

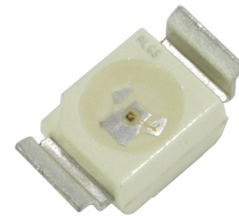
Domiled

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.
- > 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.
- > Compliance to AEC-Q101 Standard.



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	Viewing Angle°	Luminous Intensity @ IF = 20mA IV (mcd) <i>Appx. 1.1</i>		
			Min.	Typ.	Max.
DDH-CRS-PQ2-1	Hyper-red, 640nm	120	45.0	71.5	112.5
● DDH-SRS-QR2-1			71.5	112.5	180.0
DDS-CRS-QR2-1	Super-red, 632nm	120	71.5	112.5	180.0
DDS-CRS-RS1-1			112.5	140.0	224.0
● DDS-SRS-QR2-1			71.5	112.5	180.0
DDR-CRS-Q2R-1	Red, 625nm	120	90.0	135.0	180.0
DDR-CRS-RS2-1			112.5	180.0	285.0
DDR-CRS-ST1-1			180.0	224.0	355.0
● DDR-SRS-RS2-1			112.5	180.0	285.0
DDR-TRS-TU2-1			285.0	285.0	715.0
DDA-CRS-RS2-1	Amber, 615nm	120	112.5	180.0	285.0
● DDA-SRS-ST2-1			180.0	285.0	450.0
DDO-CRS-RS2-1	Orange, 605nm	120	112.5	180.0	285.0
DDO-CRS-ST2-1			180.0	285.0	450.0
● DDO-SRS-ST2-1			180.0	285.0	450.0
DDY-CRS-RS2-1	Yellow, 587nm	120	112.5	180.0	285.0
DDY-CRS-ST1-1			180.0	224.0	355.0
● DDY-SRS-ST2-1			180.0	285.0	450.0
DDY-TRS-TU2-1			285.0	450.0	715.0
DDG-CRS-PQ2-1	Green, 570nm	120	45.0	71.5	112.5
DDG-CRS-QR2-1			71.5	112.5	180.0
● DDG-SRS-QR2-1			71.5	112.5	180.0

● Not for new design

Electrical Characteristics at Tj=25°C

Part Number	Vf @ If = 20mA <i>Appx. 3.1</i>		Vr @ Ir = 100uA
	Typ. (V)	Max. (V)	Min. (V)
DDA, DDS, DDR-CRS, DDR-SRS, DDG, DDH, DDO, DDY-CRS, DDY-SRS	2.1	2.3	12
DDR-TJS, DDY-TJS	2.2	2.6	12

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	30	mA
Peak pulse current; (tp ≤ 10μs, Duty cycle = 0.005)	1000	mA
Reverse voltage	12	V
ESD threshold (HBM)	2	kV
LED junction temperature	125	°C
Operating temperature	-40 ... +100	°C
Storage temperature	-40 ... +100	°C
Power dissipation (at room temperature)	75	mW

Wavelength Grouping at Tj=25°C

Color	Group	Wavelength distribution (nm) <small>Appx. 2.2</small>
DDH; Hyper-red	Full	636 - 646
DDS; Super-red	Full	625 - 640
DDR-CR, -SR; Red (AS)	Full	620 - 630
DDR-TR; Red (TS)	Full	620 - 635
DDA; Amber	Full	610 - 621
	W	610 - 615
	X	615 - 621
DDO; Orange	Full	600 - 612
	W	600 - 603
	X	603 - 606
	Y	606 - 609
	Z	609 - 612
DDY; Yellow	Full	582 - 594
	W	582 - 585
	X	585 - 588
	Y	588 - 591
	Z	591 - 594
DDG; 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

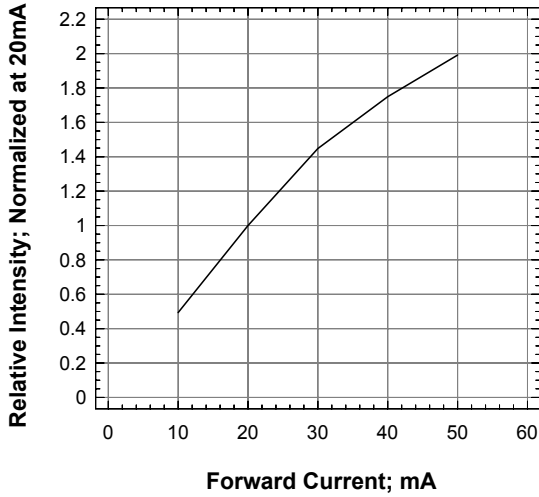
Luminous Intensity Group at Tj=25°C

Brightness Group	Luminous Intensity <small>Appx. 1.1</small> IV (mcd)
P1	45.0...56.0
P2	56.0...71.5
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

