

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 both IR reflow soldering.
- > Environmental friendly; RoHS compliance.

Applications:

- > Automotive: interior applications, eg: switches, telematics, climate control system, dashboard, etc.
- > Signage: full colour display video notice board, signage, special effect lighting.
- > Industrial: white goods (eg: Oven, microwave, etc.), light bar, illuminated advertising.



Optical Characteristics at Tj=25°C

Part Ordering Number	Color	Viewing Angle°	Luminous Intensity @ If = 20mA IV (mcd)		
			Min.	Typ.	Max.
DRS-MJS-UV1-1	Super Red, 632nm	120	450.0	675.0	900.0
DRR-MJS-U2V-1	Red, 625nm	120	560.0	900.0	1125.0
DRA-MJS-VW1-1	Amber, 615nm	120	715.0	1125.0	1400.0
DRO-MJS-VW1-1	Orange, 605nm	120	715.0	1125.0	1400.0
DRY-MJS-VW1-1	Yellow, 587nm	120	715.0	1125.0	1400.0

NOTE

1. All part number above comes in a quantity of 2000 units per reel.
2. Luminous intensity is measured with an accuracy of $\pm 11\%$.
3. Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each reel.
4. 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
	Min. (V)	Typ. (V)	Max. (V)	Min. (V)
DRx-MJS	1.8	2.1	2.6	12

Forward voltages are measure using a current pulse of 1 ms and with an accuracy of $\pm 0.1V$.

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	50	mA
Peak pulse current; (tp $\leq$ 10 μ s, Duty cycle = 0.10)	100	mA
Reverse voltage	12	V
ESD threshold (HBM)	2	kV
LED junction temperature	120	°C
Operating temperature	-40 ... +100	°C
Storage temperature	-40 ... +100	°C
Power dissipation (at room temperature)	140	mW
Thermal resistance		
- Junction / ambient, Rth JA	360	K/W
- Junction / solder point, Rth JS	150	K/W
(Mounting on FR4 PCB, pad size $\geq$ 16 mm ² per pad)		

Wavelength Grouping at Tj=25°C

Color	Group	Wavelength distribution (nm)
DRS; Super Red	Full	625 - 640
DRR; Red	Full	620 - 630
DRA; Amber	Full	610 - 621
	W	610 - 615
	X	615 - 621
DRO; Orange	Full	600 - 612
	W	600 - 603
	X	603 - 606
	Y	606 - 609
	Z	609 - 612
DRY; Yellow	Full	582 - 594
	W	582 - 585
	X	585 - 588
	Y	588 - 591
	Z	591 - 594

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

Luminous Intensity Group at Tj=25°C

Brightness Group	Luminous Intensity IV (mcd)
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

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

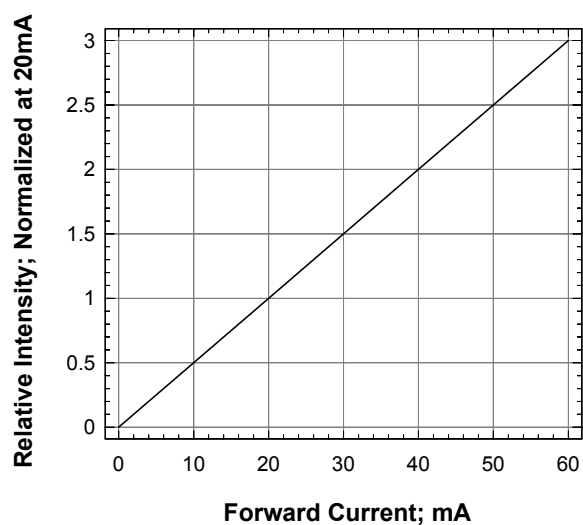
Vf Bining (Optional)

Vf @ If = 20mA	
V1	1.80 ... 1.95
V2	1.95 ... 2.10
V3	2.10 ... 2.25
V4	2.25 ... 2.40
V5	2.40 ... 2.55
V6	2.55 ... 2.70

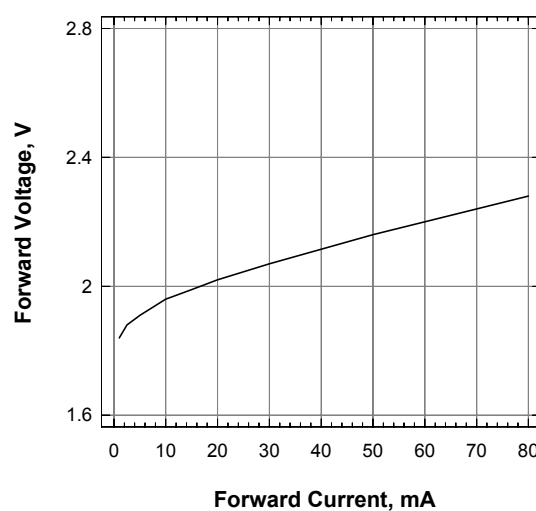
Forward voltage, Vf is measured with an accuracy of $\pm 0.1V$.

