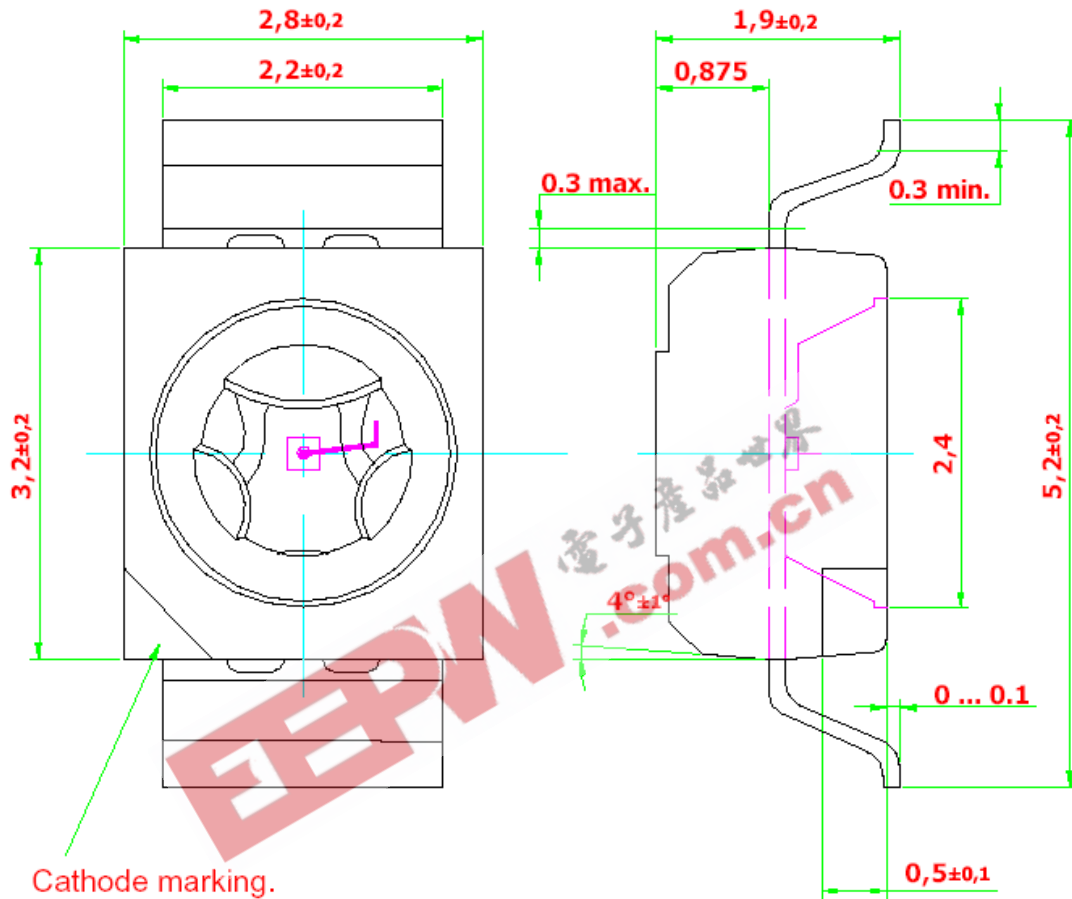


DomiLED – AlInGaP : DDx-xRS



- High brightness surface mount LED.
- 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 TTW soldering.