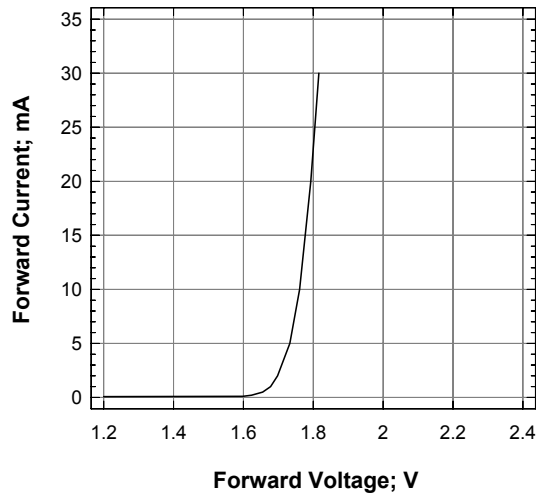
Vf Binning (Optional)

Vf Bin @ 20mA	Forward Voltage (V) <small>Appx. 3.1</small>
01	1.55 ... 1.85
02	1.85 ... 2.15
03	2.15 ... 2.45
04	2.45 ... 2.75

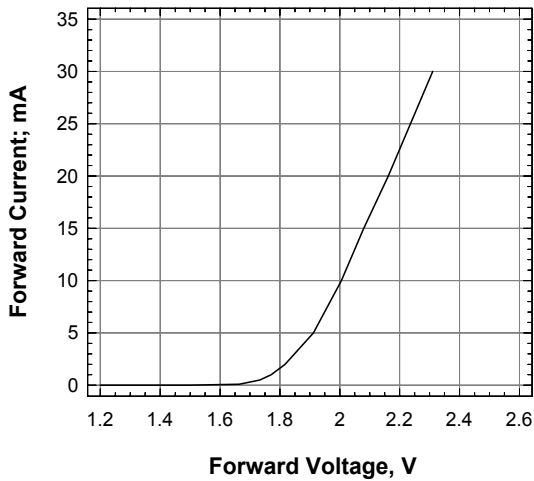
Relative Intensity Vs Forward Current



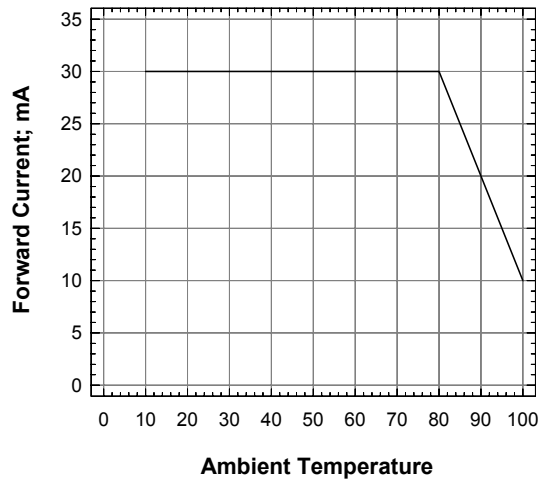
Forward Current Vs Forward Voltage (AS AllnGaP)



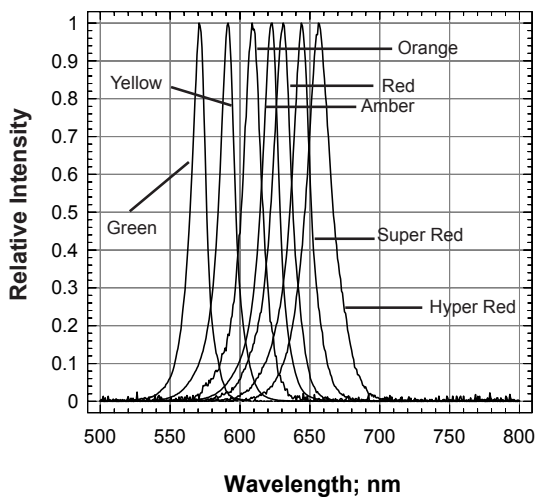
Forward Current Vs Forward Voltage (TS AllnGaP)