Please consult sales and marketing to incorporate special part number to incorporate Vf binning.

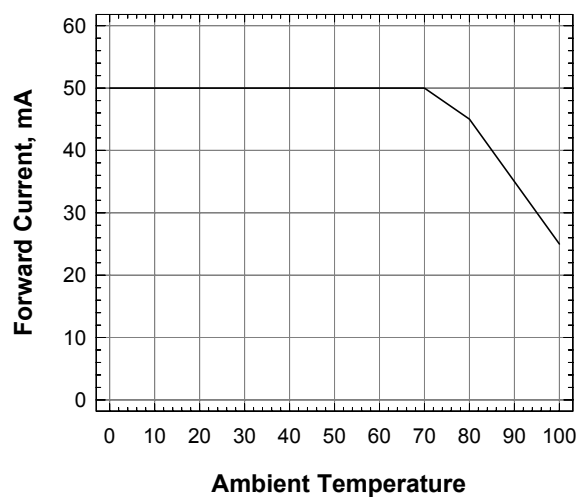
Relative Intensity Vs Forward Current



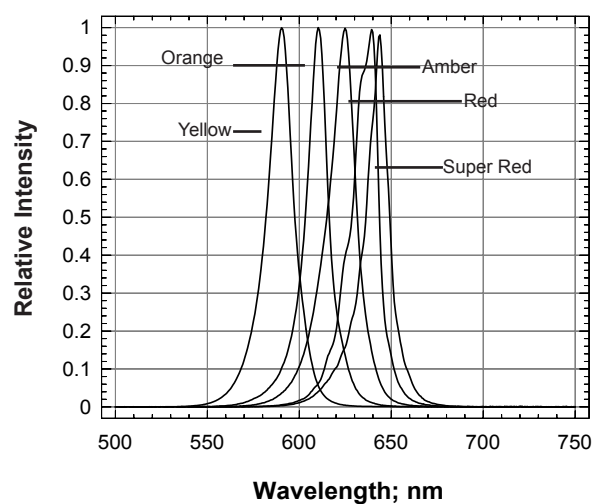
Forward Voltage Vs Forward Current



