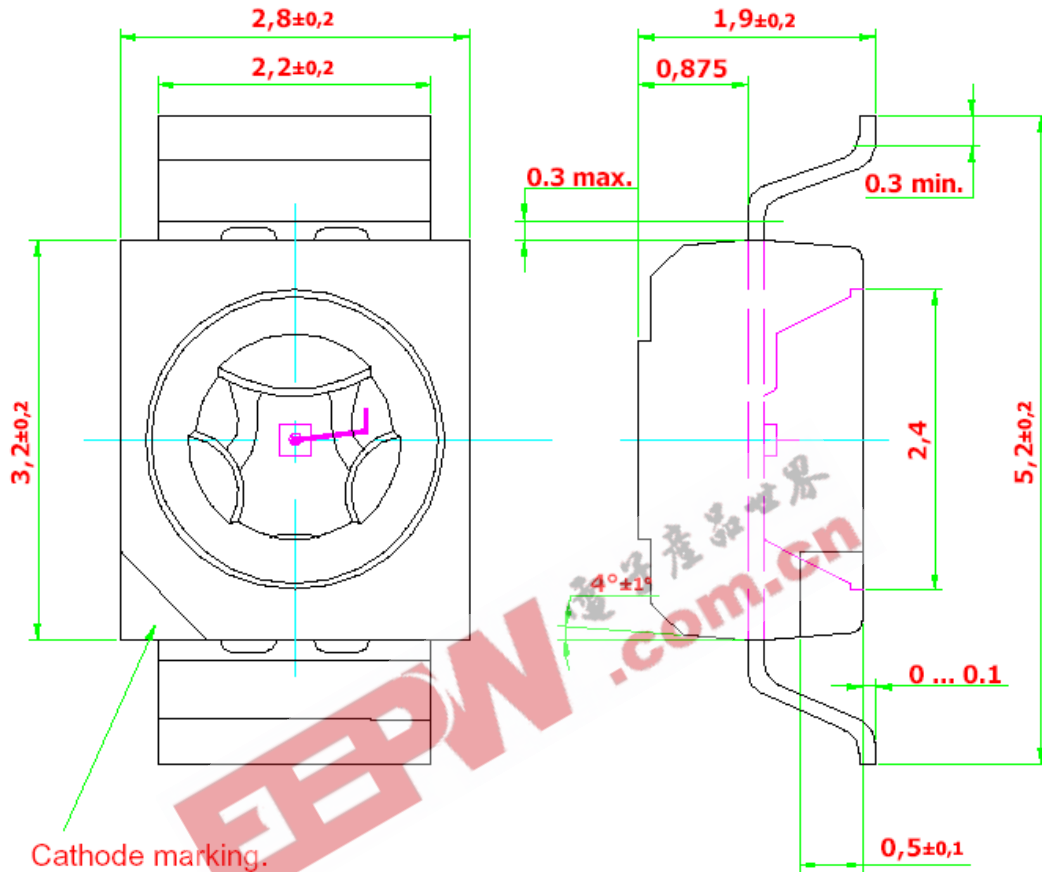


## DomiLED InGaN – Reverse Gull-wing



- High brightness surface mount LED.
- Based on InGaN technology.
- 120° viewing angle.
- Small package outline (LxWxH) of 2.8 x 3.2 x 1.8 mm.
- Qualified according to JEDEC moisture sensitivity Level 2.
- Compatible to both IR reflow soldering and TTV soldering.

