

### Multi DomiLED<sup>™</sup>

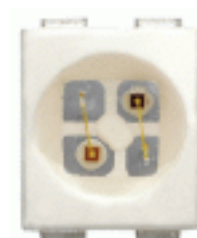
Synonymous with function and performance, the Multi DomiLED<sup>™</sup> series is perfectly suited for a variety of cross-industrial applications due to its small package outline, durability and superior brightness.

### 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 both IR reflow soldering and TTW 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.).



| Part Ordering Number    | Color, $\lambda_{dom}$ (nm) |         | Viewing Angle° | Luminous Intensity @ IF = 20mA IV (mcd) |                    |
|-------------------------|-----------------------------|---------|----------------|---|--------------------|
|                         | Chip #1                     | Chip #2 |                | Chip #1                                 | Chip #2            |
| <b>DMRY-GJS-LM+LM-1</b> | Red,                        | Yellow, | <b>120</b>     | <b>11.2 - 28.5</b>                      | <b>11.2 - 28.5</b> |
| • DMRY-GJS-LL           | 625nm                       | 587nm   |                | 11.2 - 18.0                             | 11.2 - 18.0        |
| • DMRY-GJS-LM           |                             |         |                | 11.2 - 18.0                             | 18.0 - 28.5        |
| • DMRY-GJS-ML           |                             |         |                | 18.0 - 28.5                             | 11.2 - 18.0        |
| • DMRY-GJS-MM           |                             |         |                | 18.0 - 28.5                             | 18.0 - 28.5        |
| <b>DMRG-GJS-LM+LM-1</b> | Red,                        | Green,  | <b>120</b>     | <b>11.2 - 28.5</b>                      | <b>11.2 - 28.5</b> |
| • DMRG-GJS-LL           | 625nm                       | 570nm   |                | 11.2 - 18.0                             | 11.2 - 18.0        |
| • DMRG-GJS-LM           |                             |         |                | 11.2 - 18.0                             | 18.0 - 28.5        |
| • DMRG-GJS-ML           |                             |         |                | 18.0 - 28.5                             | 11.2 - 18.0        |
| • DMRG-GJS-MM           |                             |         |                | 18.0 - 28.5                             | 18.0 - 28.5        |
| <b>DMYG-GJS-LM+LM-1</b> | Yellow,                     | Green,  | <b>120</b>     | <b>11.2 - 28.5</b>                      | <b>11.2 - 28.5</b> |
| • DMYG-GJS-LL           | 587nm                       | 570nm   |                | 11.2 - 18.0                             | 11.2 - 18.0        |
| • DMYG-GJS-LM           |                             |         |                | 11.2 - 18.0                             | 18.0 - 28.5        |
| • DMYG-GJS-ML           |                             |         |                | 18.0 - 28.5                             | 11.2 - 18.0        |
| • DMYG-GJS-MM           |                             |         |                | 18.0 - 28.5                             | 18.0 - 28.5        |

NOTE

1. DMXX comes in a quantity of 2000 units per reel.
2. Luminous intensity is measured with an accuracy of  $\pm 11\%$ .
4. Half group binning for luminous intensity is also available upon request.

### Wavelength Grouping

| Color  | Group | Wavelength distribution (nm) |
|--------|-------|------------------------------|
| Red    | Full  | 620 - 635                    |
| Yellow | Full  | 582 - 594                    |
|        | W     | 582 - 585                    |
|        | X     | 585 - 588                    |
|        | Y     | 588 - 591                    |
|        | Z     | 591 - 594                    |
| 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                |

Dominant wavelength is measured with an accuracy of  $\pm 1$  nm.

### Electrical Characteristics at Ta=25°C

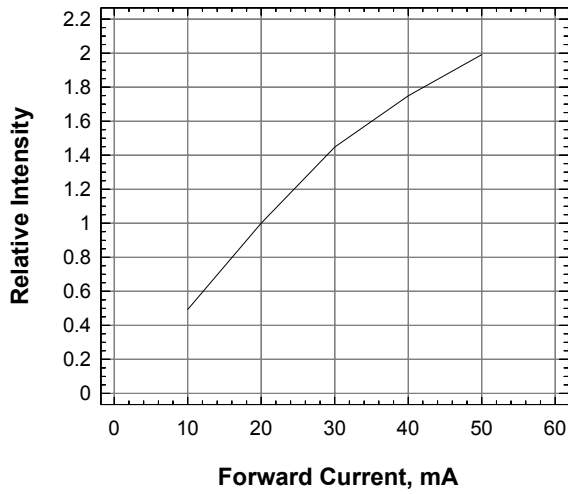
|                    | Vf @ If = 20mA |          |
|--------------------|----------------|----------|
|                    | Typ. (V)       | Max. (V) |
| Red; Yellow; Green | 2.2            | 2.5      |