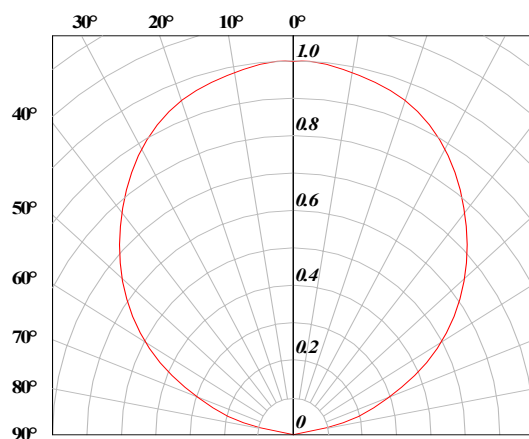
Maximum Current Vs Ambient Temperature



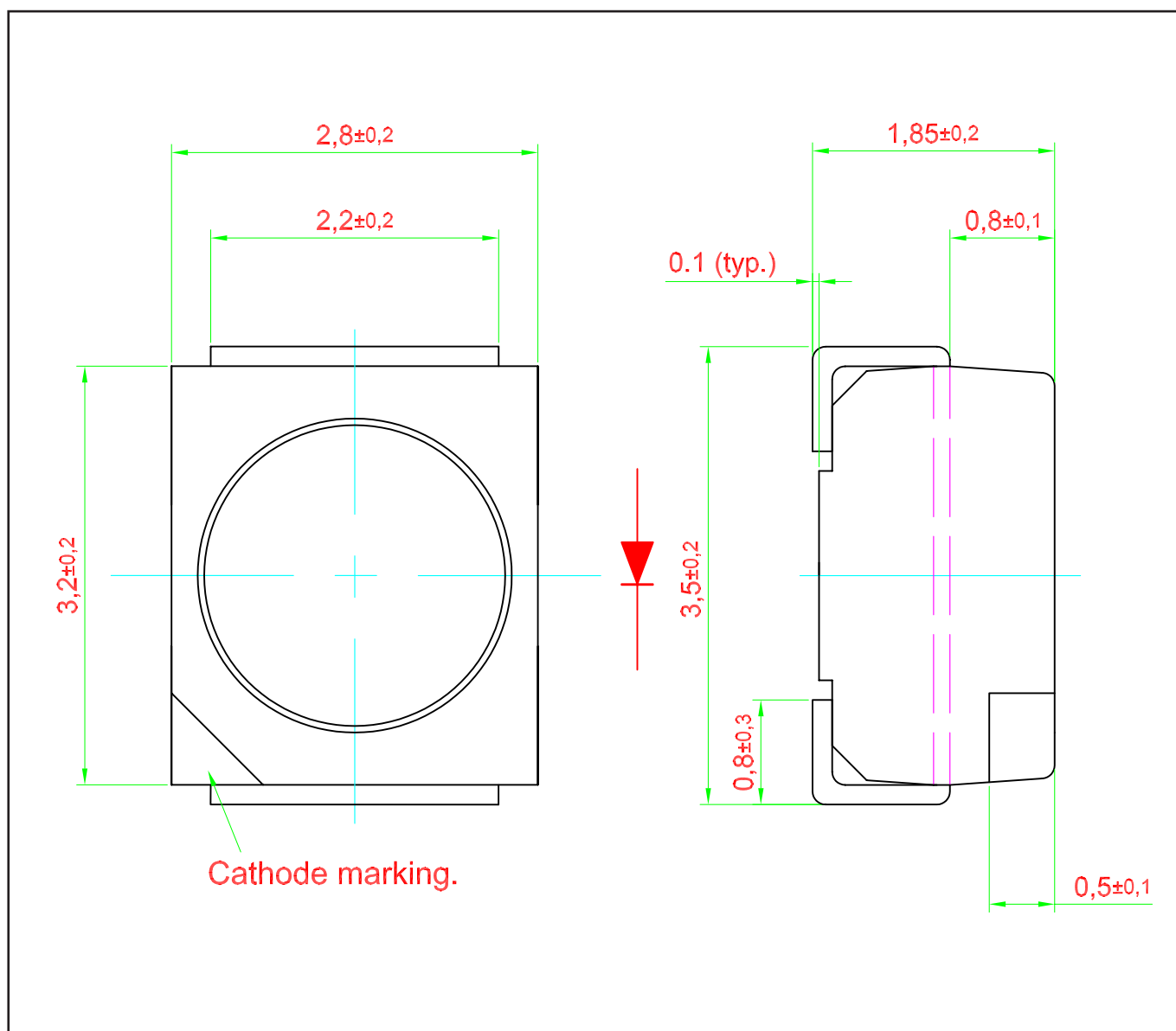
Relative Intensity Vs Wavelength



Radiation Pattern



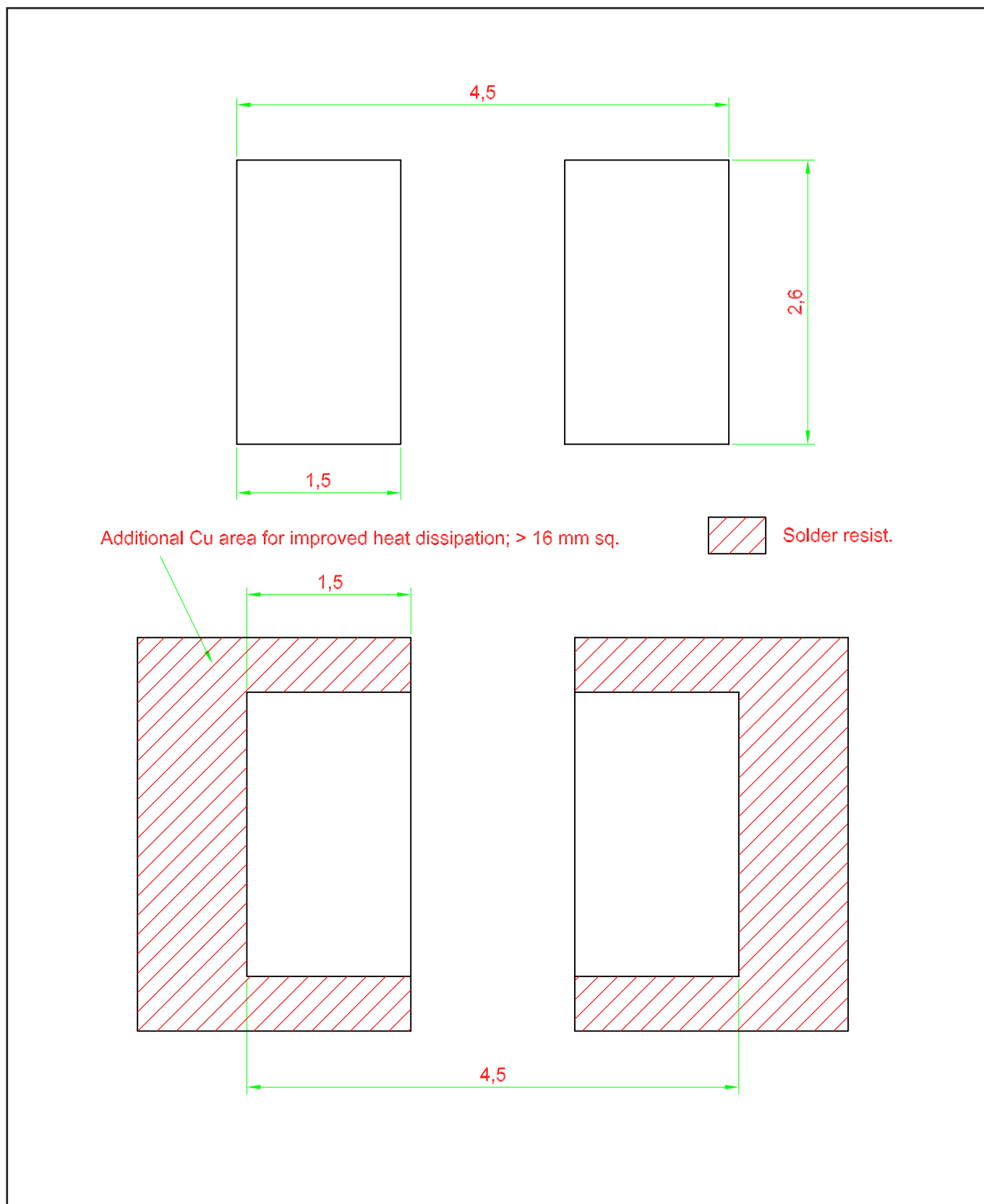