| Part Ordering Number   | Chip Technology / Color       | Viewing angle | Luminous Intensity @ If = 20mA<br>lv ( mcd )   |
|--|-------------------------------|---------------|--|
| <b>DDB-CRS-PQ2-1</b><br><ul style="list-style-type: none"> <li>• DDB-CRS-P1</li> <li>• DDB-CRS-P2</li> <li>• DDB-CRS-Q1</li> <li>• DDB-CRS-Q2</li> </ul> | InGaN /<br>Blue, 470 nm       | 120           | <b>45.0 ... 112.5</b><br>45.0 ... 56.0<br>56.0 ... 71.5<br>71.5 ... 90.0<br>90.0 ... 112.5         |
| <b>DDB-SRS-QR2-1</b><br><ul style="list-style-type: none"> <li>• DDB-SRS-Q1</li> <li>• DDB-SRS-Q2</li> <li>• DDB-SRS-R1</li> <li>• DDB-SRS-R2</li> </ul> |                               |               | <b>71.5 ... 180.0</b><br>71.5 ... 90.0<br>90.0 ... 112.5<br>112.5 ... 140.0<br>140.0 ... 180.0     |
| <b>DDB-URS-RS1-1</b><br><ul style="list-style-type: none"> <li>• DDB-URS-R1</li> <li>• DDB-URS-R2</li> <li>• DDB-URS-S1</li> </ul>                       |                               |               | <b>112.5 ... 224.0</b><br>112.5 ... 140.0<br>140.0 ... 180.0<br>180.0 ... 224.0                    |
| <b>DDC-CRS-RS2-1</b><br><ul style="list-style-type: none"> <li>• DDC-CRS-R1</li> <li>• DDC-CRS-R2</li> <li>• DDC-CRS-S1</li> <li>• DDC-CRS-S2</li> </ul> | InGaN /<br>Cyan, 505 nm       | 120           | <b>112.5 ... 285.0</b><br>112.5 ... 140.0<br>140.0 ... 180.0<br>180.0 ... 224.0<br>224.0 ... 285.0 |
| <b>DDC-SRS-ST2-1</b><br><ul style="list-style-type: none"> <li>• DDC-SRS-S1</li> <li>• DDC-SRS-S2</li> <li>• DDC-SRS-T1</li> <li>• DDC-SRS-T2</li> </ul> |                               |               | <b>180.0 ... 450.0</b><br>180.0 ... 224.0<br>224.0 ... 285.0<br>285.0 ... 355.0<br>355.0 ... 450.0 |
| <b>DDT-CRS-RS2-1</b><br><ul style="list-style-type: none"> <li>• DDT-CRS-R1</li> <li>• DDT-CRS-R2</li> <li>• DDT-CRS-S1</li> <li>• DDT-CRS-S2</li> </ul> | InGaN /<br>True Green, 525 nm | 120           | <b>112.5 ... 285.0</b><br>112.5 ... 140.0<br>140.0 ... 180.0<br>180.0 ... 224.0<br>224.0 ... 285.0 |
| <b>DDT-SRS-ST2-1</b><br><ul style="list-style-type: none"> <li>• DDT-SRS-S1</li> <li>• DDT-SRS-S2</li> <li>• DDT-SRS-T1</li> <li>• DDT-SRS-T2</li> </ul> |                               |               | <b>180.0 ... 450.0</b><br>180.0 ... 224.0<br>224.0 ... 285.0<br>285.0 ... 355.0<br>355.0 ... 450.0 |
| <b>DDT-URS-TU2-1</b><br><ul style="list-style-type: none"> <li>• DDT-URS-T1</li> <li>• DDT-URS-T2</li> <li>• DDT-URS-U1</li> <li>• DDT-URS-U2</li> </ul> |                               |               | <b>285.0 ... 715.0</b><br>285.0 ... 355.0<br>355.0 ... 450.0<br>450.0 ... 560.0<br>560.0 ... 715.0 |

| Part Ordering Number   | Chip Technology / Color | Viewing angle | Luminous Intensity @ If = 20mA<br>lv ( mcd )                             |
|--|-------------------------|---------------|--|
| <b>DDW-CRD-RS2-1</b>   | InGaN /<br>White        | 120           | <b>112.5 ... 285.0</b>   |
| <ul style="list-style-type: none"> <li>• DDW-CRD-R1</li> <li>• DDW-CRD-R2</li> <li>• DDW-CRD-S1</li> <li>• DDW-CRD-S2</li> </ul> |                         |               | 112.5 ... 140.0<br>140.0 ... 180.0<br>180.0 ... 224.0<br>224.0 ... 285.0 |
| <b>DDW-CRD-ST1-1</b>   |                         |               | <b>180.0 ... 355.0</b>   |
| <ul style="list-style-type: none"> <li>• DDW-CRD-S1</li> <li>• DDW-CRD-S2</li> <li>• DDW-CRD-T1</li> </ul>                       |                         |               | 180.0 ... 224.0<br>224.0 ... 285.0<br>285.0 ... 355.0                    |
| <b>DDW-SRD-ST2-1</b>   |                         |               | <b>180.0 ... 450.0</b>   |
| <ul style="list-style-type: none"> <li>• DDW-SRD-S1</li> <li>• DDW-SRD-S2</li> <li>• DDW-SRD-T1</li> <li>• DDW-SRD-T2</li> </ul> |                         |               | 180.0 ... 224.0<br>224.0 ... 285.0<br>285.0 ... 355.0<br>355.0 ... 450.0 |
| <b>DDW-URD-TU2-1</b>   |                         |               | <b>285.0 ... 715.0</b>   |
| <ul style="list-style-type: none"> <li>• DDW-URD-T1</li> <li>• DDW-URD-T2</li> <li>• DDW-URD-U1</li> <li>• DDW-URD-U2</li> </ul> |                         |               | 285.0 ... 355.0<br>355.0 ... 450.0<br>450.0 ... 560.0<br>560.0 ... 715.0 |
| <b>DDW-URD-UV1-1</b>   |                         |               | <b>450.0 ... 900.0</b>   |
| <ul style="list-style-type: none"> <li>• DDW-URD-U1</li> <li>• DDW-URD-U2</li> <li>• DDW-URD-V1</li> </ul>                       |                         |               | 450.0 ... 560.0<br>560.0 ... 715.0<br>715.0 ... 900.0                    |

