

### Domiled<sup>TM</sup>

Synonymous with function and performance, the Domiled<sup>TM</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 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 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 | Chip Technology / Color | Viewing Angle° | Luminous Intensity @ IF = 20mA IV (mcd) |
|----------------------|-------------------------|----------------|---|
| <b>DDR-SJE-Q2R-1</b> | <b>AlGaP</b>            | <b>120</b>     | <b>90.0 - 180.0</b>                     |
| • DDR-SJE-Q2         | Red, 625nm              |                | 90.0 - 112.5                            |
| • DDR-SJE-R1         |                         |                | 112.5 - 140.0                           |
| • DDR-SJE-R2         |                         |                | 140.0 - 180.0                           |
| <b>DDY-CJE-ST2-1</b> | <b>AlGaP</b>            | <b>120</b>     | <b>180.0 - 450.0</b>                    |
| • DDY-CJE-S1         | Yellow, 587nm           |                | 180.0 - 224.0                           |
| • DDY-CJE-S2         |                         |                | 224.0 - 285.0                           |
| • DDY-CJE-T1         |                         |                | 285.0 - 355.0                           |
| • DDY-CJE-T2         |                         |                | 355.0 - 450.0                           |
| <b>DDY-SJE-S2T-1</b> |                         |                | <b>224.0 - 450.0</b>                    |
| • DDY-SJE-S2         |                         |                | 224.0 - 285.0                           |
| • DDY-SJE-T1         |                         |                | 285.0 - 355.0                           |
| • DDY-SJE-T2         |                         |                | 355.0 - 450.0                           |
| <b>DDT-SJE-ST2-1</b> | <b>InGaP</b>            | <b>120</b>     | <b>180.0 - 450.0</b>                    |
| • DDY-SJE-S1         | True Green, 525nm       |                | 180.0 - 224.0                           |
| • DDY-SJE-S2         |                         |                | 224.0 - 285.0                           |
| • DDY-SJE-T1         |                         |                | 285.0 - 355.0                           |
| • DDY-SJE-T2         |                         |                | 355.0 - 450.0                           |
| <b>DDB-SJE-PQ2-1</b> | <b>InGaP</b>            | <b>120</b>     | <b>45.0 - 112.5</b>                     |
| • DDB-SJE-P1         | Blue, 470nm             |                | 45.0 - 56.0                             |
| • DDB-SJE-P2         |                         |                | 56.0 - 71.5                             |
| • DDB-SJE-Q1         |                         |                | 71.5 - 90.0                             |
| • DDB-SJE-Q2         |                         |                | 90.0 - 112.5                            |

NOTE

1. All part number above comes in a quantity of 2000 units per reel.
2. Other luminous intensity groups are also available upon request.
3. Luminous intensity is measured with an accuracy of  $\pm 11\%$ .
4. Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each reel.
5. An optional Vf binning is also available upon request. Binning scheme is as per following table.

## Wavelength Grouping

| Color           | Group | Wavelength distribution (nm) |
|-----------------|-------|------------------------------|
| DDR; Red        | Full  | 620 - 630                    |
| DDY; Yellow     | Full  | 582 - 594                    |
|                 | W     | 582 - 585                    |
|                 | X     | 585 - 588                    |
|                 | Y     | 588 - 591                    |
|                 | Z     | 591 - 594                    |
| DDT; True Green | Full  | 520 - 536                    |
|                 | W     | 520 - 524                    |
|                 | X     | 524 - 528                    |
|                 | Y     | 528 - 532                    |
|                 | Z     | 532 - 536                    |
| DDB; Blue       | Full  | 464 - 476                    |
|                 | W     | 464 - 468                    |
|                 | X     | 468 - 472                    |
|                 | Y     | 472 - 476                    |

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

## Vf Bining (Optional)

| Vf @ If = 20mA | Forward Voltage (V) InGaN | Forward Voltage (V) AlInGaP |
|----------------|---------------------------|-----------------------------|
| Standard       | 3.35 ... 4.25             | 1.55 ... 2.45               |
| 01             | 3.35 ... 3.65             | 1.55 ... 1.85               |
| 02             | 3.65 ... 3.95             | 1.85 ... 2.15               |
| 03             | 3.95 ... 4.45             | 2.15 ... 2.45               |

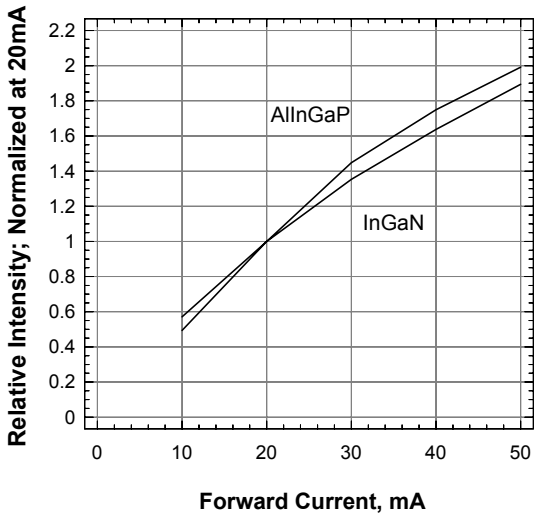
Forward Voltage, Vf is measured with an accuracy of  $\pm 0.1V$ .  
Please consult sales and marketing for special part number to incorporate Vf binning.