DomiLED™ • AlInGaP : DRx-MJS Package Outlines



Material

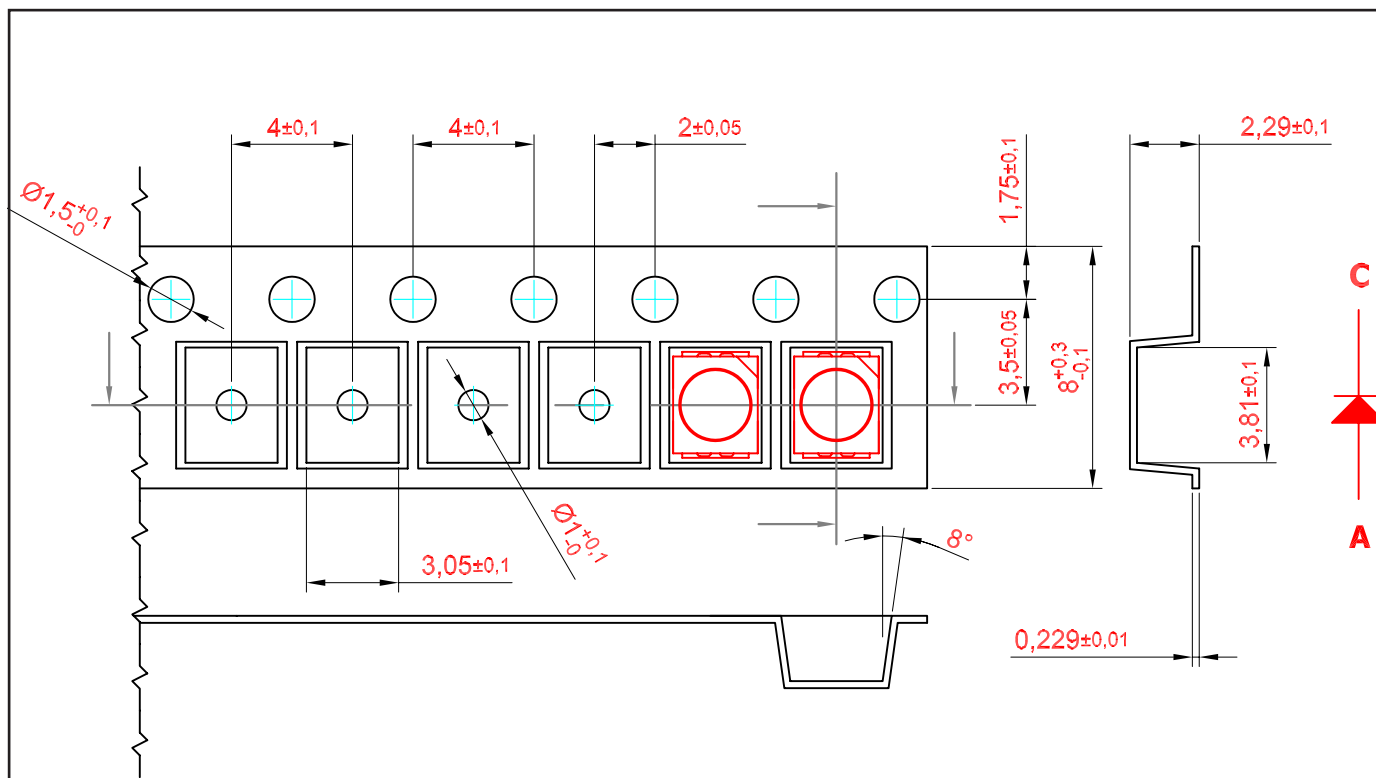
Material	
Lead-frame	Cu Alloy With Ag Plating
Package	High Temperature Resistant Plastic, PPA
Encapsulant	Epoxy
Soldering Leads	Sn-Sn Plating

