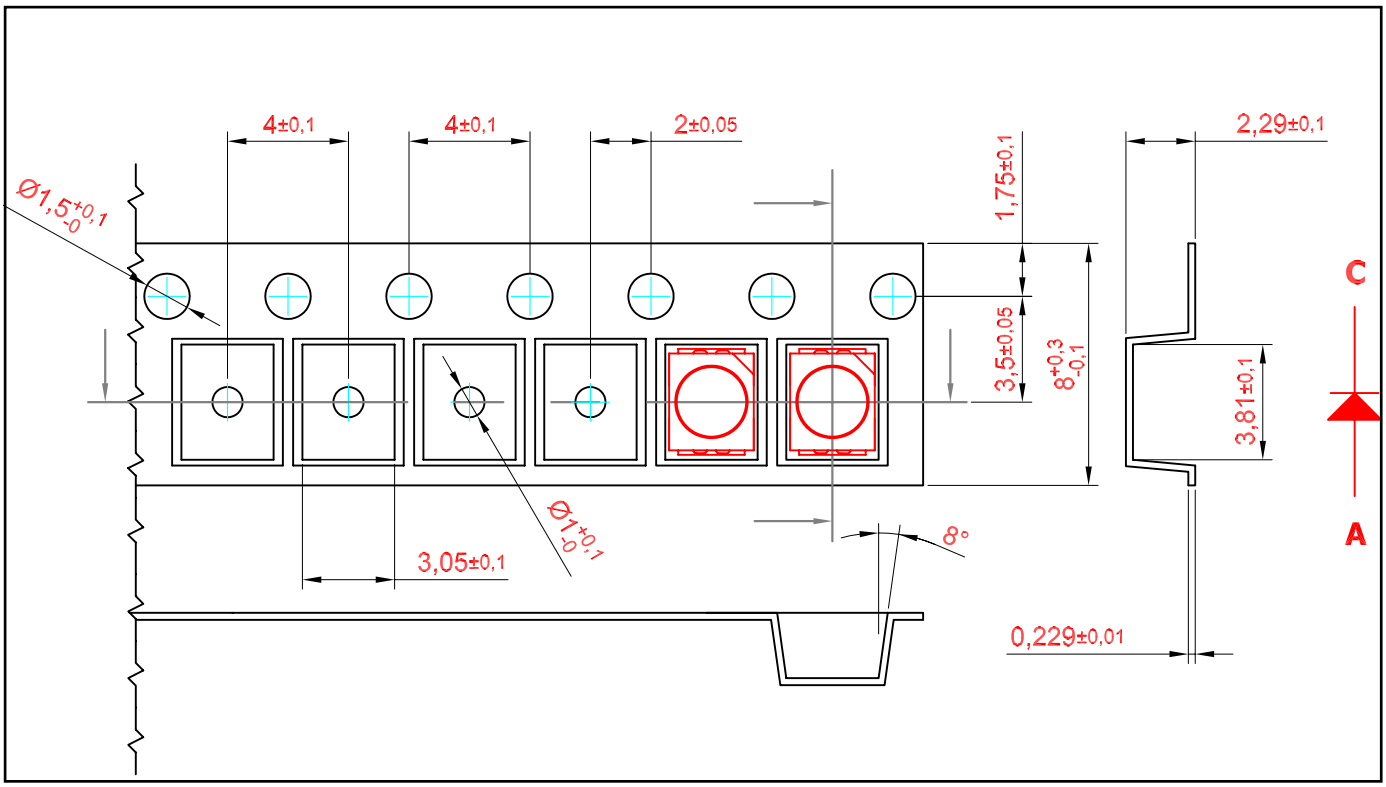


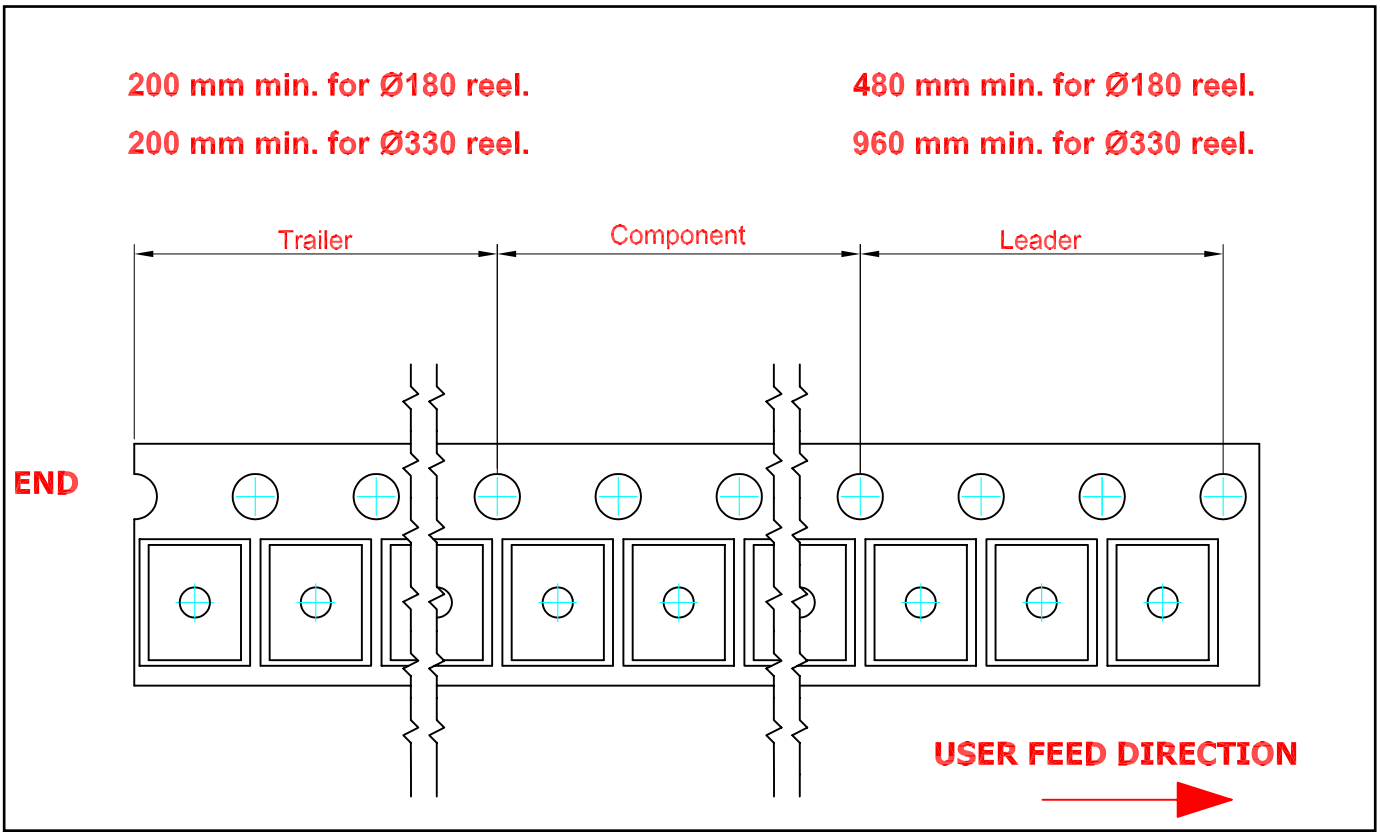
Recommended Solder Pad