## Absolute Maximum Ratings

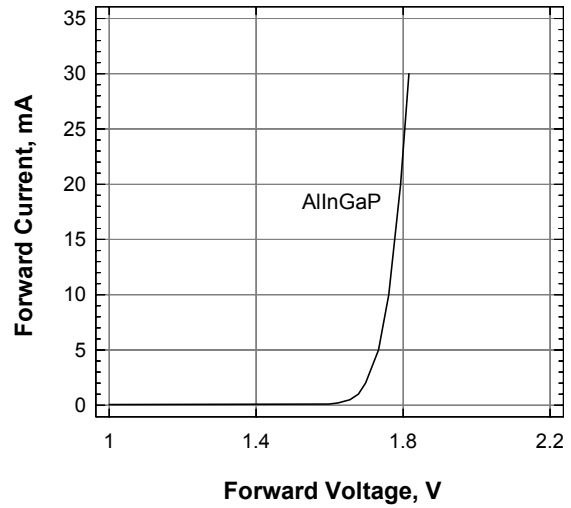
|   | Maximum Value             | Unit |
|---|---------------------------|------|
| DC forward current                                  | AllnGaP: 30; InGaN: 20    | mA   |
| Peak pulse current; (tp ≤ 10μs, Duty cycle = 0.005) | AllnGaP: 1000; InGaN: 200 | mA   |
| Reverse voltage                                     | 5                         | V    |
| ESD threshold (HBM)                                 | 2000                      | V    |
| LED junction temperature                            | 125                       | °C   |
| Operating temperature                               | -40 ... +100              | °C   |
| Storage temperature                                 | -40 ... +100              | °C   |
| Power dissipation (at room temperature)             | AllnGaP: 75; InGaN: 85    | mW   |

EEPW 电子产品世界  
.com.cn

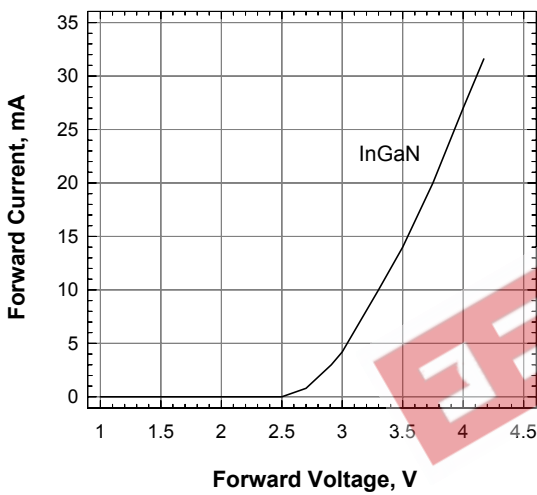
Relative Luminous Intensity Vs Forward Current