Recommended Solder Pad



Taping and orientation

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

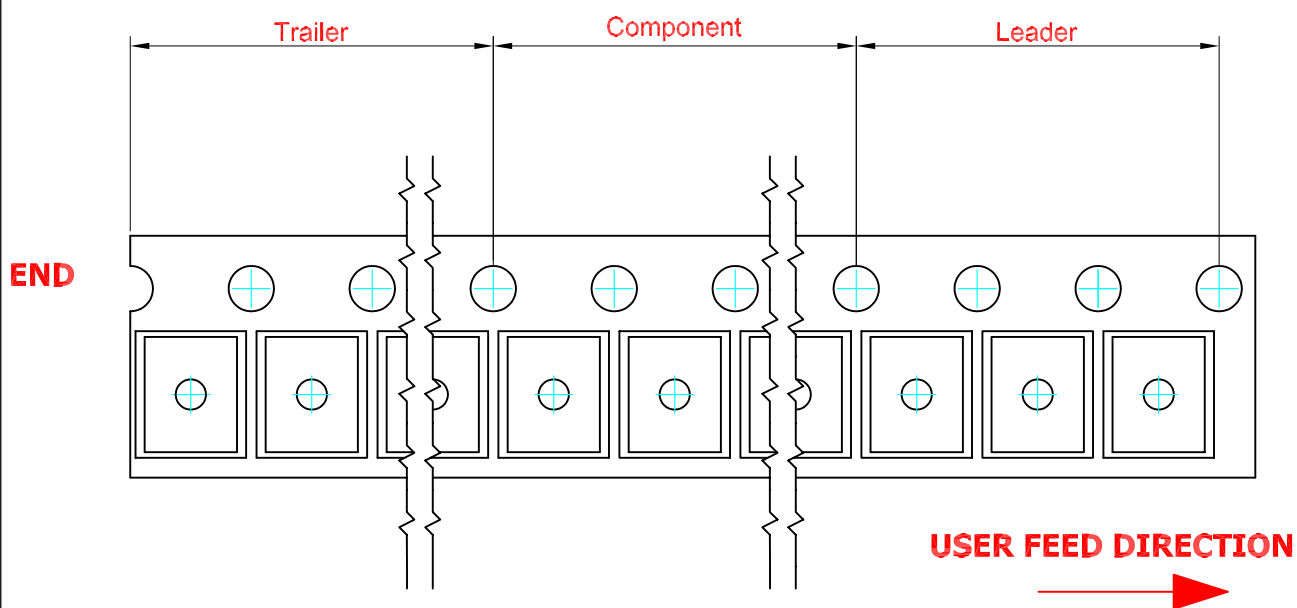


200 mm min. for $\varnothing 180$ reel.