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

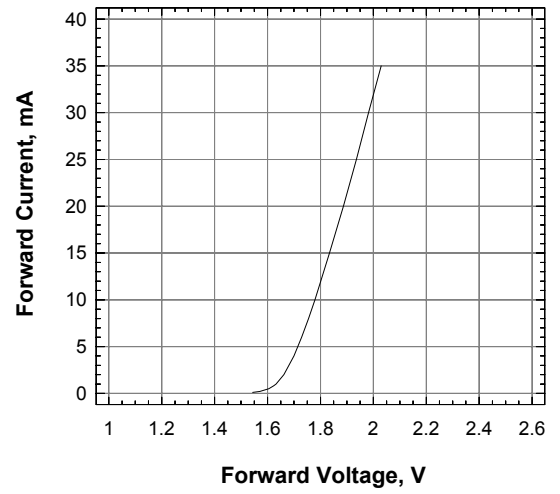
### Absolute Maximum Ratings

|  | Maximum Value | Unit |
|--|---------------|------|
| DC forward current   | 30            | mA   |
| Peak pulse current; (tp $\leq$ 10 $\mu$ s, Duty cycle = 0.005) | 1000          | mA   |
| Reverse voltage  | 5             | V    |
| ESD Threshold (HBM)  | 2             | KV   |
| LED junction temperature                                       | 125           | °C   |
| Operating temperature  | -40 ... +100  | °C   |
| Storage temperature  | -40 ... +100  | °C   |

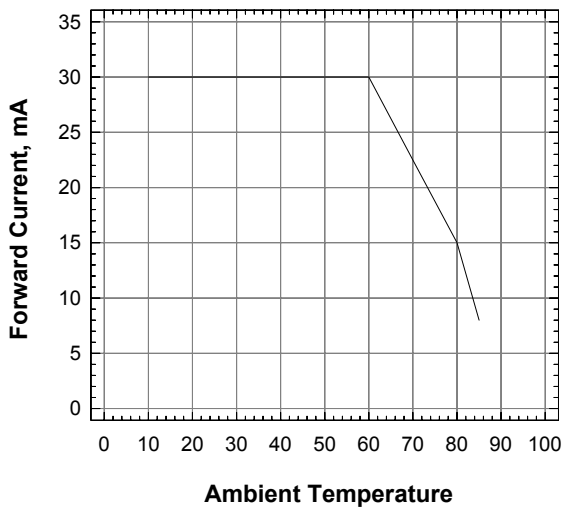
**Relative Intensity Vs Forward Current**