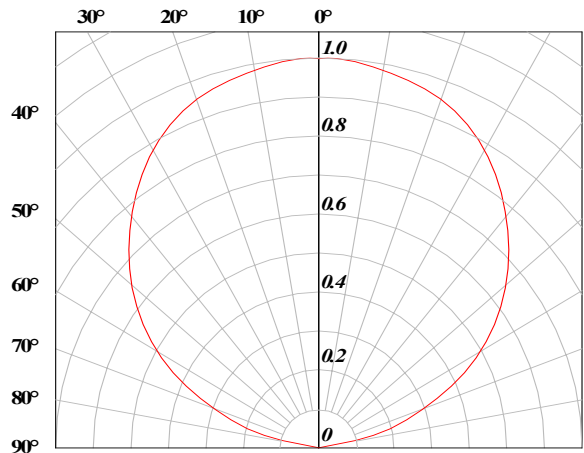
Maximum Forward Current Vs Temperature



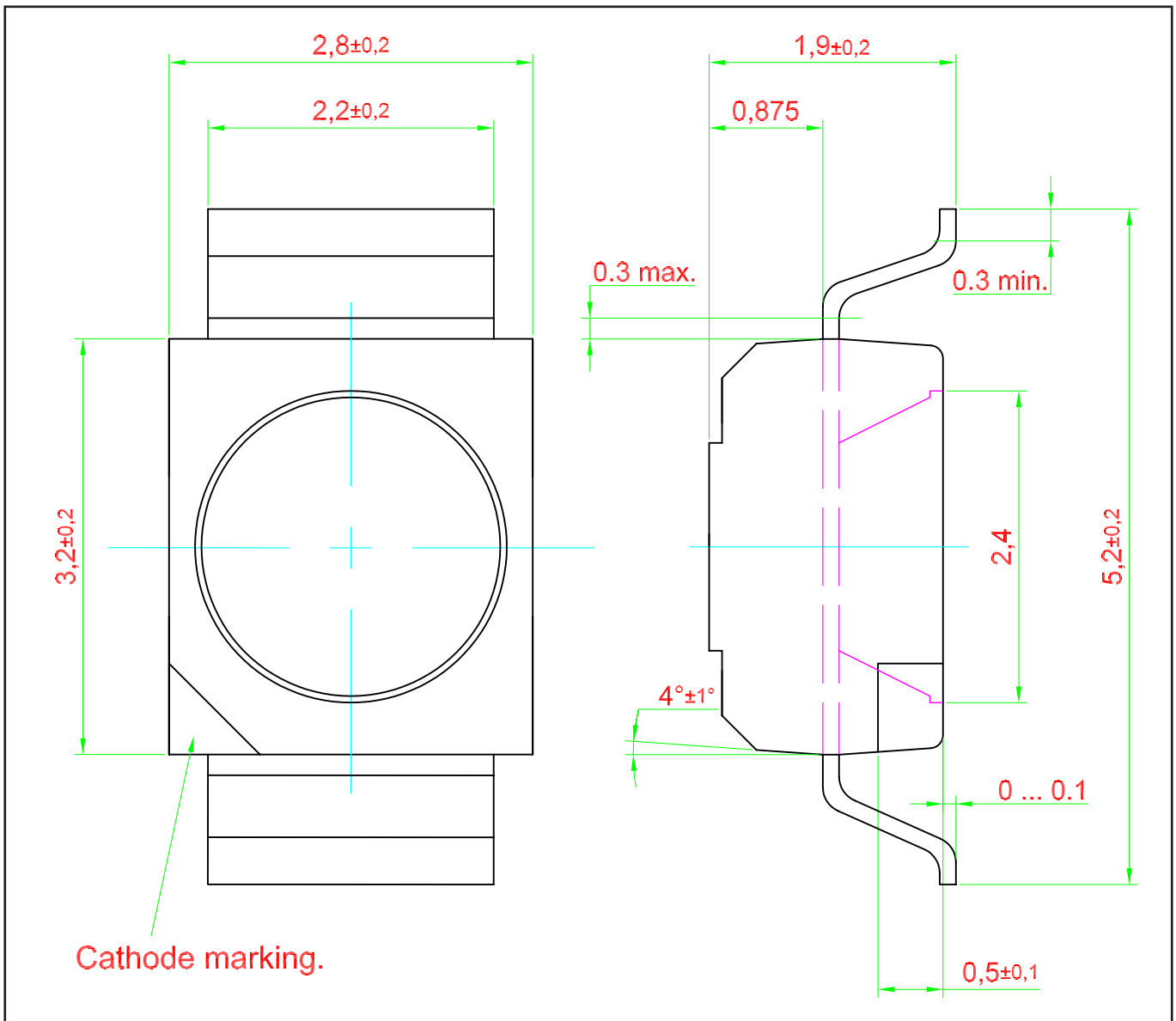