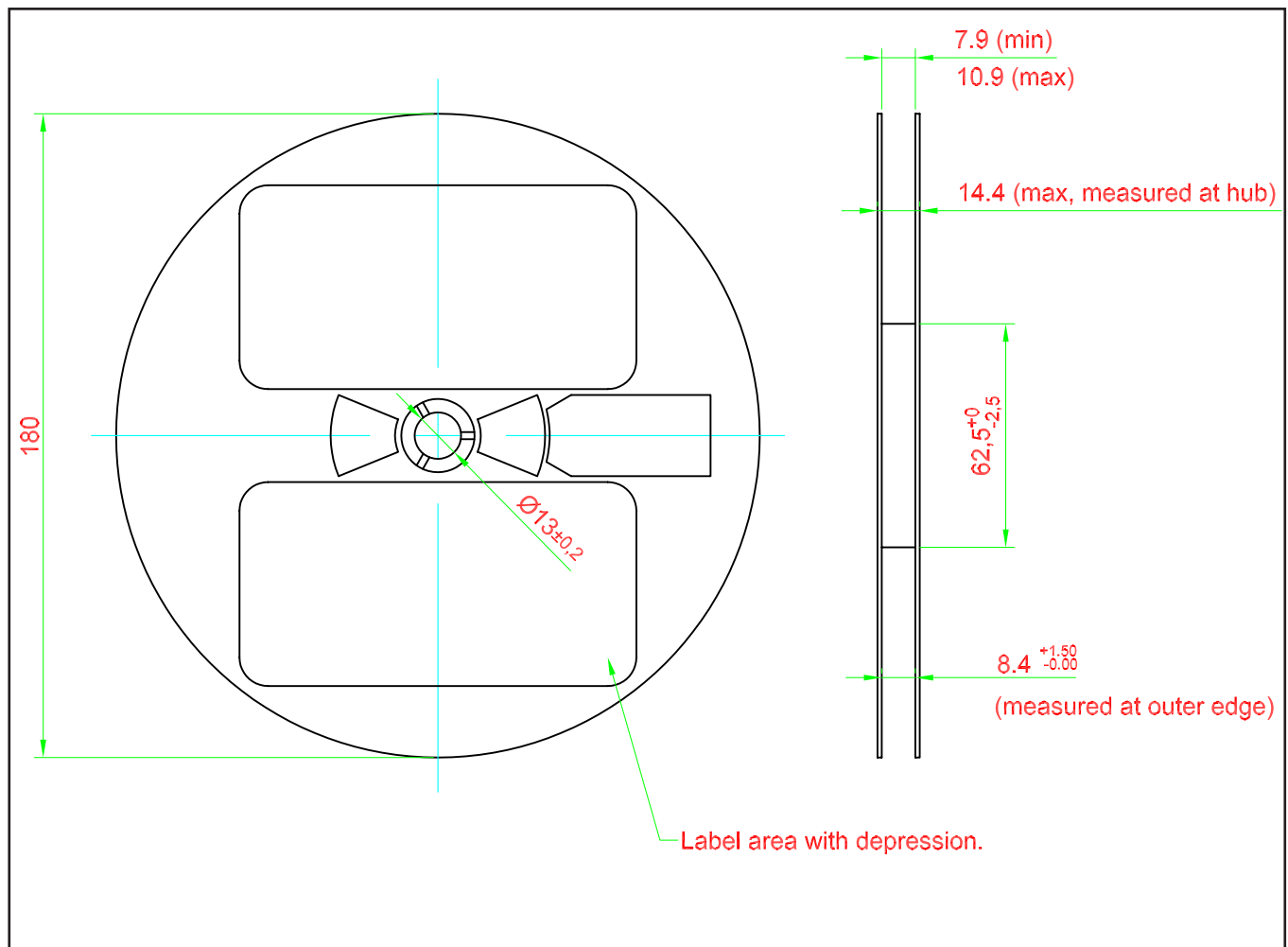
480 mm min. for $\varnothing 180$ reel.