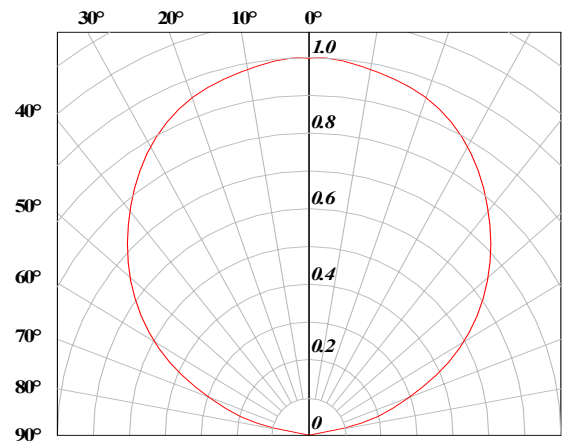
**Forward Current Vs Forward Voltage**



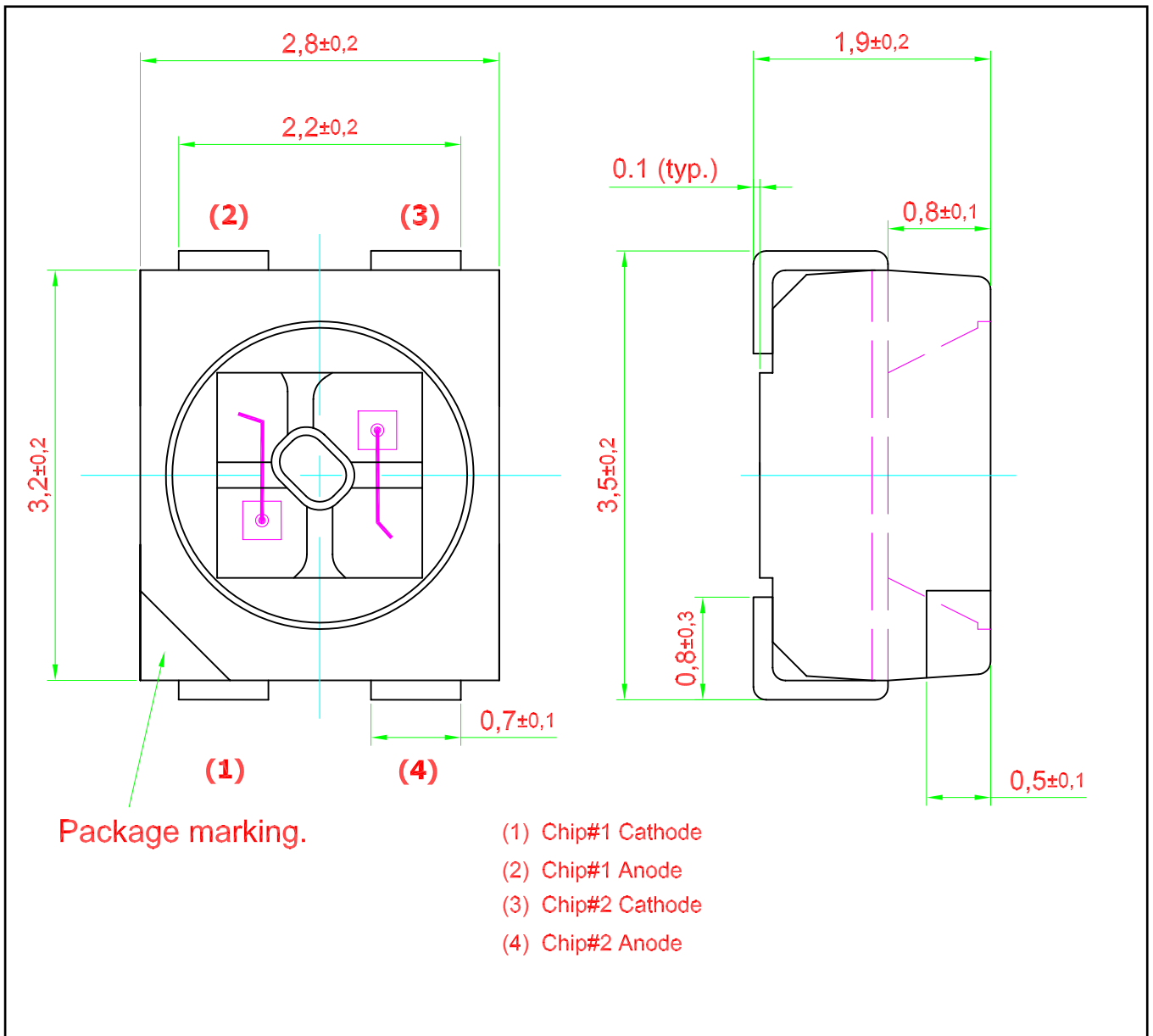
**Maximum Current Vs