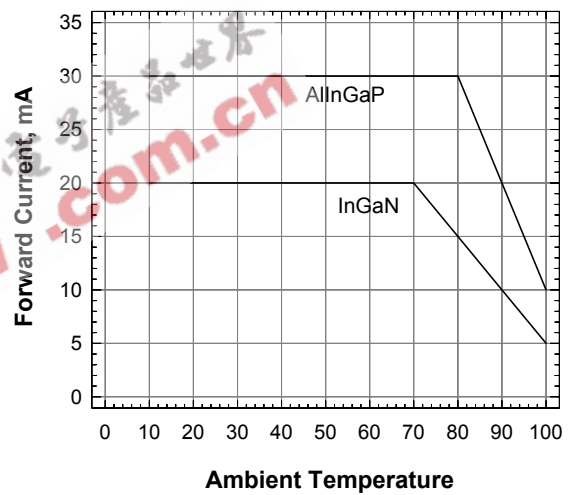
Forward Current Vs Forward Voltage



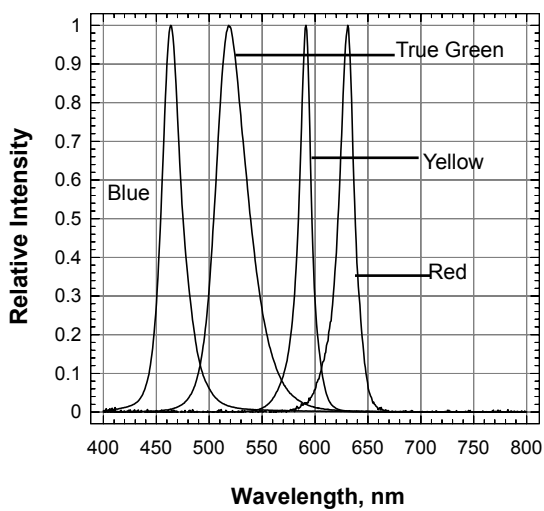
Forward Current Vs Forward Voltage



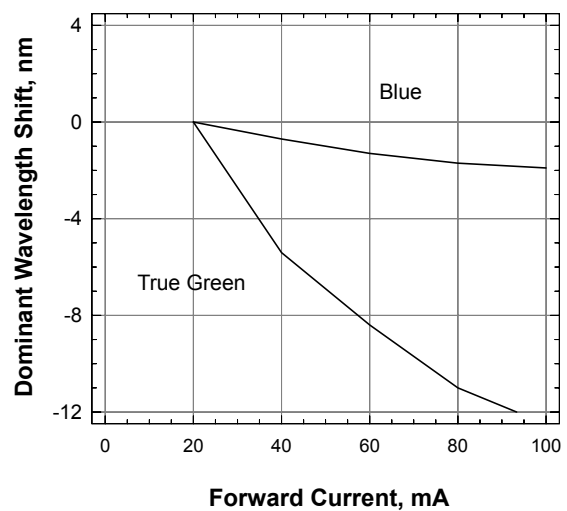
Forward Current Vs Temperature