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

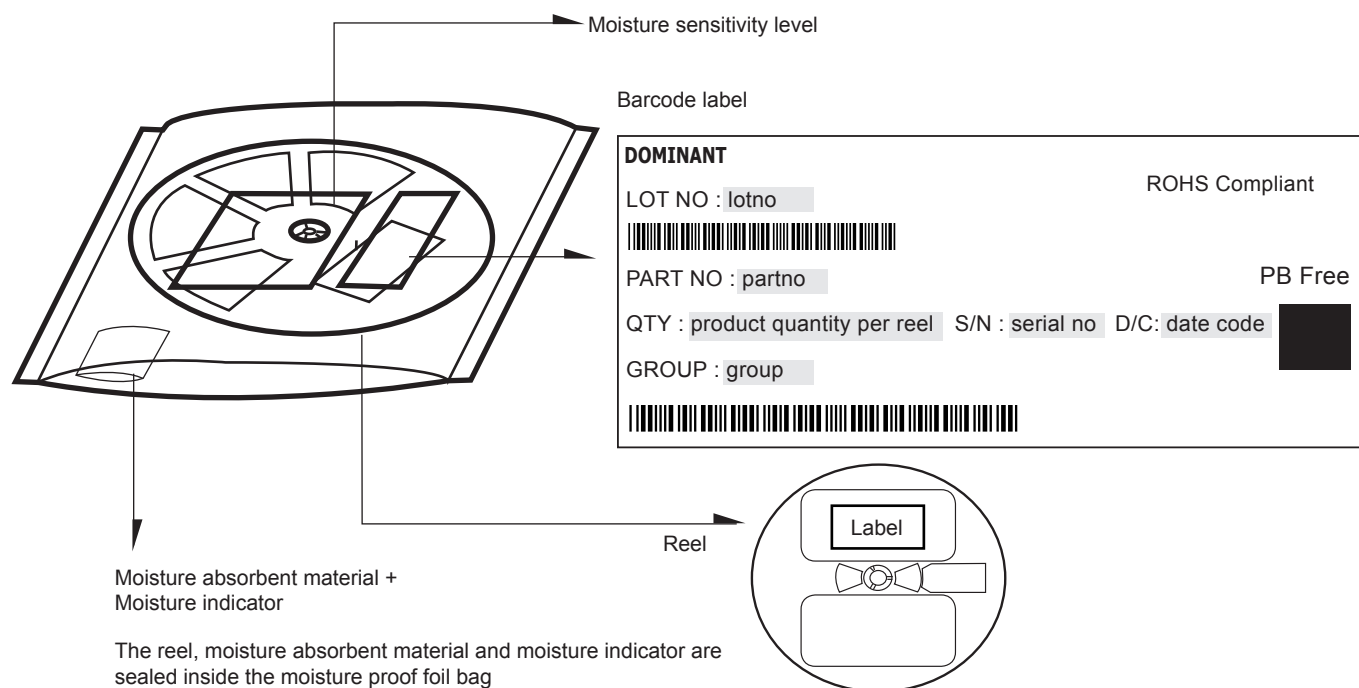
960 mm min. for $\varnothing 330$ reel.