Temperature**



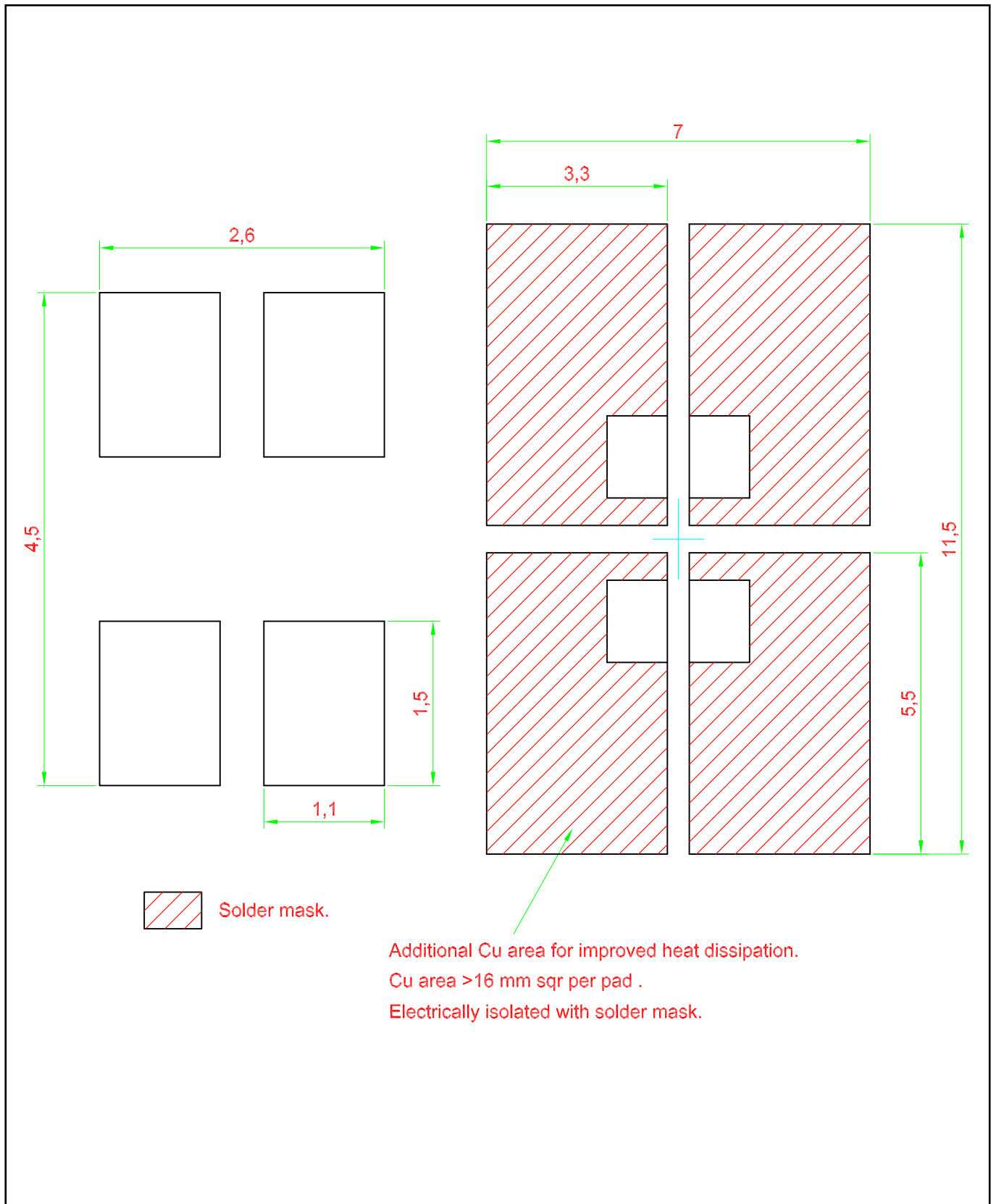
**Radiation Pattern**



**Multi DomiLED™ • GaP : Bi-Color Package Outlines**

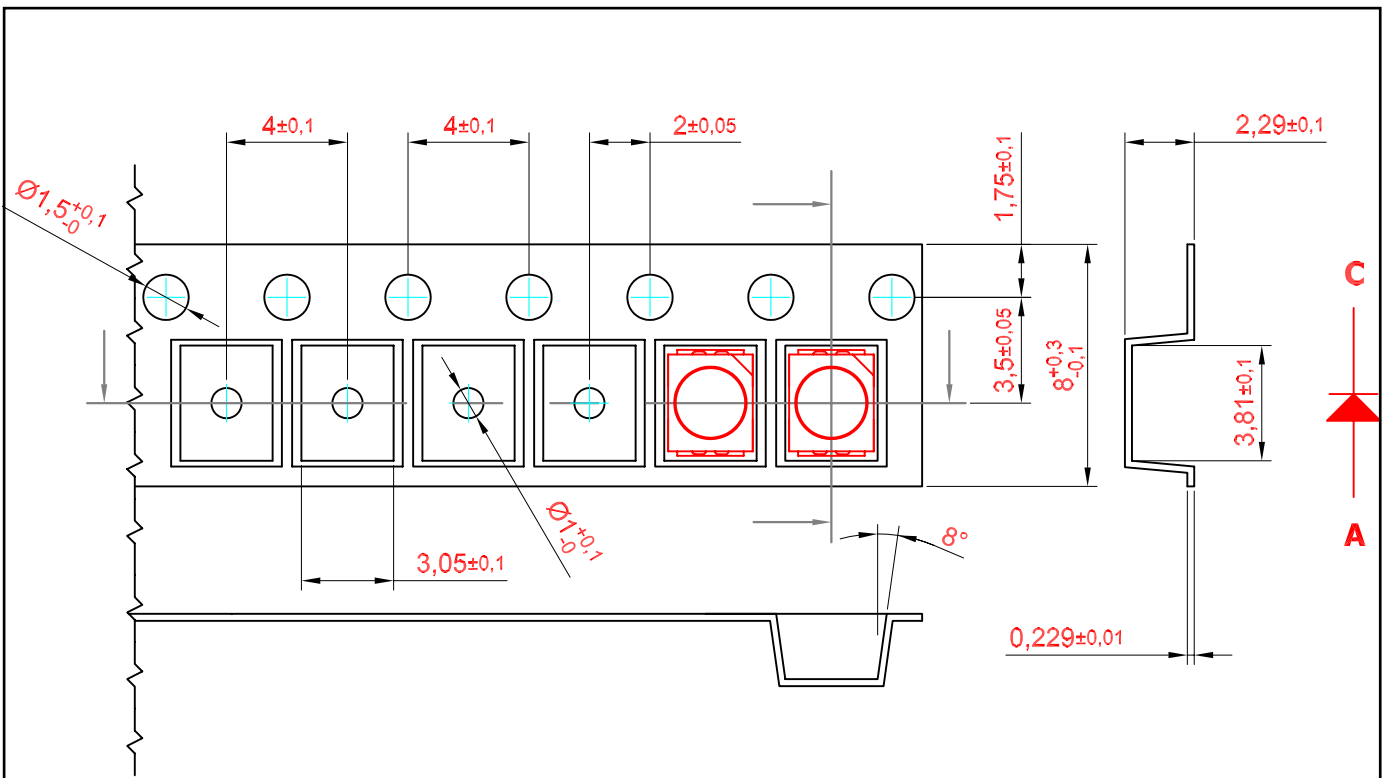