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.

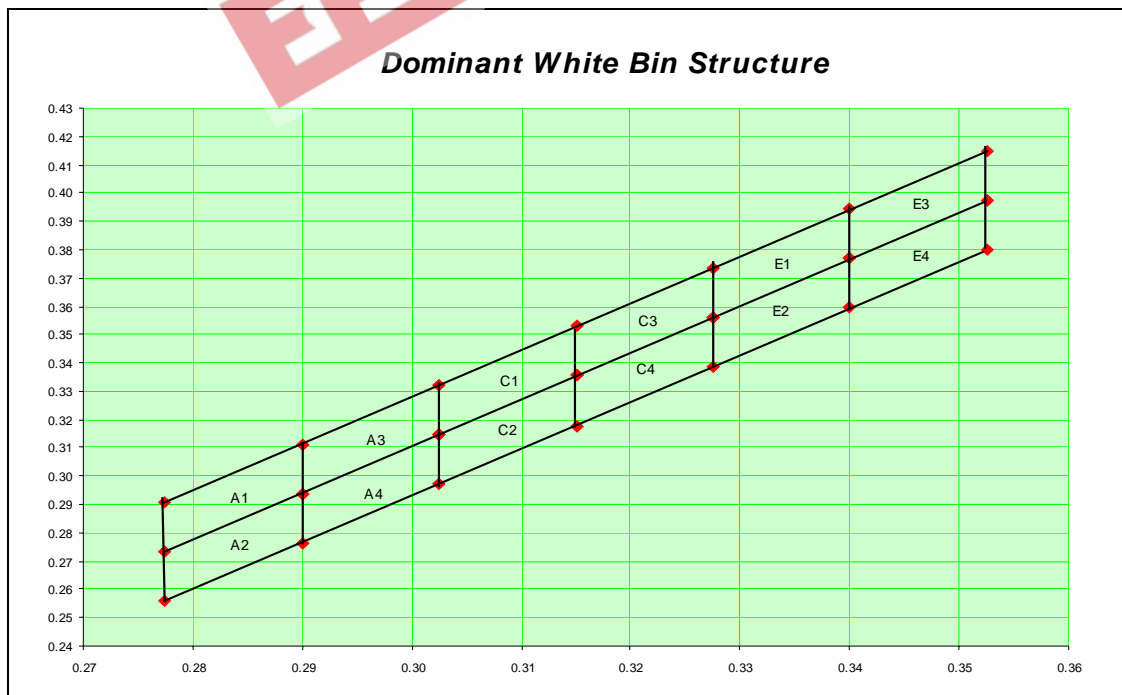
## DOMINANT Semiconductors

### Wavelength Grouping.

| Color           | Group | Wavelength distribution (nm) |
|-----------------|-------|------------------------------|
| DDB; Blue       | Full  | 464 - 476                    |
|                 | W     | 464 - 468                    |
|                 | X     | 468 - 472                    |
|                 | Y     | 472 - 476                    |
| DDC; Cyan       | Full  | 499 - 511                    |
|                 | W     | 499 - 503                    |
|                 | X     | 503 - 507                    |
|                 | Y     | 507 - 511                    |
| DDT; True Green | Full  | 520 - 536                    |
|                 | W     | 520 - 524                    |
|                 | X     | 524 - 528                    |
|                 | Y     | 528 - 532                    |
|                 | Z     | 532 - 536                    |

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

### DDW, White Color Grouping



## DOMINANT Semiconductors

Chromaticity coordinate groups are measured with an accuracy of  $\pm 0.01$ .