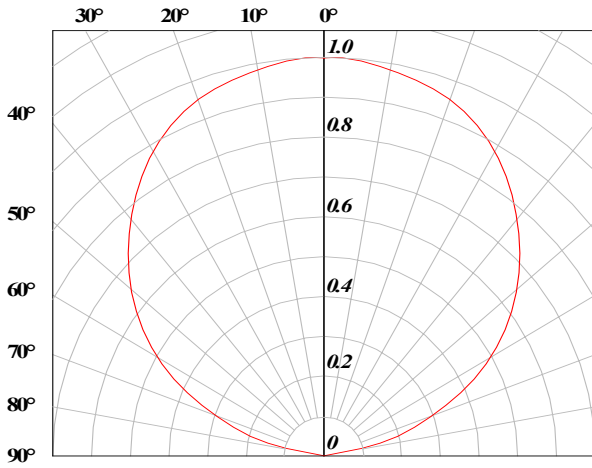
Relative Intensity Vs Wavelength



Dominant Wavelength Shift Vs Forward Current

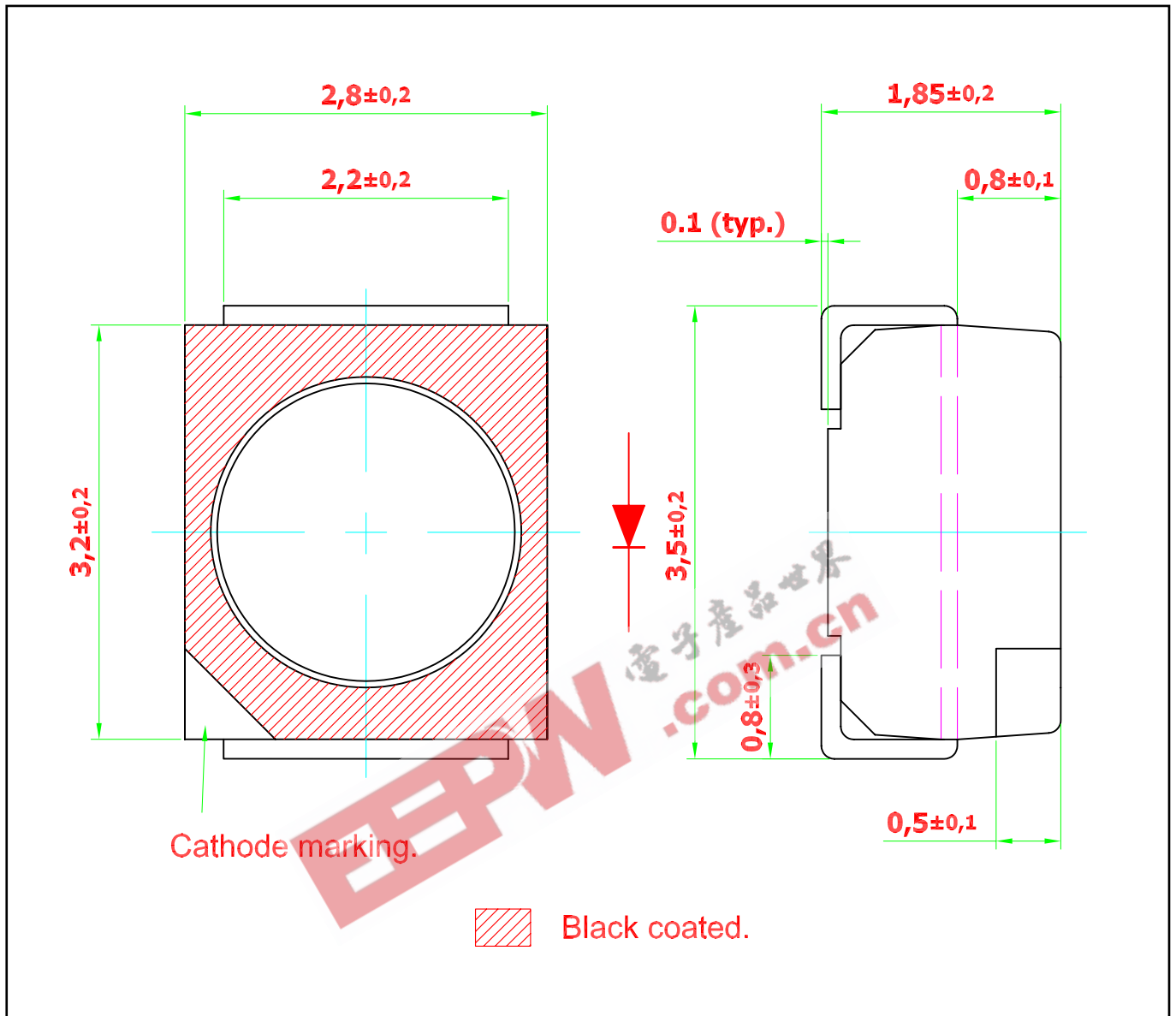


Radiation Pattern