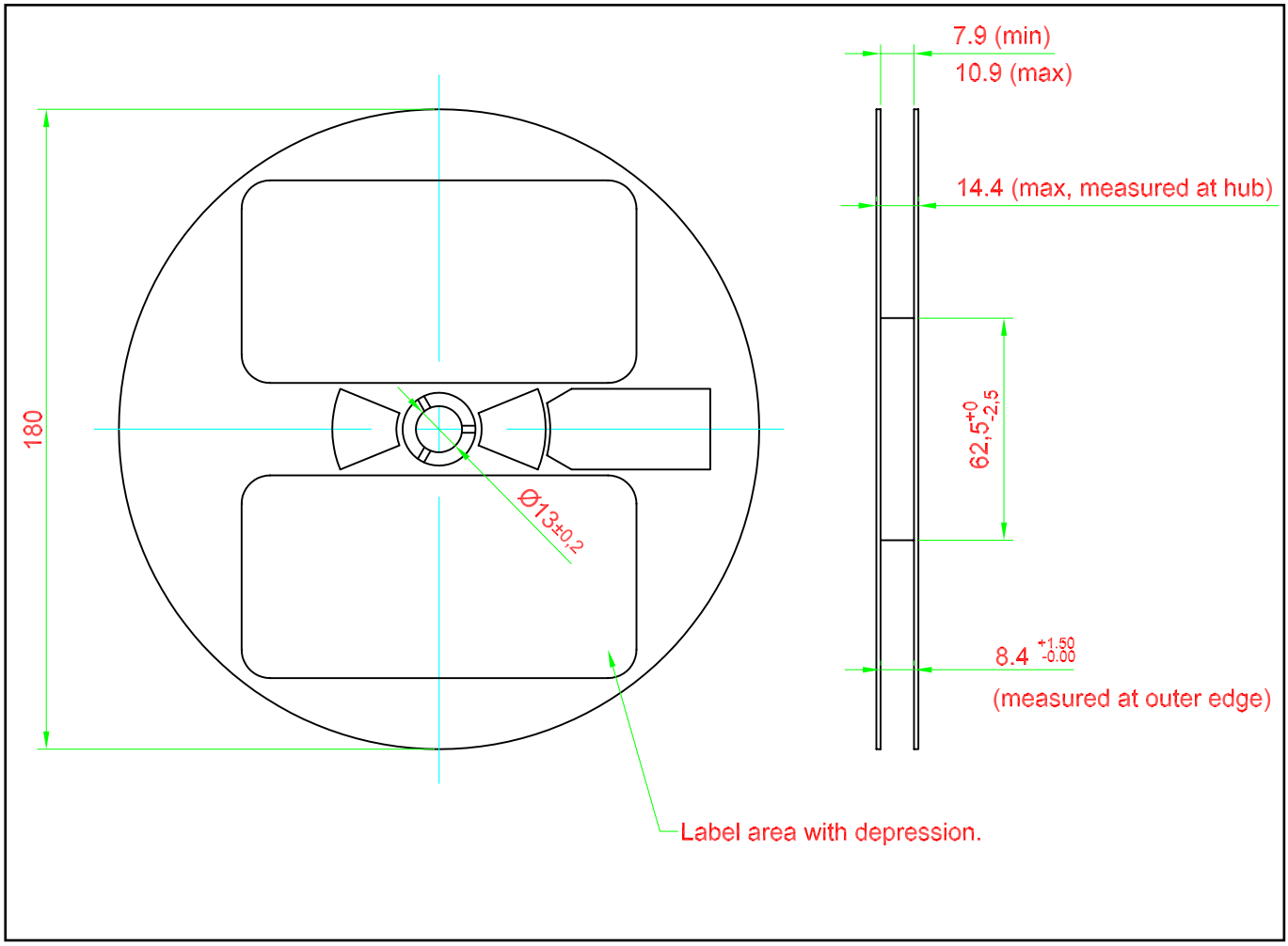
Taping and orientation

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

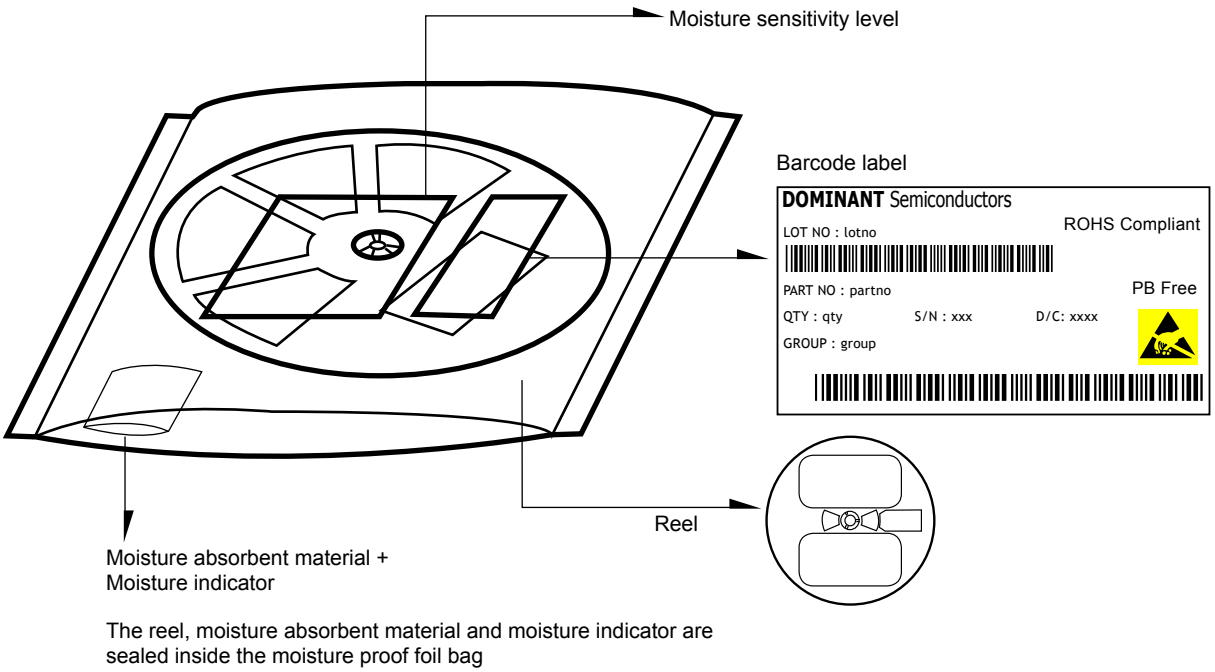