| W   |    |        |        |        | X      |     |    |        |        |        |        |
|-----|----|--------|--------|--------|--------|-----|----|--------|--------|--------|--------|
| Bin |    |        |        |        |        | Bin |    |        |        |        |        |
| A1  | Cx | 0.2775 | 0.2900 | 0.2900 | 0.2775 | E1  | Cx | 0.3275 | 0.3400 | 0.3400 | 0.3275 |
|     | Cy | 0.2732 | 0.2939 | 0.3114 | 0.2907 |     | Cy | 0.3561 | 0.3768 | 0.3943 | 0.3736 |
| A2  | Cx | 0.2775 | 0.2900 | 0.2900 | 0.2775 | E2  | Cx | 0.3275 | 0.3400 | 0.3400 | 0.3275 |
|     | Cy | 0.2557 | 0.2764 | 0.2939 | 0.2732 |     | Cy | 0.3386 | 0.3593 | 0.3768 | 0.3561 |
| A3  | Cx | 0.2900 | 0.3025 | 0.3025 | 0.2900 | E3  | Cx | 0.3400 | 0.3525 | 0.3525 | 0.3400 |
|     | Cy | 0.2939 | 0.3146 | 0.3321 | 0.3114 |     | Cy | 0.3768 | 0.3975 | 0.4150 | 0.3943 |
| A4  | Cx | 0.2900 | 0.3025 | 0.3025 | 0.2900 | E4  | Cx | 0.3400 | 0.3525 | 0.3525 | 0.3400 |
|     | Cy | 0.2764 | 0.2971 | 0.3146 | 0.2939 |     | Cy | 0.3593 | 0.3800 | 0.3975 | 0.3768 |
| C1  | Cx | 0.3025 | 0.3150 | 0.3150 | 0.3025 |     |    |        |        |        |        |
|     | Cy | 0.3146 | 0.3354 | 0.3529 | 0.3321 |     |    |        |        |        |        |
| C2  | Cx | 0.3025 | 0.3150 | 0.3150 | 0.3025 |     |    |        |        |        |        |
|     | Cy | 0.2971 | 0.3179 | 0.3354 | 0.3146 |     |    |        |        |        |        |
| C3  | Cx | 0.3150 | 0.3275 | 0.3275 | 0.3150 |     |    |        |        |        |        |
|     | Cy | 0.3354 | 0.3561 | 0.3736 | 0.3529 |     |    |        |        |        |        |
| C4  | Cx | 0.3150 | 0.3275 | 0.3275 | 0.3150 |     |    |        |        |        |        |
|     | Cy | 0.3179 | 0.3386 | 0.3561 | 0.3354 |     |    |        |        |        |        |

### Vf Binning.

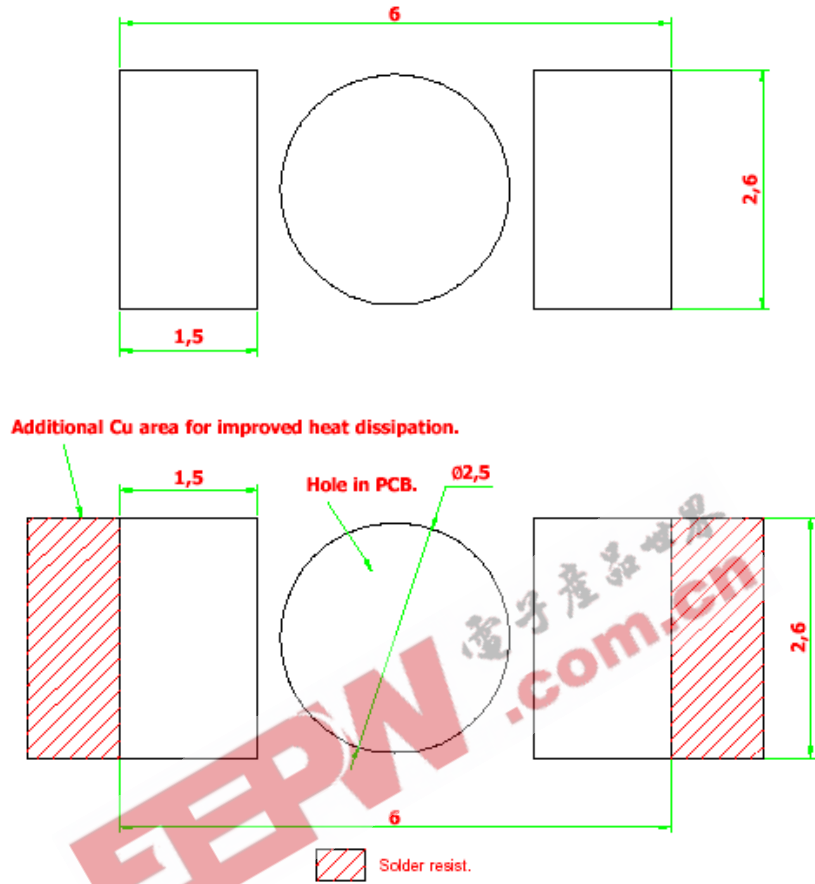
| Vf Bin @ 20mA | Forward voltage (V) |
|---------------|---------------------|
| Standard      | 3.35 ... 4.25       |
| 01            | 3.35 ... 3.65       |
| 02            | 3.65 ... 3.95       |
| 03            | 3.95 ... 4.25       |