**Recommended Solder Pad**



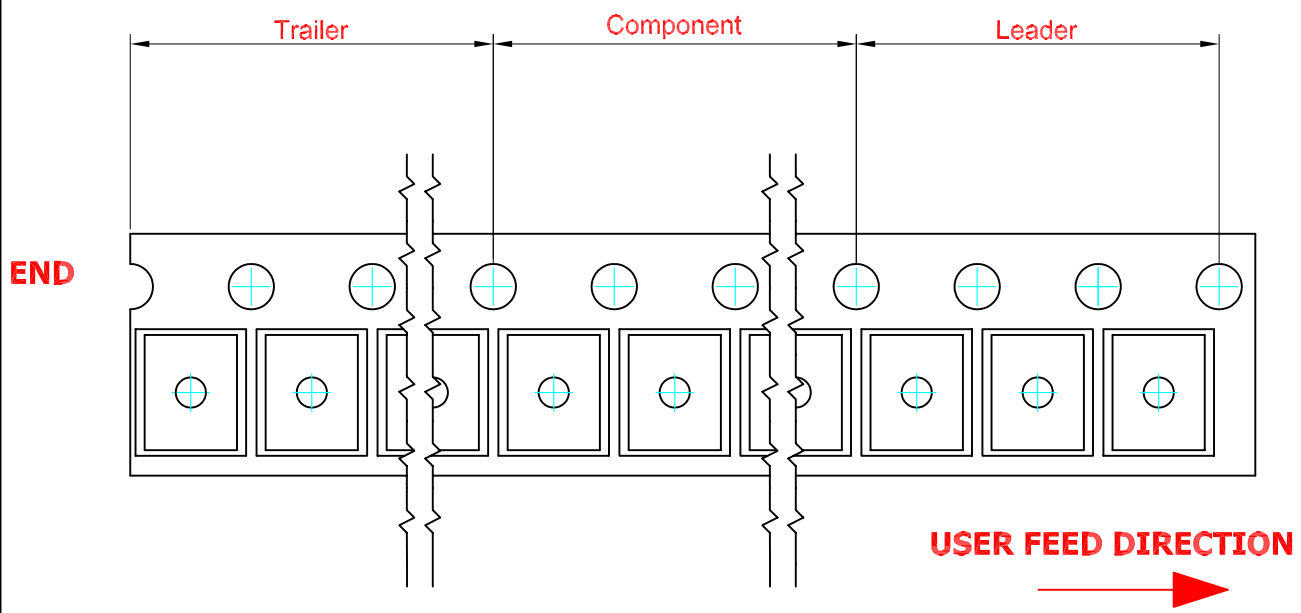
**Taping and orientation**

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