Relative Intensity Vs Wavelength



Radiation Pattern



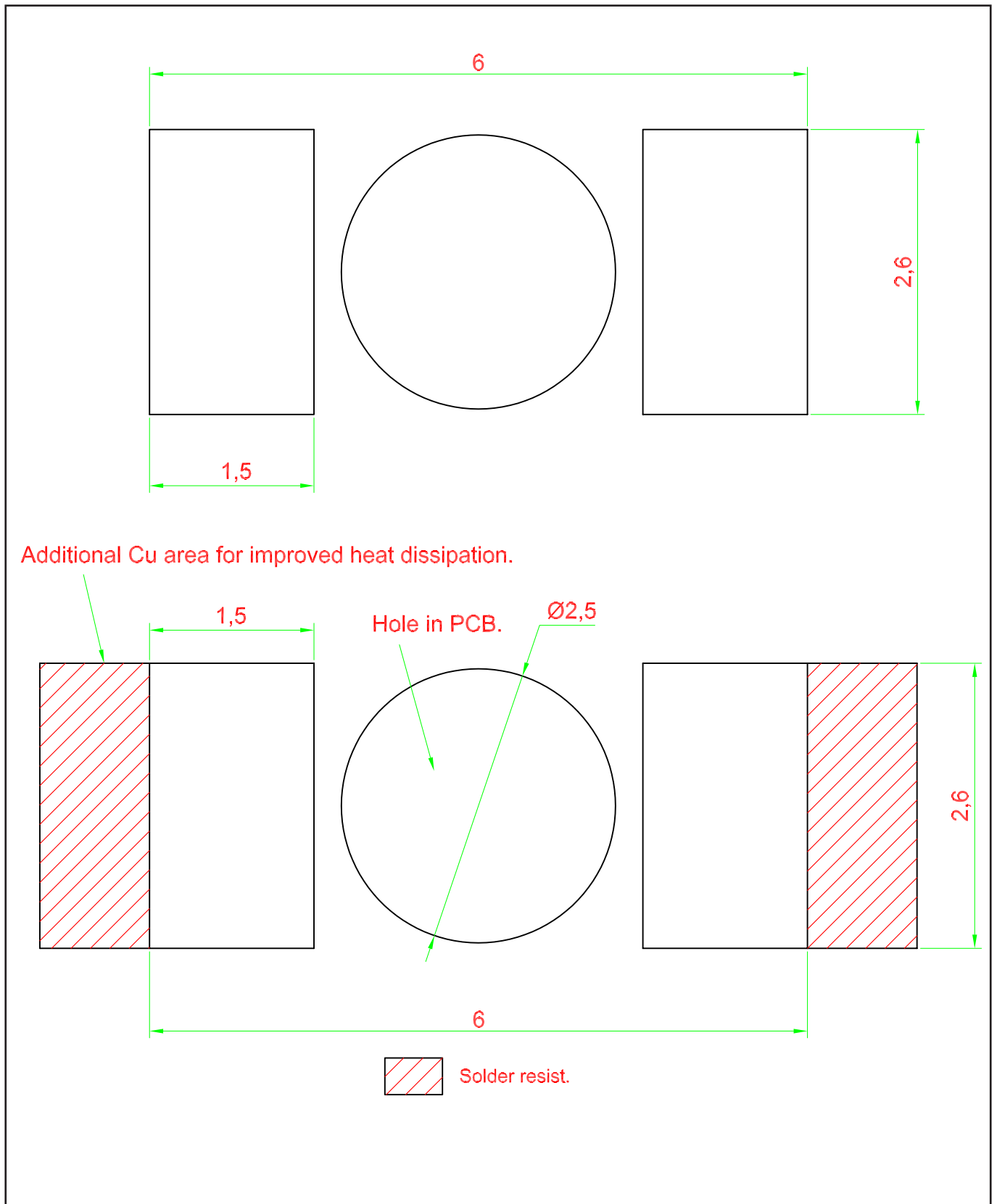
DomiLED • AllnGaP : DDx-xRS Package Outlines