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

### Absolute Maximum Ratings.

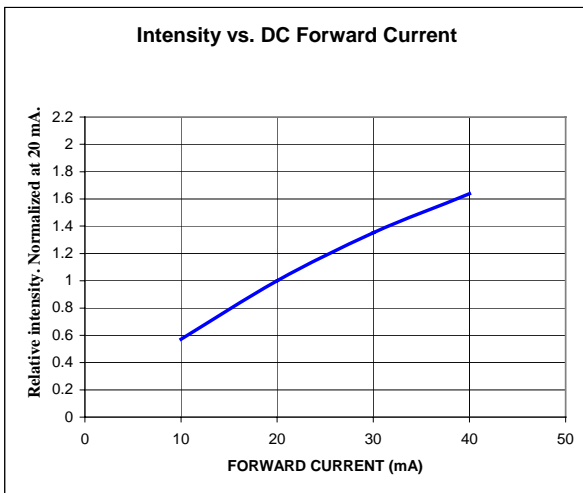
|  | Maximum Value | Unit         |
|--|---------------|--------------|
| DC forward current.  | 20            | mA           |
| Peak pulse current; (tp $\leq$ 10 $\mu$ s, Duty cycle = 0.005) | 200           | mA           |
| Reverse voltage.   | 5             | V            |
| LED junction temperature.                                      | 125           | $^{\circ}$ C |
| Operating temperature.   | -40 ... +100  | $^{\circ}$ C |
| Storage temperature.   | -40 ... +100  | $^{\circ}$ C |
| Power dissipation ( at room temperature )                      | 85            | mW           |

**Recommended Solder Pad**

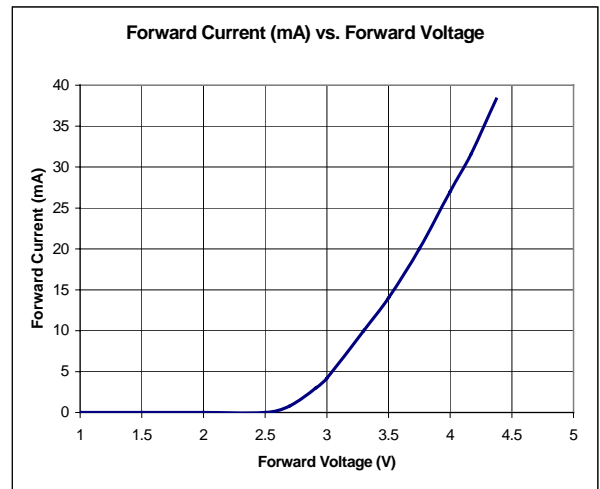


# DOMINANT Semiconductors

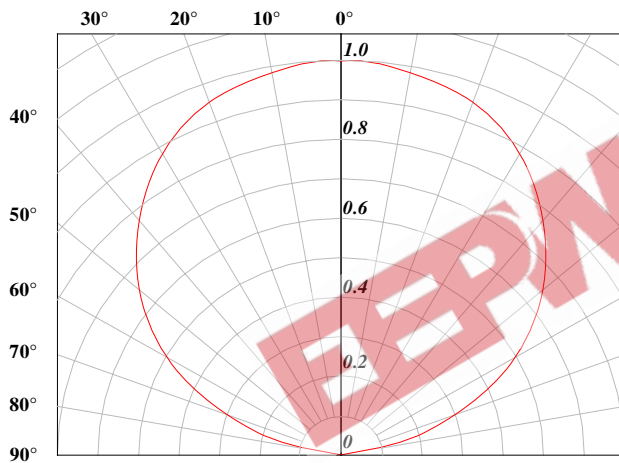
Relative luminous intensity vs. forward current.