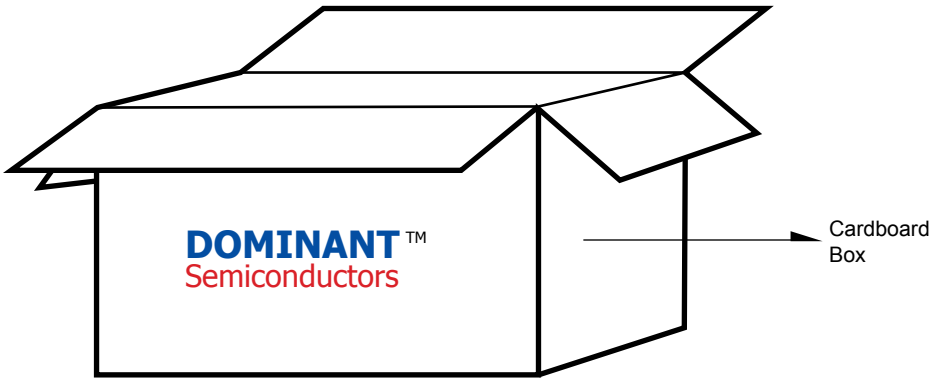
Packaging Specification



Packaging Specification



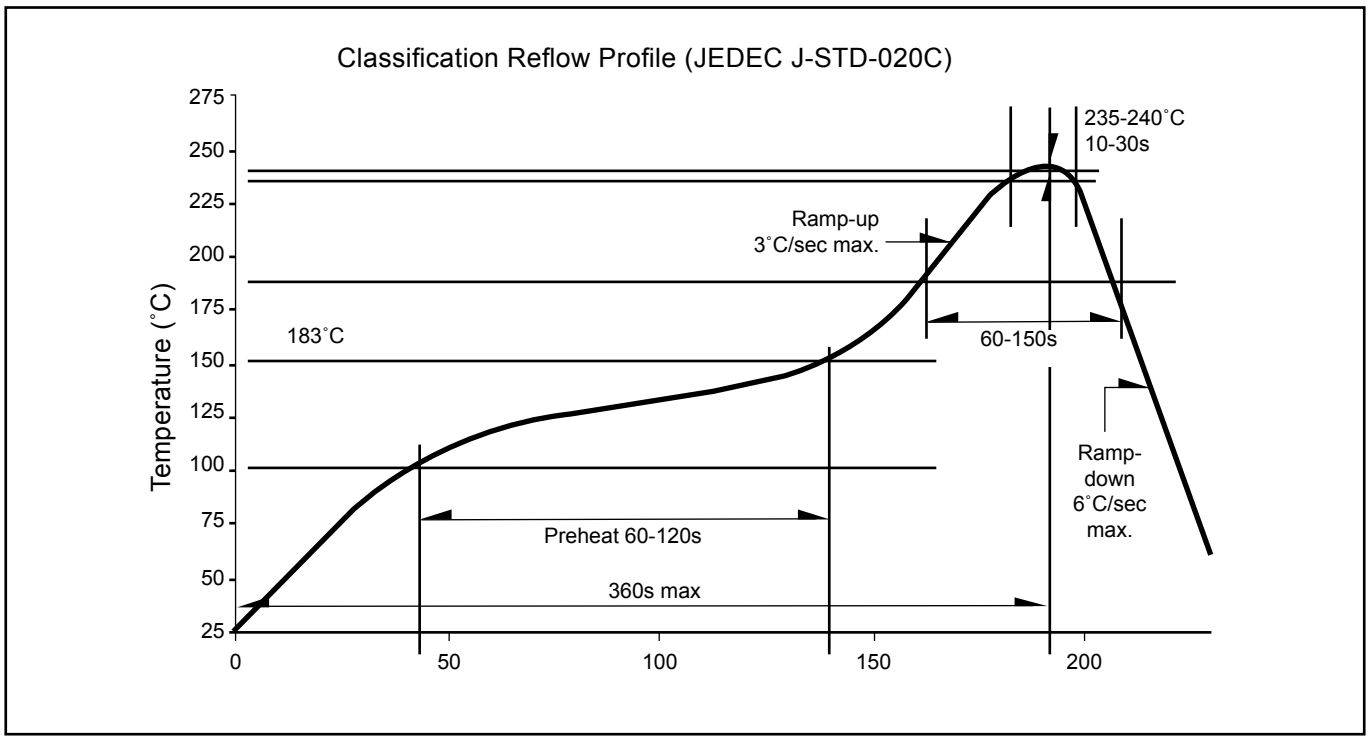
	Average 1pc DomiLED/Multi DomiLED	1 completed bag (2000pcs)
Weight (gram)	**0.034**	**190 ± 10**