Material

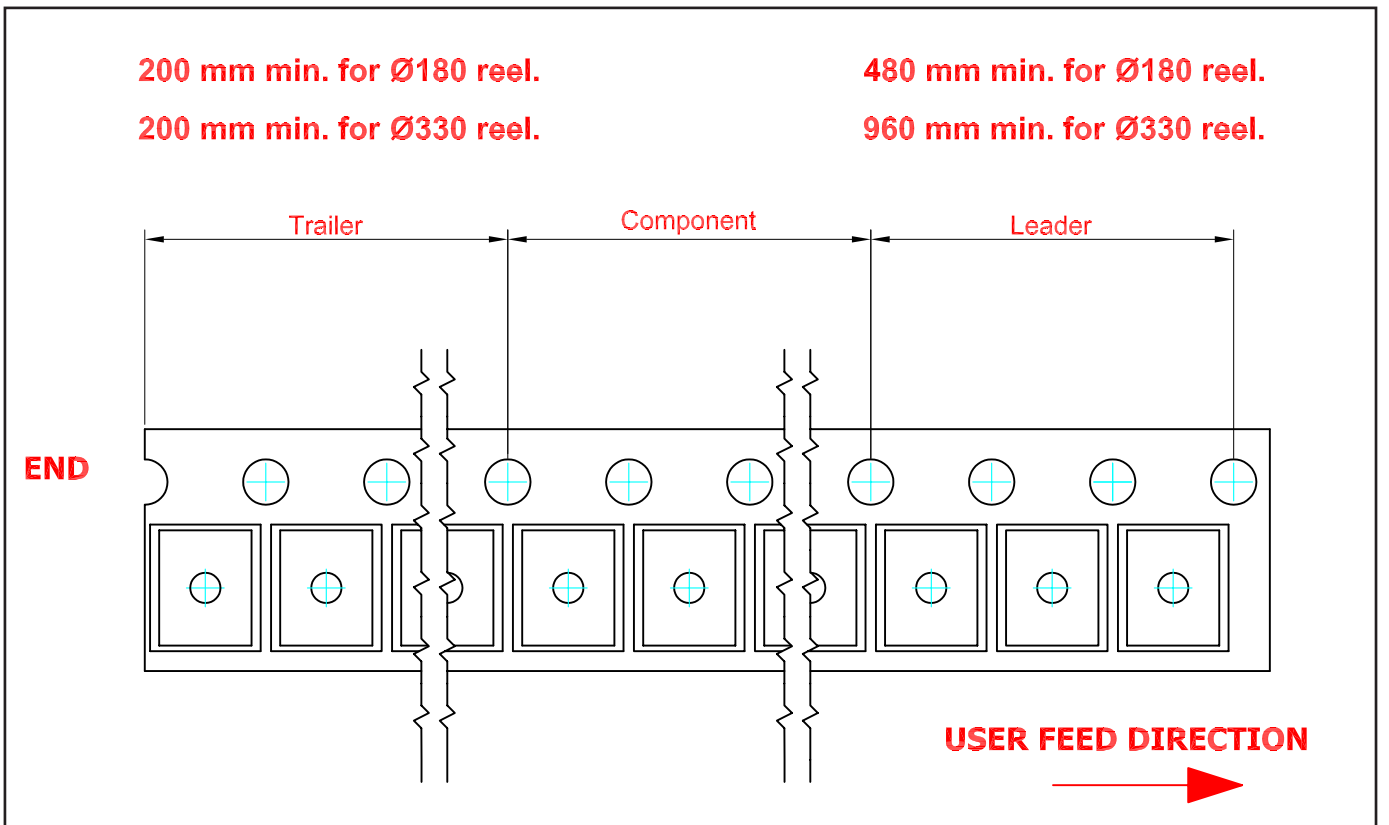
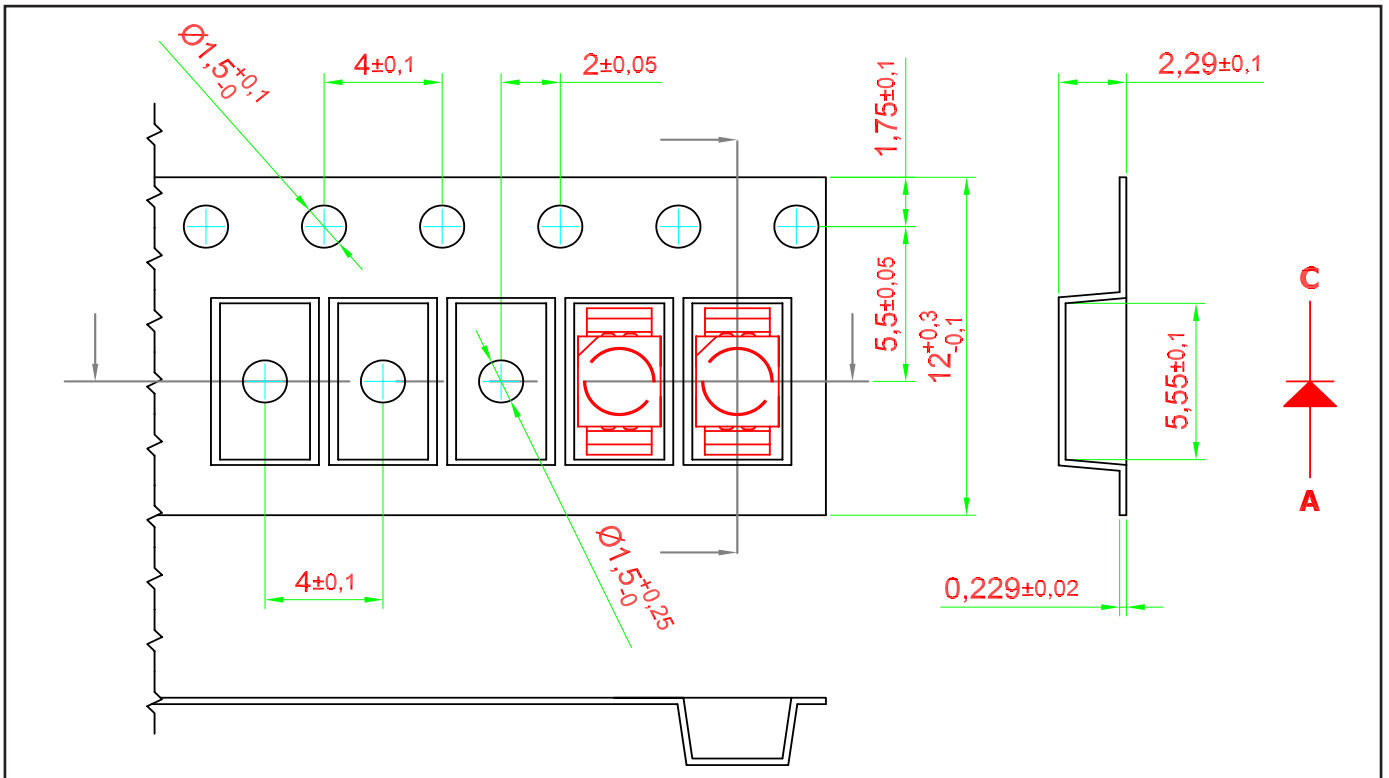
Material	
Lead-frame	Cu Alloy With Ag Plating
Package	High Temperature Resistant Plastic, PPA
Encapsulant	Epoxy
Soldering Leads	Sn Plating