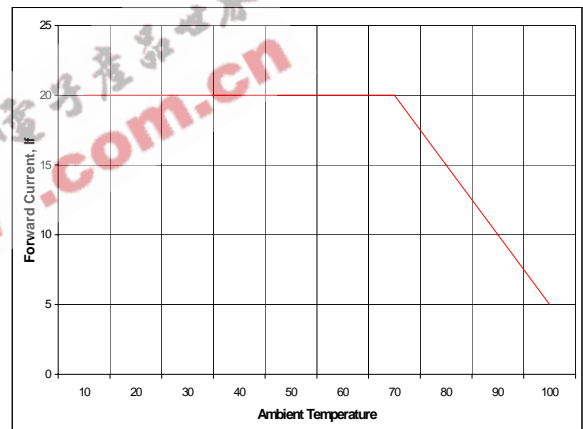
Forward current vs. forward voltage.



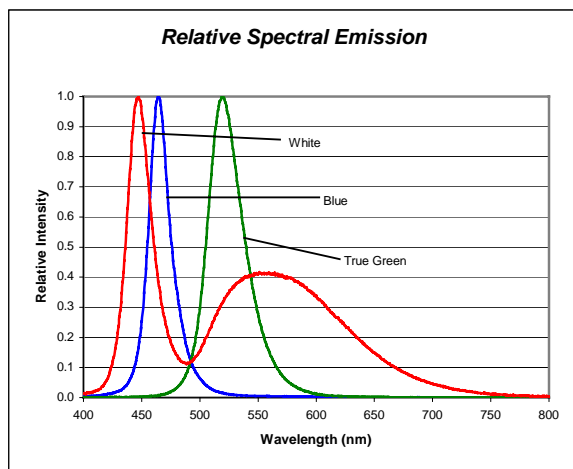
Radiation pattern.



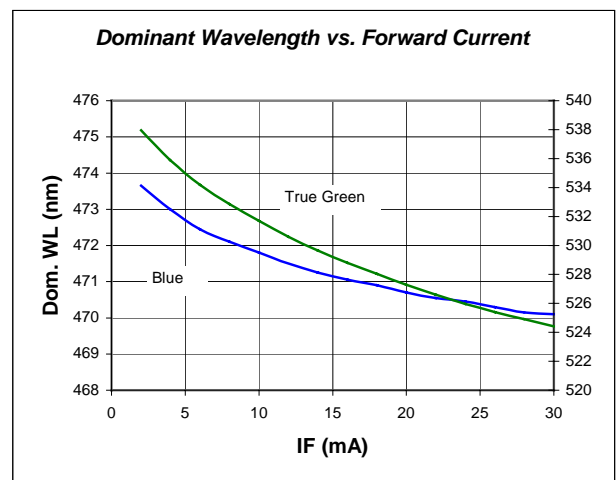
Maximum forward current vs. temperature.