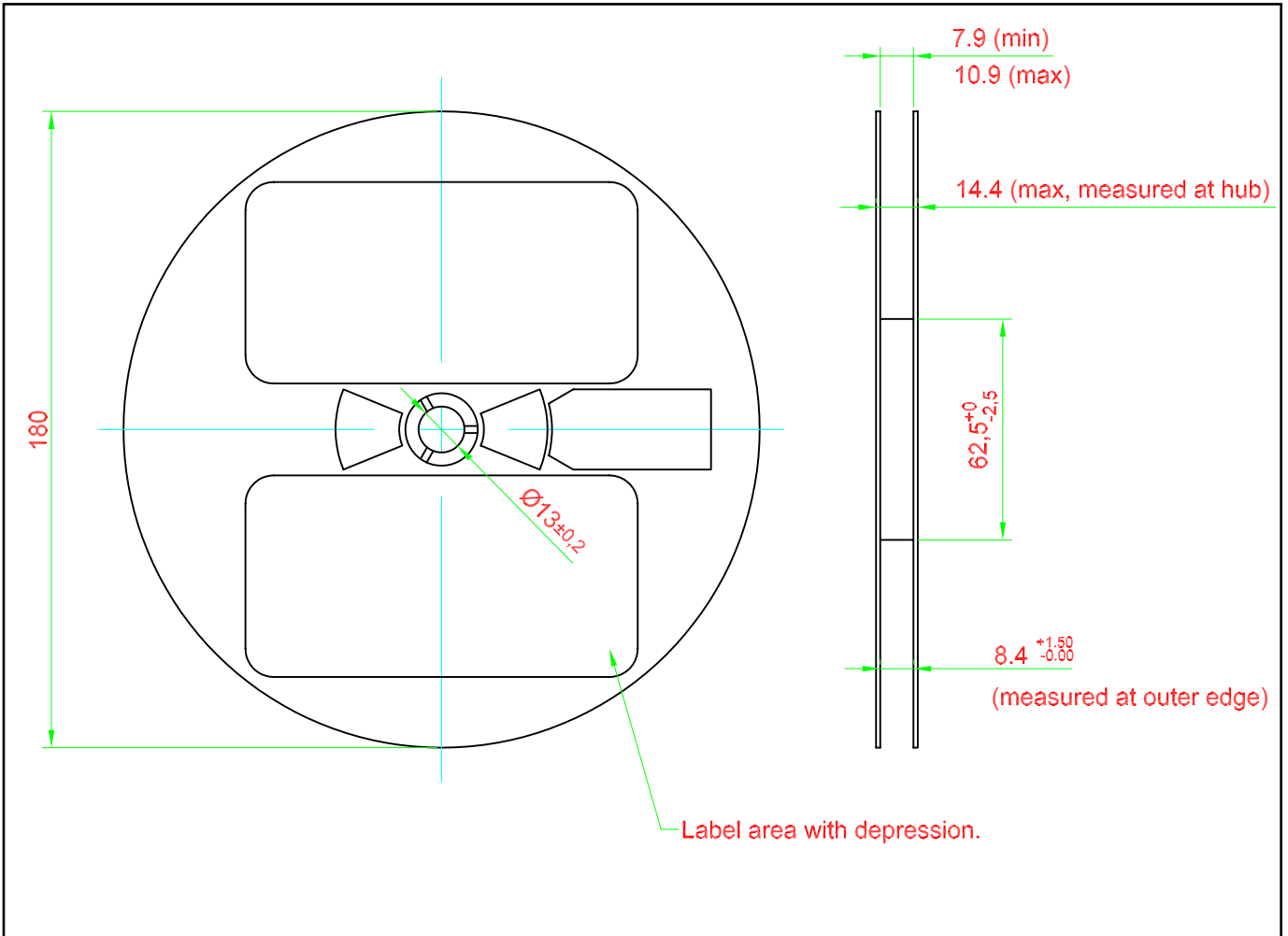


200 mm min. for  $\varnothing 180$  reel.  
200 mm min. for  $\varnothing 330$  reel.