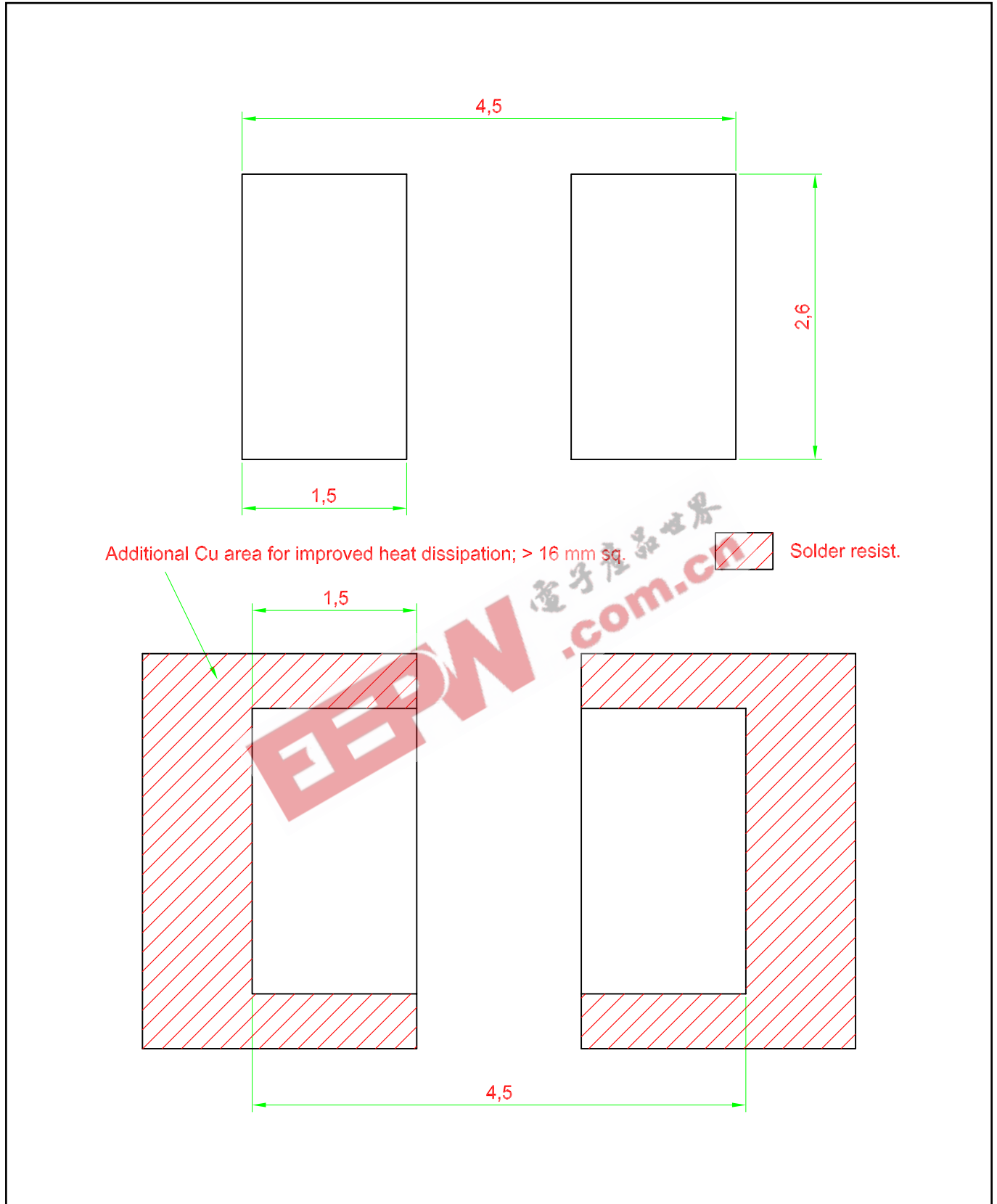


EEPW 电子产品世界  
.com.cn

**DomiLED™ • Colored Resin : DDx-xJE Package Outlines**



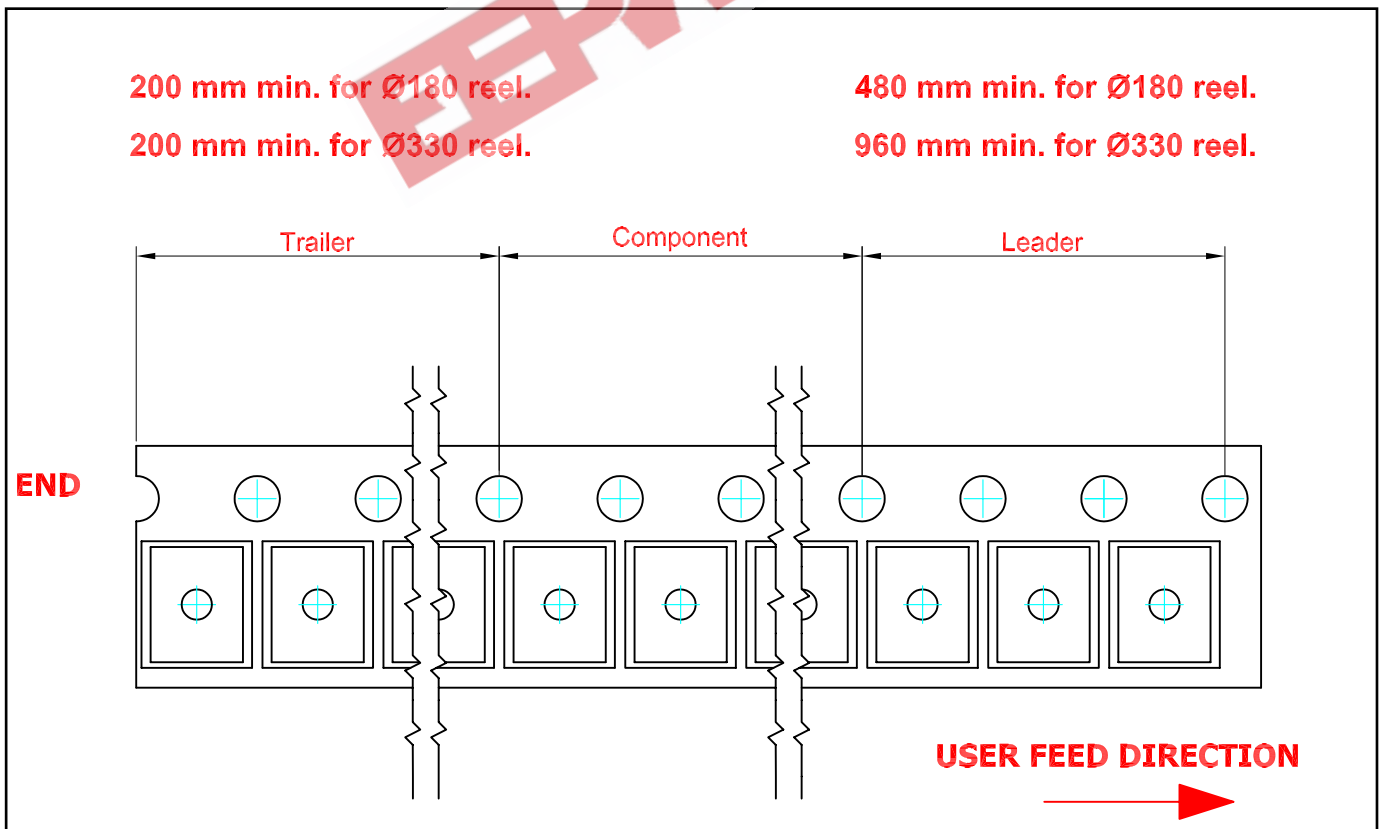
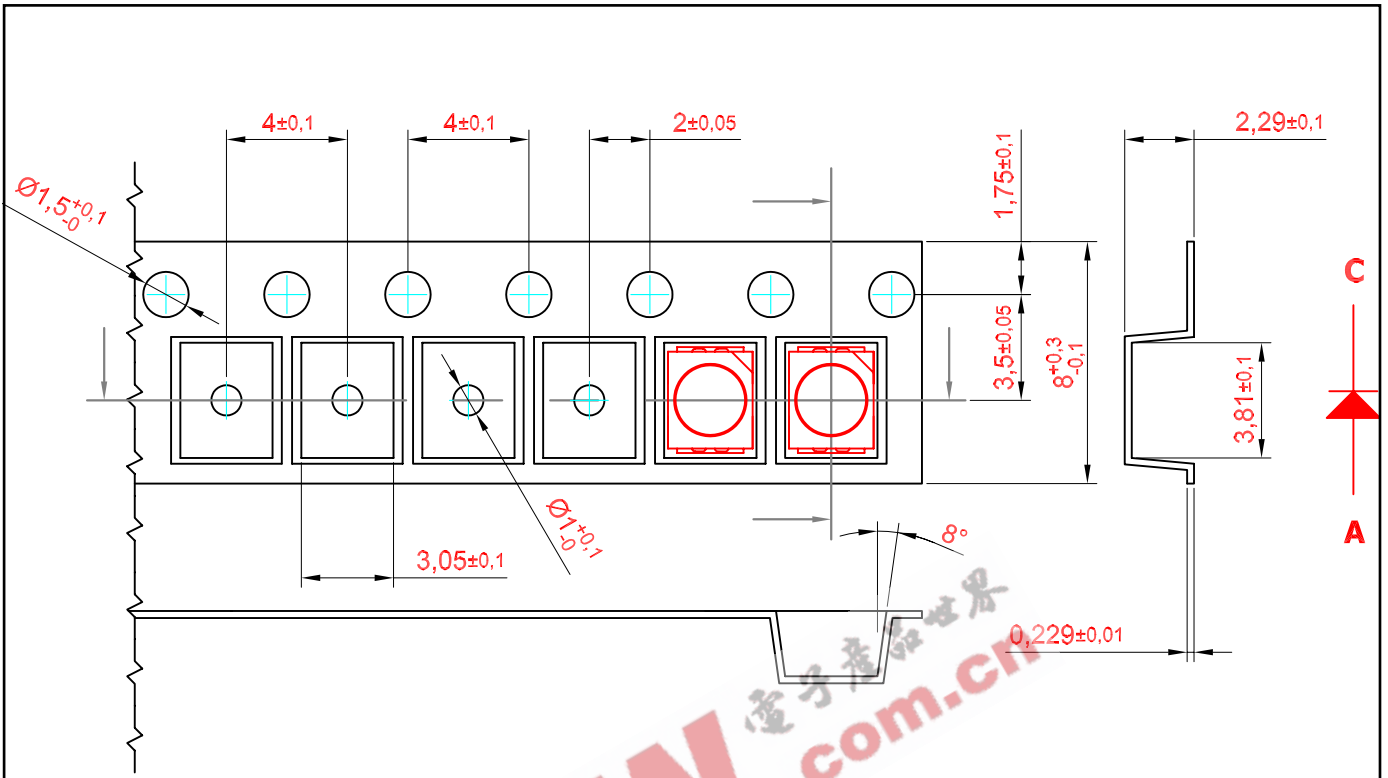
### Recommended Solder Pad