Relative Intensity vs. Wavelength



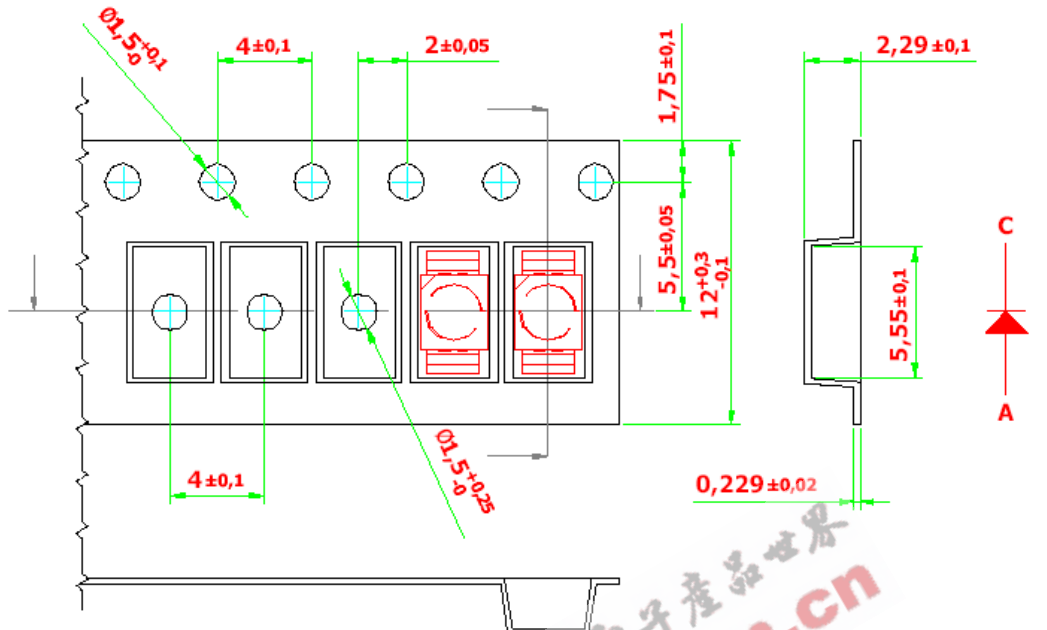
Dominant Wavelength vs. Forward Current



**Taping And Orientation.**

Reels come in quantity of 8000 units or 2000 units.

Reel diameters are 330 mm and 180 mm respectively.

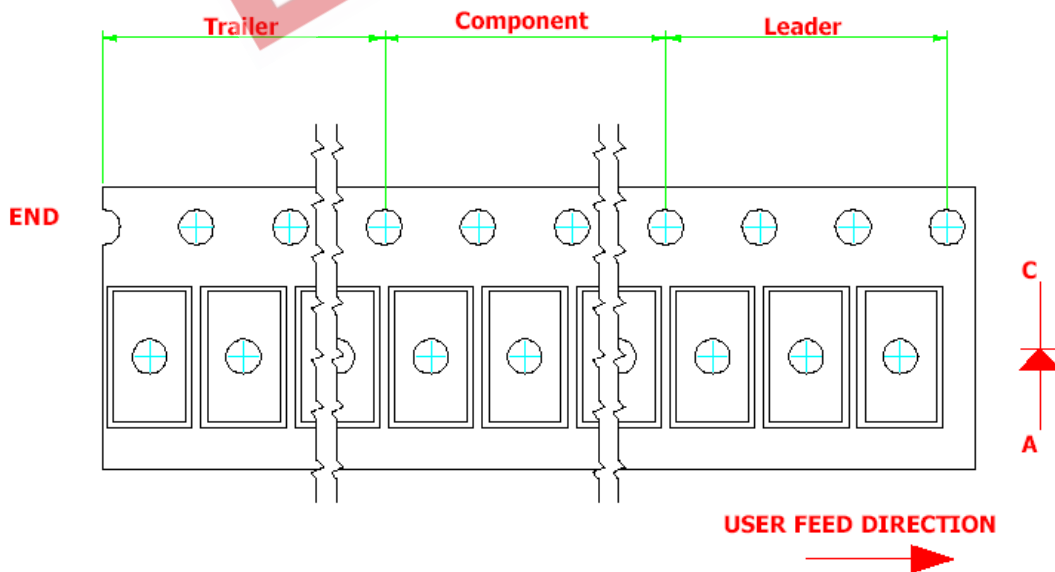


200 mm min. for Ø180 reel.

480 mm min. for Ø180 reel.