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

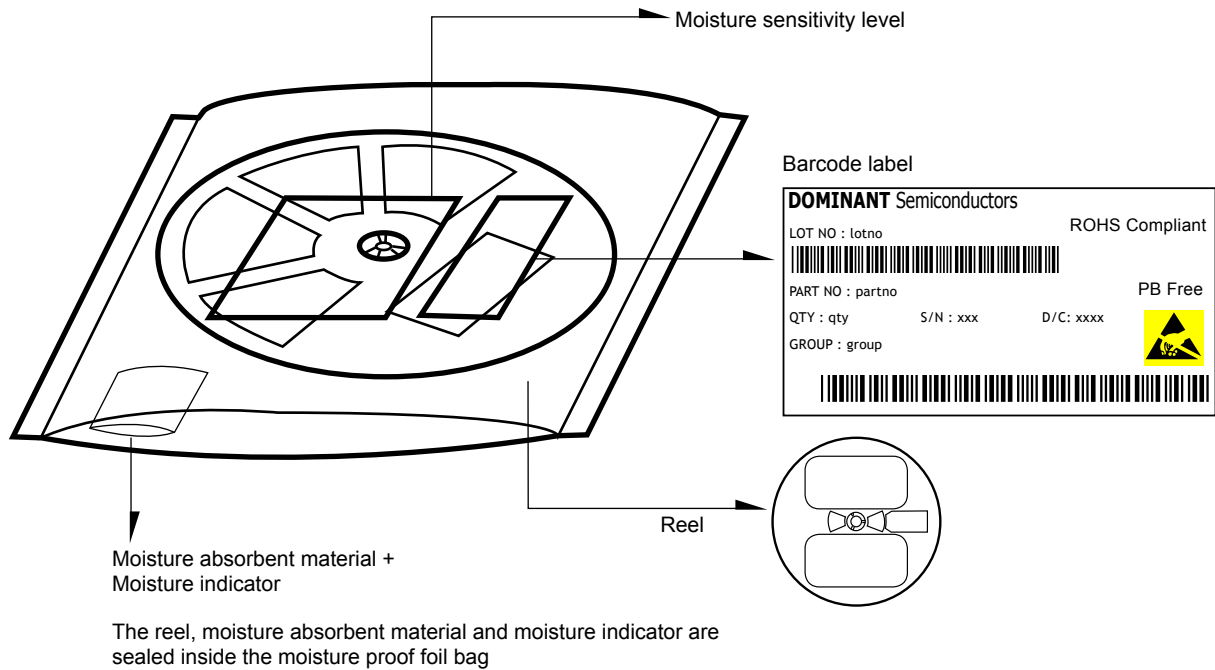


**Packaging Specification**

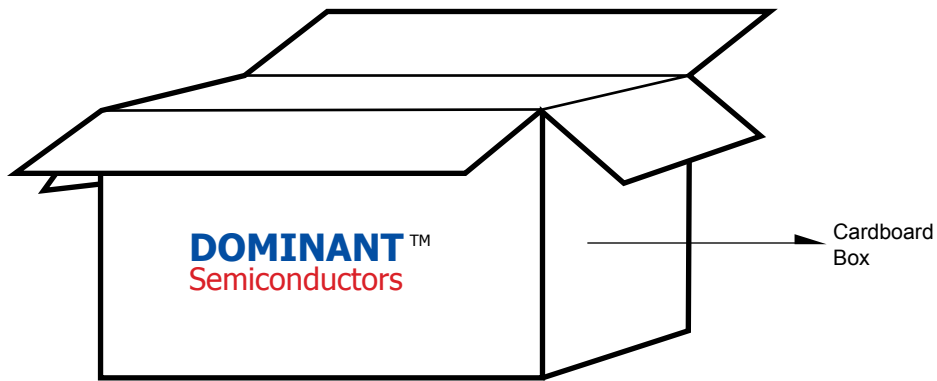




**Packaging Specification**



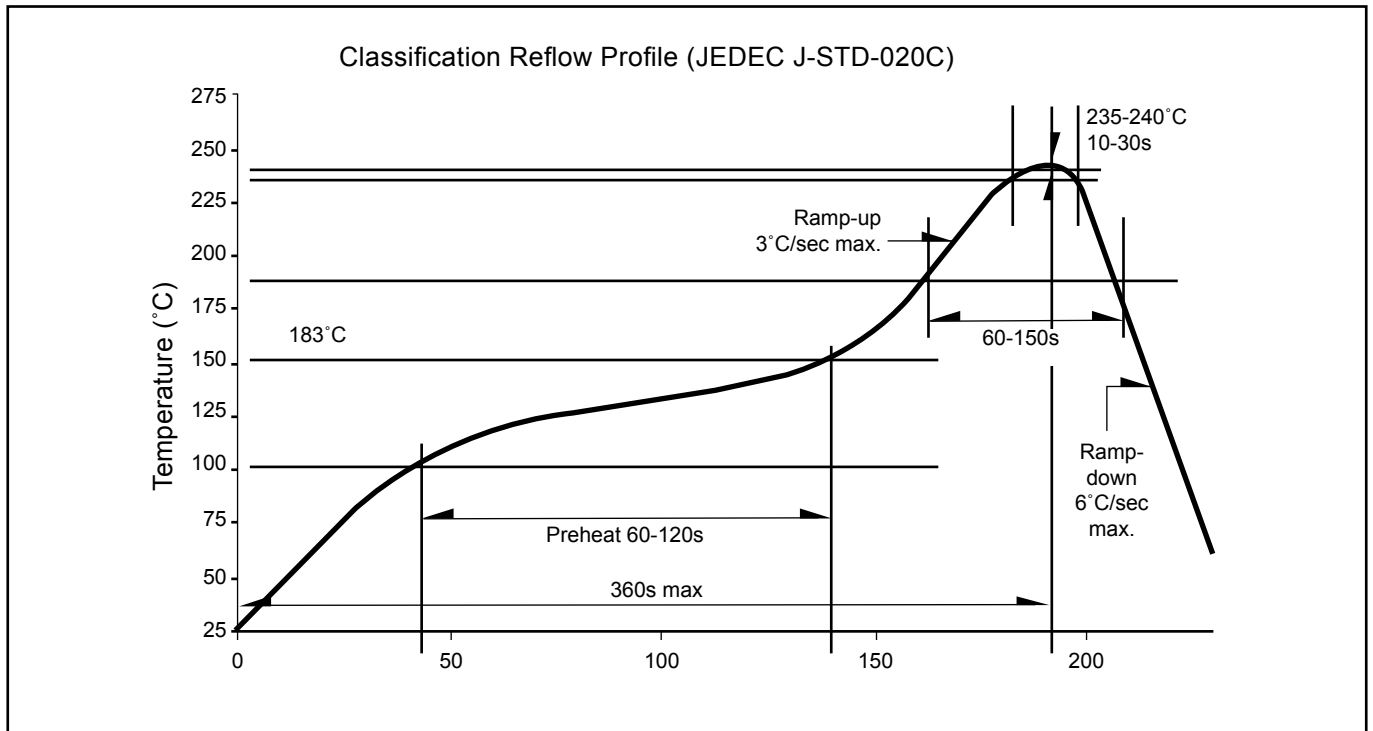
|               | Average 1pc DomiLED/Multi DomiLED | 1 completed bag (2000pcs) |
|---------------|-----------------------------------|---------------------------|
| Weight (gram) | 0.034                             | 190 ± 10                  |