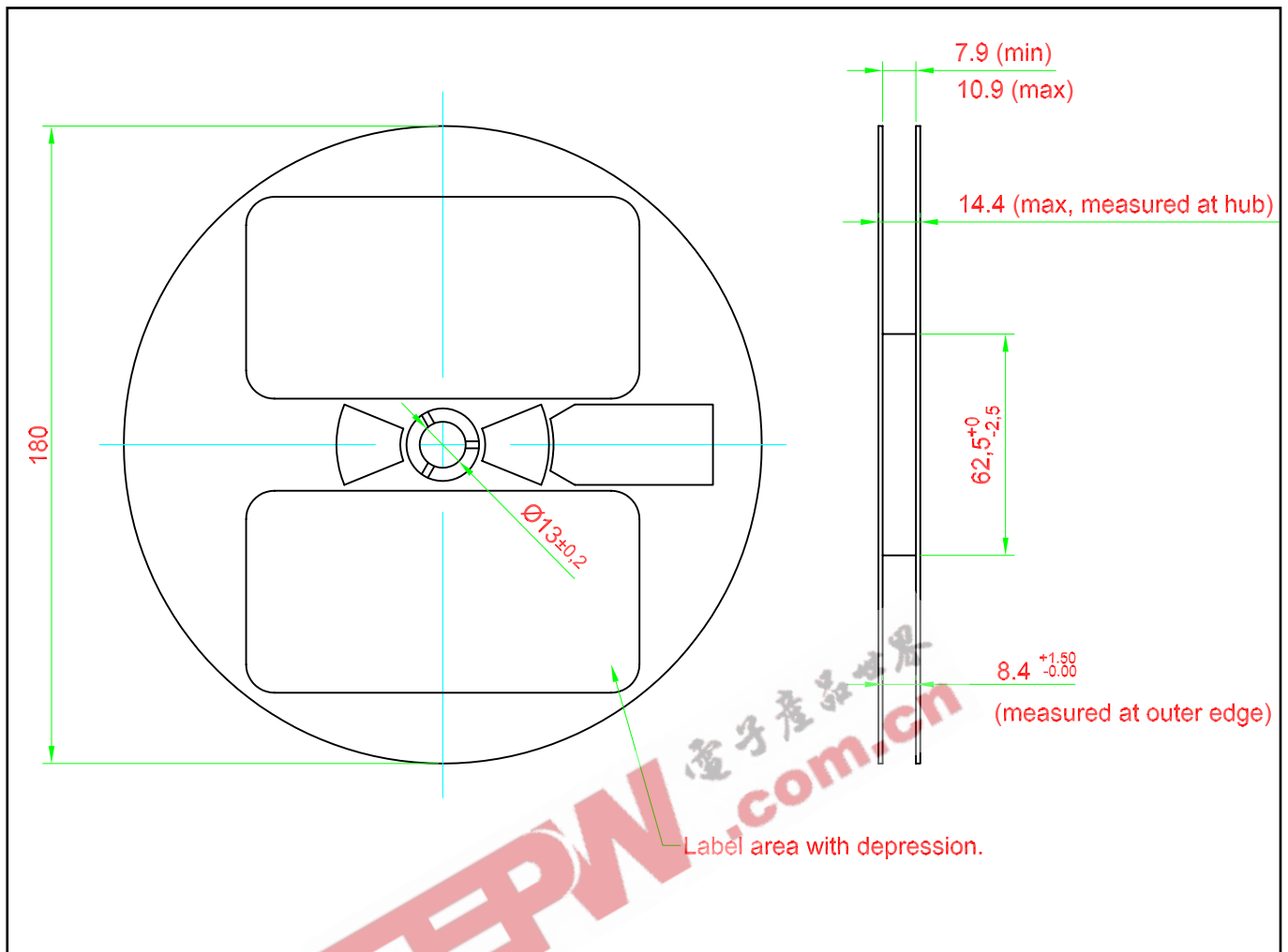


**Taping and orientation**

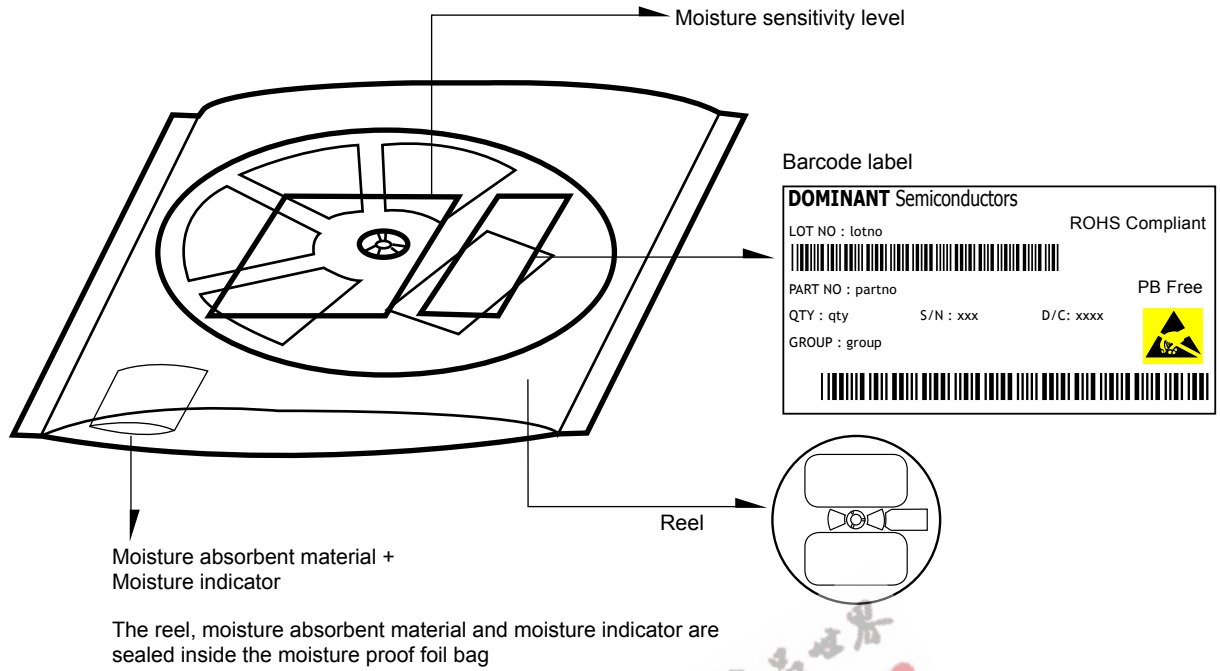
- Reels come in quantity of 2000 units.
- Reel diameter is 180 mm.