Recommended Solder Pad

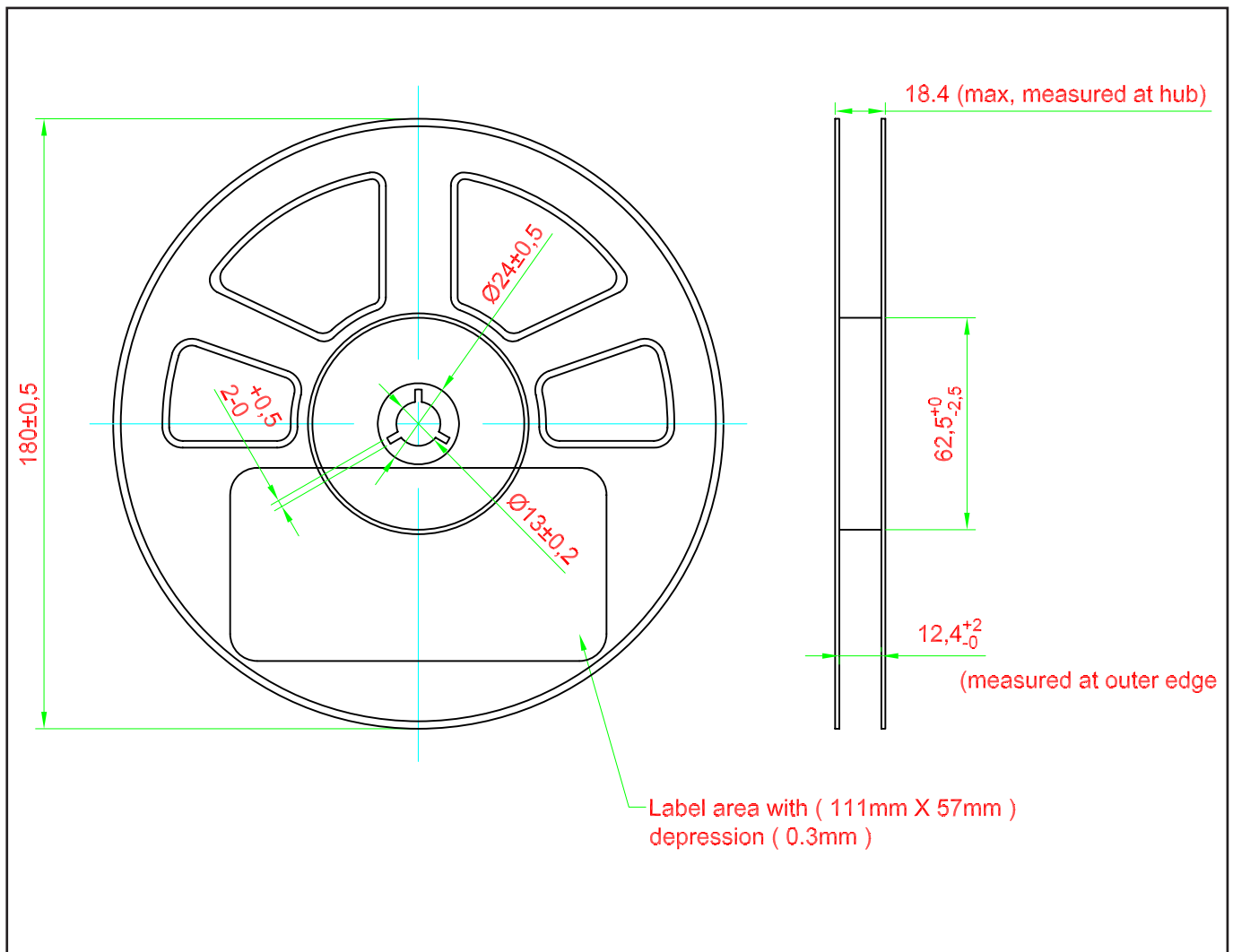


Taping and orientation

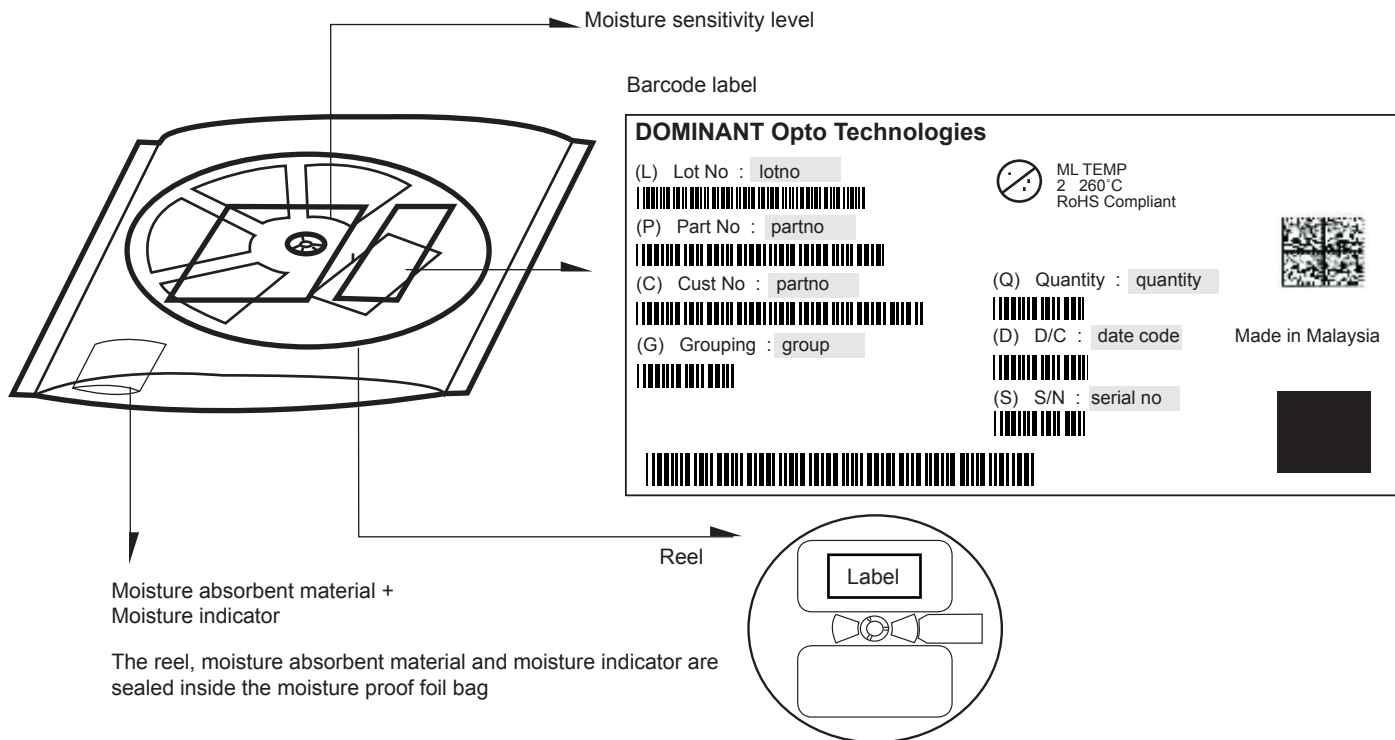
- Reels come in quantity of 2000 units.
- Reel diameter is 180 mm.