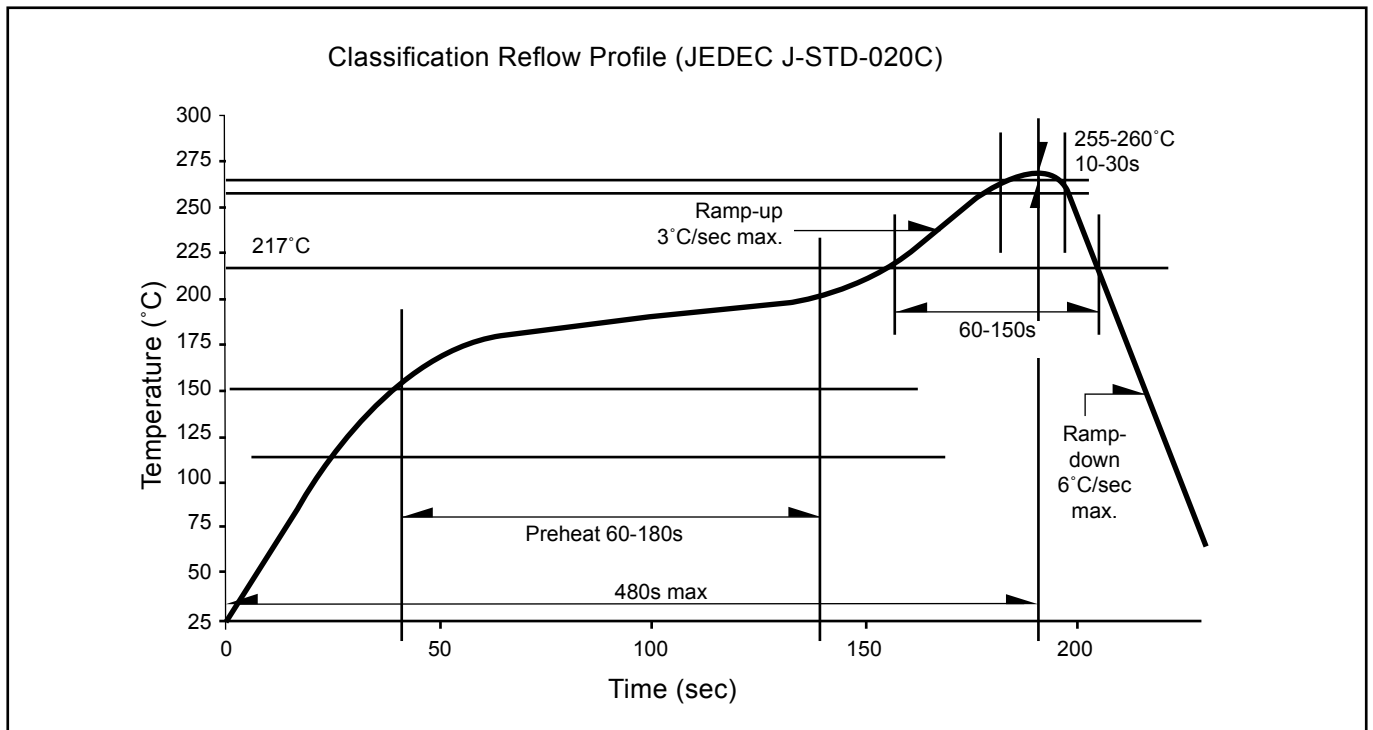
**For Multi DomiLED™**

| 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                  | 55 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 | 11 Aug 2006          |
|      |            |                      |
|      |            |                      |
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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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