**Packaging Specification**



**Packaging Specification**

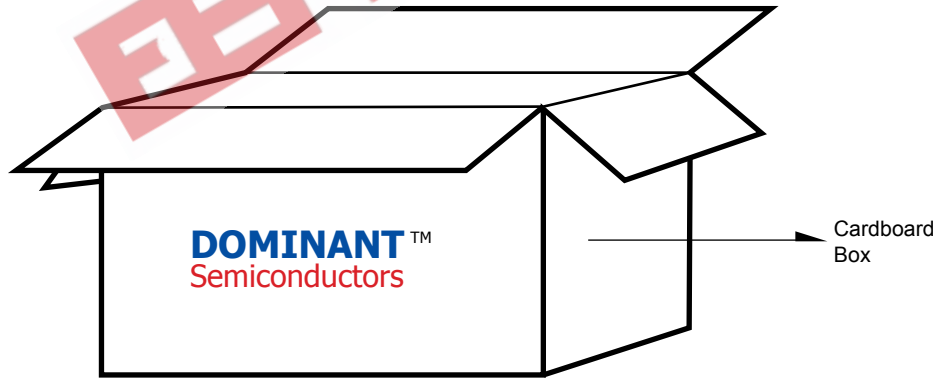


**Average 1pc DomiLED/Multi DomiLED 1 completed bag (2000pcs)**

Weight (gram)