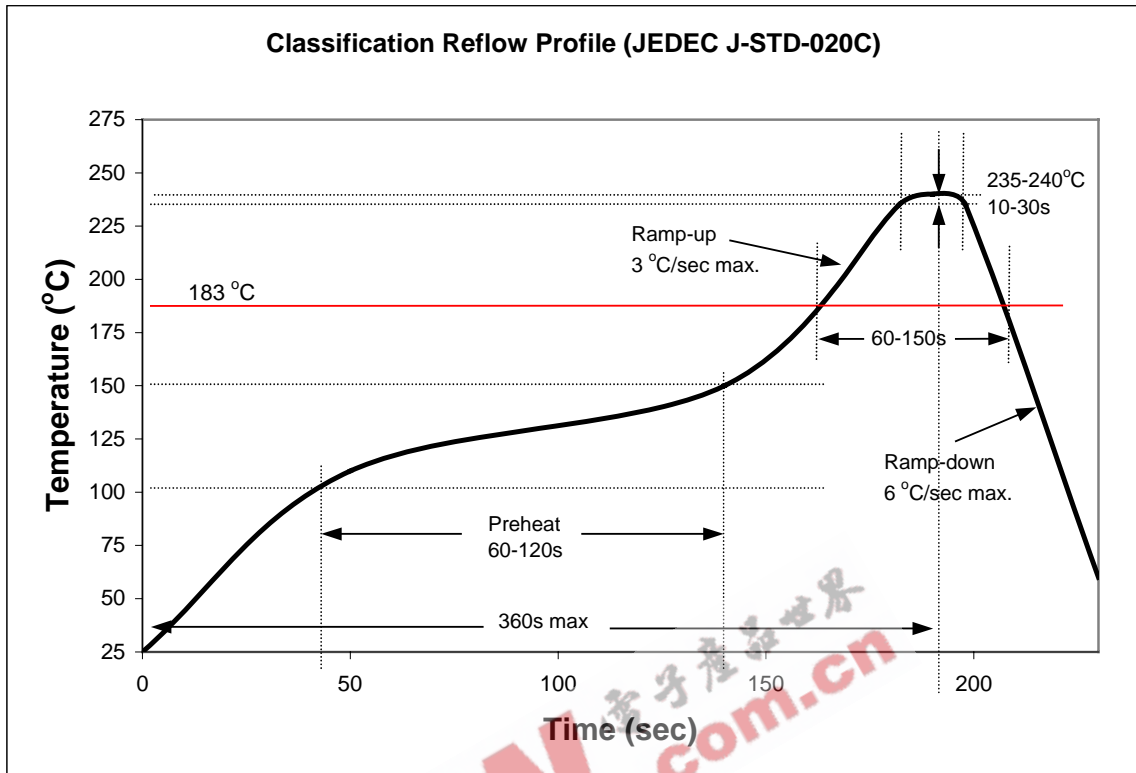
200 mm min. for Ø330 reel.

960 mm min. for Ø330 reel.

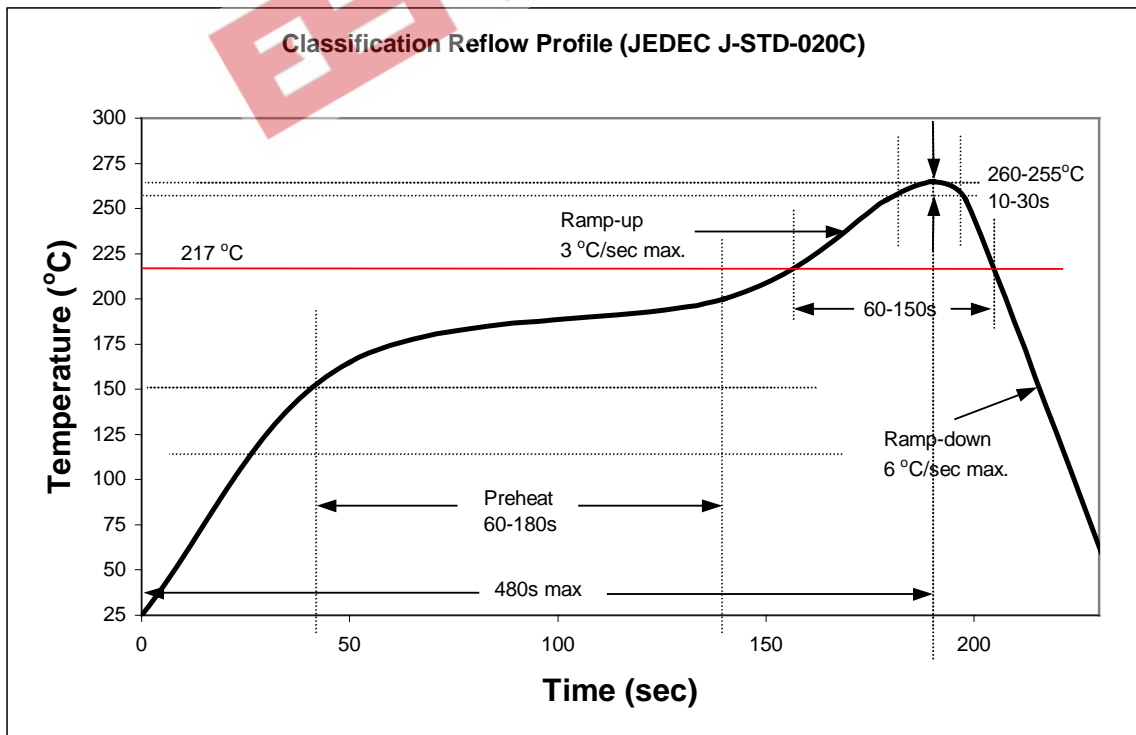




**Recommended Sn-Pb IR-Reflow Soldering Profile.**



**Recommended Pb Free IR-Reflow Soldering Profile.**



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### NOTE.

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