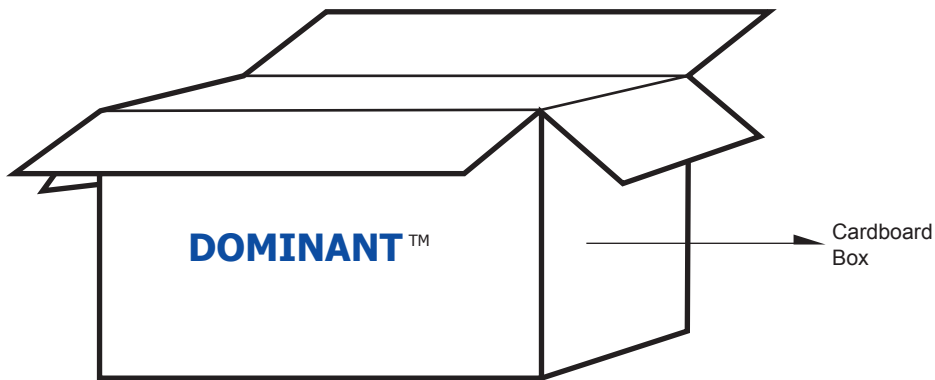
Packaging Specification



Packaging Specification



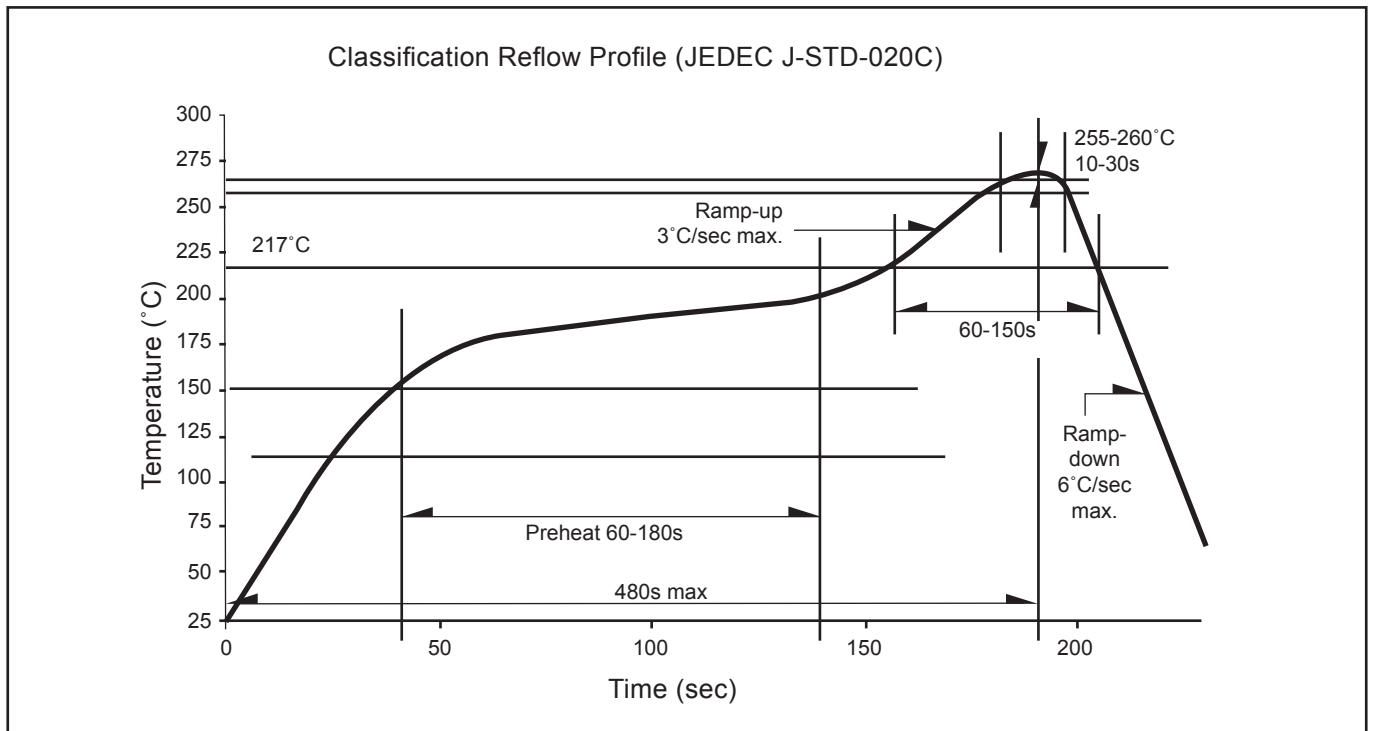
	Average 1pc DomiLED	1 completed bag (2000pcs)
Weight (gram)	0.034	240 ± 10



For DomiLED

Cardboard Box Size	Dimensions (mm)	Empty Box Weight (kg)	Reel / Box
Super Small	325 x 225 x 190	0.38	7 reels MAX
Small	325 x 225 x 280	0.54	11 reels MAX
Medium	570 x 440 x 230	1.46	48 reels MAX
Large	570 x 440 x 460	1.92	96 reels MAX

Recommended Pb-free Soldering Profile



Appendix

1) **Brightness:**

- 1.1 Luminous intensity is measured with an internal reproducibility of $\pm 8 \%$ and an expanded uncertainty of $\pm 11 \%$ (according to GUM with a coverage factor of $k=3$).
- 1.2 Luminous flux is measured with an internal reproducibility of $\pm 8 \%$ and an expanded uncertainty of $\pm 11 \%$ (according to GUM with a coverage factor of $k=3$).

2) **Color:**

- 2.1 Chromaticity coordinate groups are measured with an internal reproducibility of ± 0.005 and an expanded uncertainty of ± 0.01 (accordingly to GUM with a coverage factor of $k=3$).
- 2.2 DOMINANT wavelength is measured with an internal reproducibility of $\pm 0.5\text{nm}$ and an expanded uncertainty of $\pm 1\text{nm}$ (accordingly to GUM with a coverage factor of $k=3$).

3) **Voltage:**