0.034

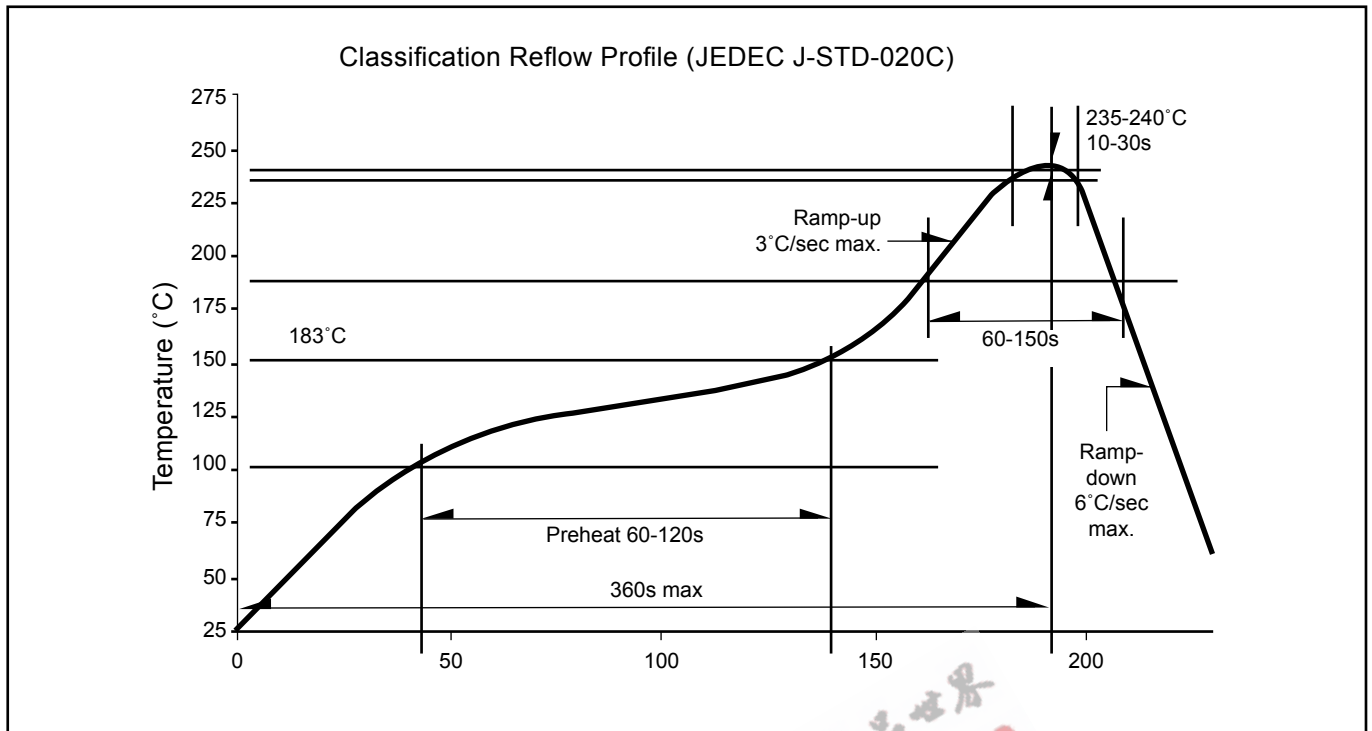
190 ± 10



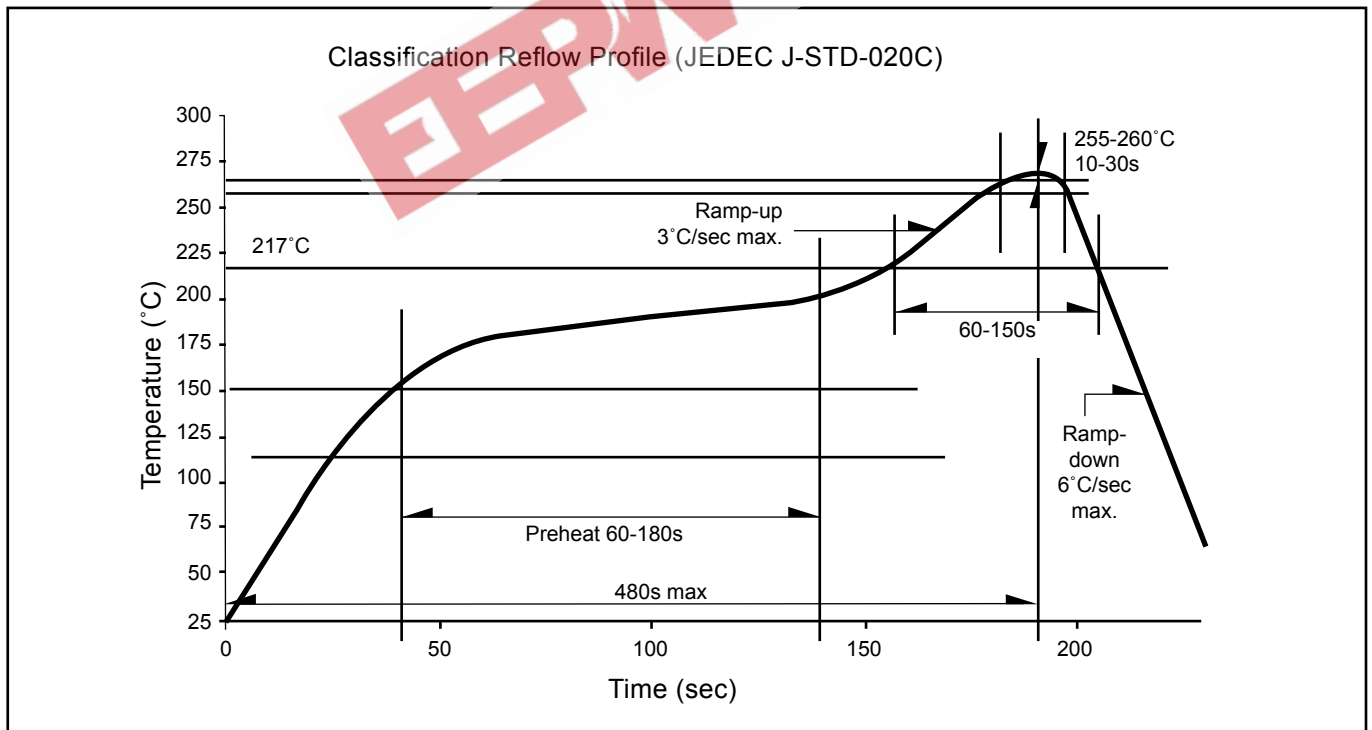
**For DomiLED™**

| 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<br>- Add new PartNo: DDY-CJE-ST2-1 | 23 Apr 2007          |
|      |   |                      |
|      |   |                      |
|      |   |                      |
|      |   |                      |
|      |   |                      |
|      |   |                      |
|      |   |                      |
|      |   |                      |
|      |   |                      |
|      |   |                      |

**NOTE**

All the information contained in this document is considered to be reliable at the time of publishing. However, DOMINANT Semiconductors does not assume any liability arising out of the application or use of any product described herein.

DOMINANT Semiconductors reserves the right to make changes at any time without prior notice to any products in order to improve reliability, function or design.

DOMINANT Semiconductors 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 Semiconductors.

## 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>.

### Please contact us for more information:

#### Head Quarter

DOMINANT Semiconductors 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](mailto:sales@dominant-semi.com)

#### DOMINANT China Sales Office

DOMINANT Semiconductors (Shenzhen) Co. Ltd.  
24BC Newbaohui Building, No. 1007 West Nanhai Blvd., Nanshan, Shenzhen, China P.C. 518054  
Tel: +86 (755) 86031785 / +86 (755) 86031786 Fax: +86 (755) 86031789  
E-mail: [sales\\_china@dominant-semi.com](mailto:sales_china@dominant-semi.com)

#### DOMINANT Korea Sales Office

DOMINANT Semiconductors Korea Inc.  
902 Sunil Technopia, 440 Sangdaewon-dong, Jungwon-gu, Sungnam-si, Kyunggi-do, Korea 462726  
Tel: 82-31-777-3978 Fax: 82-31-777-3976  
E-mail: [sales\\_korea@dominant-semi.com](mailto:sales_korea@dominant-semi.com)