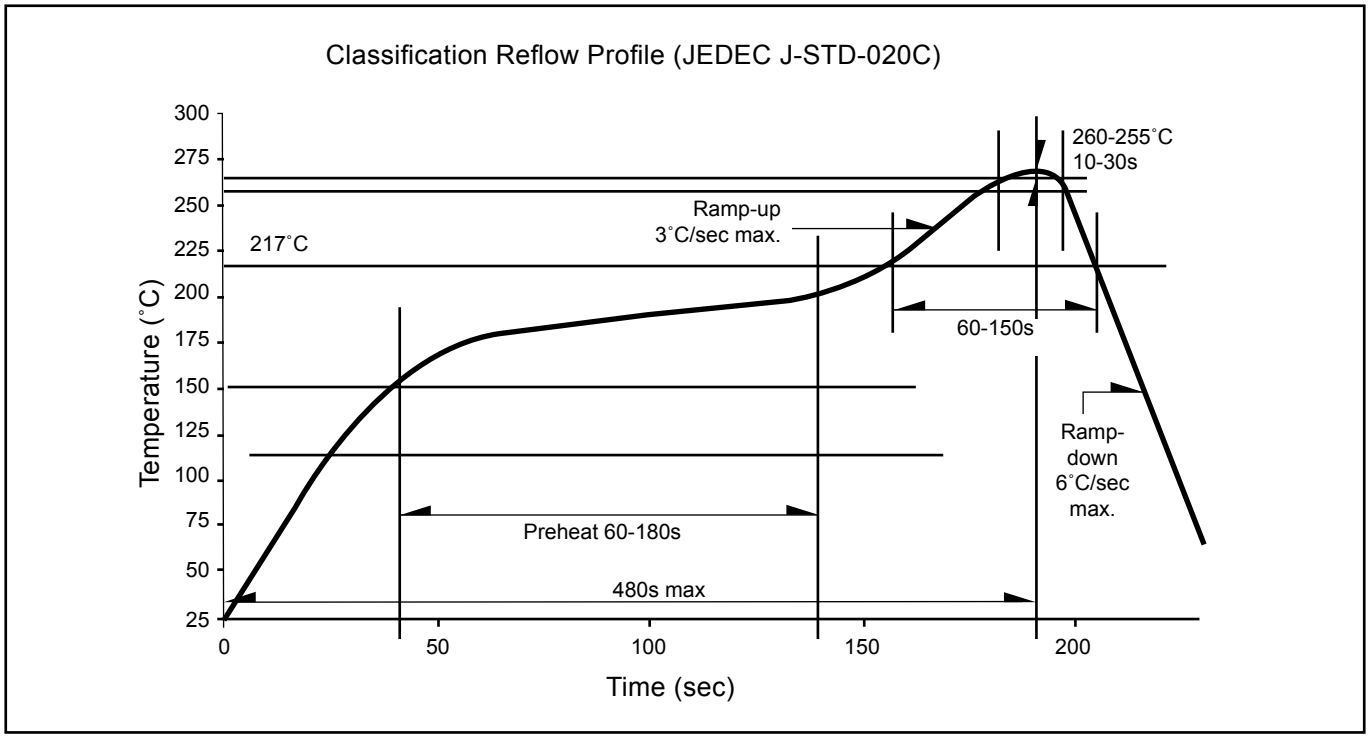
For Multi DomiLED™

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	50 reels MAX	110,000 MAX

Recommended Sn-Pb IR-Reflow Soldering Profile



Recommended Pb-free Soldering Profile



Revision History

Page	Subjects	Date of Modification
-	New Format	29 Sept 2005
2	Add new part no: DMAY-SJS-ST+ST-1	14 Feb 2006
2	Add new part no: DMSG-CJS-PQ+PQ-1	15 Jun 2007
2	Add part no: DMST-CJS-PQ+RS-1	19 Jul 2007

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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