- 3.1 Forward Voltage, V_f is measured with an internal reproducibility of $\pm 0.05\text{V}$ and an expanded uncertainty of $\pm 0.1\text{V}$ (accordingly to GUM with a coverage factor of $k=3$).

Revision History

Page	Subjects	Date of Modification
-	Update company name	31 May 2010
2	Add new partno: DDO-CRS-ST2-1	28 Oct 2010
2	Add new partno: DDR-CRS-Q2R-1	10 Mar 2011
2	Not for new design: DDH-SRS-QR2-1, DDS-SRS-QR2-1, DDR-SRS-RS2-1, DDA-SRS-ST2-1, DDO-SRS-ST2-1, DDY-SRS-ST2-1, DDG-SRS-QR2-1	09 Oct 2012
2	Add new partno: DDR-CRS-ST1-1	22 May 2013
1, 11	Add Features Update Package Specification	16 Oct 2015
1, 11, 13	Update Product Photo Error on Packaging Specification Add Appendix	03 Jul 2017

NOTE

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About Us

DOMINANT Opto Technologies is a dynamic company that is amongst the world's leading automotive LED manufacturers. With an extensive industry experience and relentless pursuit of innovation, DOMINANT's state-of-art manufacturing and development capabilities have become a trusted and reliable brand across the globe. More information about DOMINANT Opto Technologies, a ISO/TS 16949 and ISO 14001 certified company, can be found under <http://www.dominant-semi.com>.

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