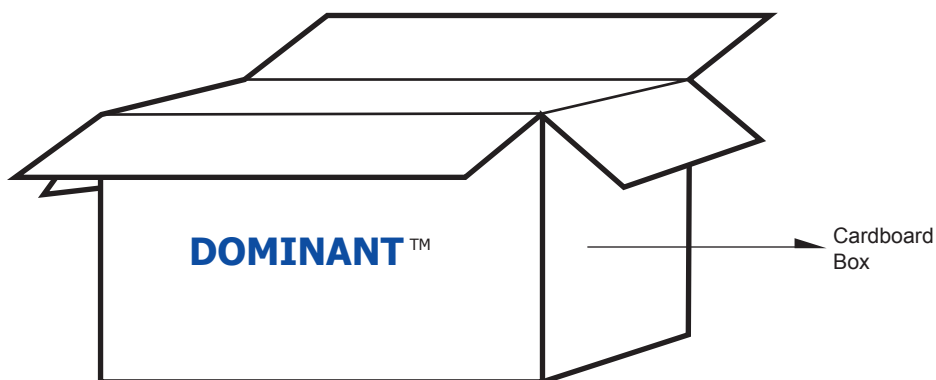
Packaging Specification



Packaging Specification



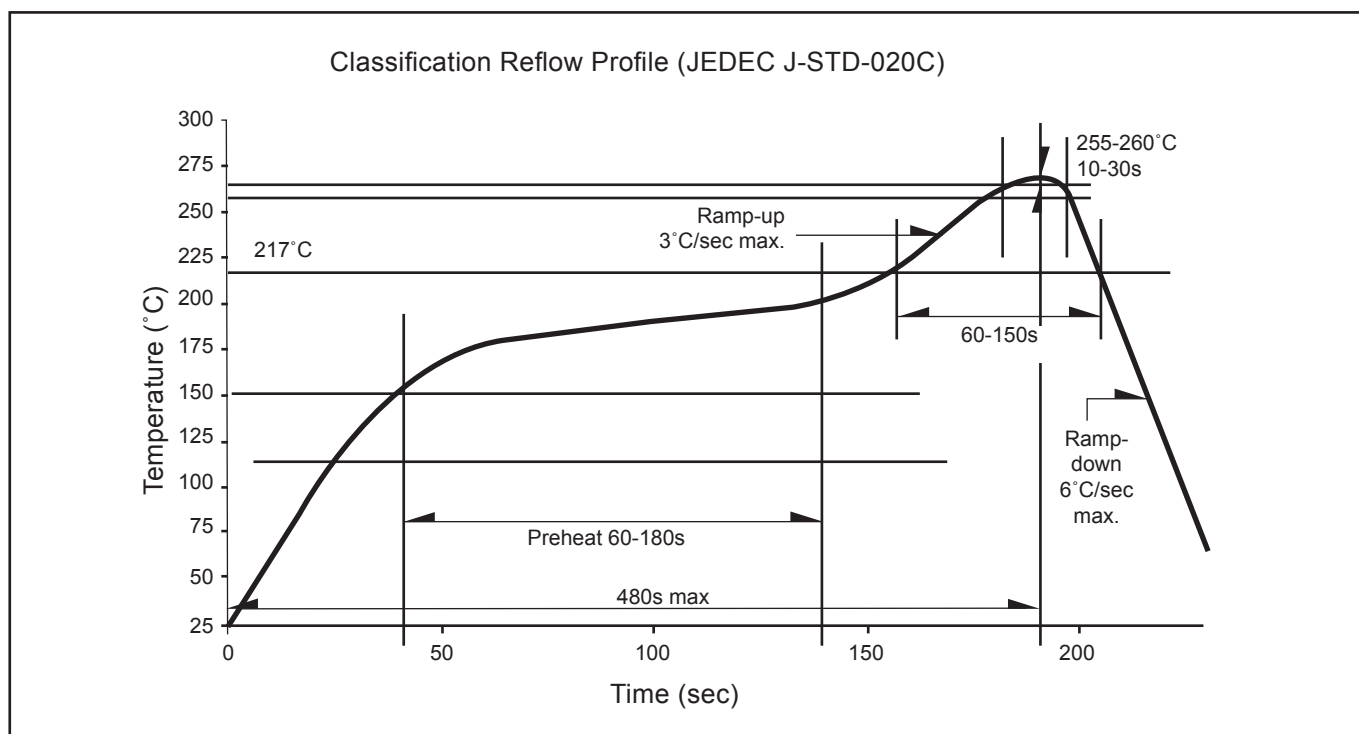
	Average 1pc DomiLED/Multi DomiLED	1 completed bag (2000pcs)
Weight (gram)	0.034	190 ± 10



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 Pb-free Soldering Profile



Revision History

Page	Subjects	Date of Modification
-	Initial Release	04 Aug 2009
2	Update on Power Dissipation --> 140mW	08 Dec 2009
-	Update company name	31 May 2010
2	Add partno: DRS-MJS-UV1-1	18 Nov 2010
2	Add partno: DRO-MJS-VW1-1	24 Feb 2012
4	Add Vf Binning	03 Sep 2012
2	Add Thermal Resistance	26 Apr 2013

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.

DOMINANT Opto Technologies reserves the right to make changes to any products in order to improve reliability, function or design.

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>.

Please contact us for more information:

Head Quarter

DOMINANT Opto Technologies Sdn. Bhd
Lot 6, Batu Berendam, FTZ Phase III, 75350 Melaka, Malaysia.
Tel: +606 283 3566 Fax: +606 283 0566
E-mail: sales@dominant-semi.com

DOMINANT Opto Technologies (Shanghai) Co., Ltd

Rm 305, Hongwell International Plaza No. 1600 Zhong Shan(W) Rd, Xuhui District, 200235 Shanghai, China
Tel: +86 21 5403 5655, Fax: +86 21 5403 6055
E-mail: sales_china@dominant-semi.com

DOMINANT Korea Sales Office

DOMINANT Semiconductors Korea Inc.
6F, Dojin Bldg., 217-3, Seokchon-dong, Songpa-gu, Seoul, 138-845, Korea
Tel: +82-2-425-5203 Fax: +82-2-425-5207
E-mail: sales_korea@dominant-semi.com

DOMINANT Europe Sales Office

DOMINANT Semiconductors Europe GmbH
Raiffeisenstr. 38, 74906 Bad Rappenau Germany
Tel: +49 (0) 7264-89010-0 Fax: +49 (0) 7264-89010-29
E-mail: info@dominant-semi.eu

DOMINANT U.S.A Sales Office

DOMINANT Opto Technologies North America Inc.
25 Rockaway Road, 08833 Lebanon, New Jersey, USA
Tel: +1(908) 439-9930 Cell: +1(908) 343-5810 Fax: +1(908) 439-9929
E-mail: don.wendel@dominant-semi.com

DOMINANT India Sales Office

C-11, Vesanth Business Centre, #86, TTK Road, Alwarpet Chennai - 600 018, India.
Tel: +91-44-42030616 / 516 Fax: +91-44-4920616 Cell: +91-9444 920 537
E-mail: pravat.behera@dominant-semi.com