| Part Ordering Number | Chip Technology / Color | Viewing Angle ° | Luminous Intensity @ IF=20mA Iv (mcd) |
|--|------------------------------------|-----------------|--|
| DDH-CRS-PQ2-1 <ul style="list-style-type: none"> • DDH-CRS-P1 • DDH-CRS-P2 • DDH-CRS-Q1 • DDH-CRS-Q2 DDH-SRS-QR2-1 <ul style="list-style-type: none"> • DDH-SRS-Q1 • DDH-SRS-Q2 • DDH-SRS-R1 • DDH-SRS-R2 | AllnGaP Hyper-red, 640nm | 120 | 45.0 – 112.5 45.0 – 56.0 56.0 – 71.5 71.5 – 90.0 90.0 – 112.5 71.5 – 180.0 71.5 – 90.0 90.0 – 112.5 112.5 – 140.0 140.0 – 180.0 |
| DDS-CRS-PQ2-1 <ul style="list-style-type: none"> • DDS-CRS-P1 • DDS-CRS-P2 • DDS-CRS-Q1 • DDS-CRS-Q2 ** Not for new design. | AllnGaP Super-red, 632nm | 120 | 45.0 – 112.5 45.0 – 56.0 56.0 – 71.5 71.5 – 90.0 90.0 – 112.5 71.5 – 180.0 71.5 – 90.0 90.0 – 112.5 112.5 – 140.0 140.0 – 180.0 71.5 – 180.0 71.5 – 90.0 90.0 – 112.5 112.5 – 140.0 140.0 – 180.0 |
| DDR-CRS-QR2-1 <ul style="list-style-type: none"> • DDR-CRS-Q1 • DDR-CRS-Q2 • DDR-CRS-R1 • DDR-CRS-R2 ** Not for new design. | AllnGaP Red, 625nm | 120 | 71.5 – 180.0 71.5 – 90.0 90.0 – 112.5 112.5 – 140.0 140.0 – 180.0 112.5 – 285.0 112.5 – 140.0 140.0 – 180.0 180.0 – 224.0 224.0 – 285.0 112.5 – 285.0 112.5 – 140.0 140.0 – 180.0 180.0 – 224.0 224.0 – 285.0 |
| DDR-CRS-RS2-1 <ul style="list-style-type: none"> • DDR-CRS-R1 • DDR-CRS-R2 • DDR-CRS-S1 • DDR-CRS-S2 DDR-SRS-RS2-1 <ul style="list-style-type: none"> • DDR-SRS-R1 • DDR-SRS-R2 • DDR-SRS-S1 • DDR-SRS-S2 | | | |

| Part Ordering Number | Chip Technology / Color | Viewing Angle | Luminous Intensity @ IF=20mA Iv (mcd) |
|--|------------------------------------|---------------|--|
| DDR-TRS-TU2-1 <ul style="list-style-type: none"> • DDR-TRS-T1 • DDR-TRS-T2 • DDR-TRS-U1 • DDR-TRS-U2 | Ts AllnGaP Red, 625nm | 120 | 285.0 – 715.0 285.0 – 355.0 355.0 – 450.0 450.0 – 560.0 560.0 – 715.0 |
| DDA-CRS-RS2-1 <ul style="list-style-type: none"> • DDA-CRS-R1 • DDA-CRS-R2 • DDA-CRS-S1 • DDA-CRS-S2 DDA-SRS-ST2-1 <ul style="list-style-type: none"> • DDA-SJS-S1 • DDA-SJS-S2 • DDA-SJS-T1 • DDA-SJS-T2 | As AllnGaP Amber, 615nm | 120 | 112.5 – 285.0 112.5 – 140.0 140.0 – 180.0 180.0 – 224.0 224.0 – 285.0 180.0 – 450.0 180.0 – 224.0 224.0 – 285.0 285.0 – 355.0 355.0 – 450.0 |
| DDO-CRS-RS2-1 <ul style="list-style-type: none"> • DDO-CRS-R1 • DDO-CRS-R2 • DDO-CRS-S1 • DDO-CRS-S2 DDO-SRS-ST2-1 <ul style="list-style-type: none"> • DDO-SRS-S1 • DDO-SRS-S2 • DDO-SRS-T1 • DDO-SRS-T2 | As AllnGaP Orange, 605nm | 120 | 112.5 – 285.0 112.5 – 140.0 140.0 – 180.0 180.0 – 224.0 224.0 – 285.0 180.0 – 450.0 180.0 – 224.0 224.0 – 285.0 285.0 – 355.0 355.0 – 450.0 |
| DDY-CRS-QR2-1 <ul style="list-style-type: none"> • DDY-CRS-Q1 • DDY-CRS-Q2 • DDY-CRS-R1 • DDY-CRS-R2 ** Not for new design | As AllnGaP Yellow, 587nm | 120 | 71.5 – 180.0 71.5 – 90.0 90.0 – 112.5 112.5 – 140.0 140.0 – 180.0 |
| DDY-CRS-RS2-1 <ul style="list-style-type: none"> • DDY-CRS-R1 • DDY-CRS-R2 • DDY-CRS-S1 • DDY-CRS-S2 DDY-SRS-ST2-1 <ul style="list-style-type: none"> • DDY-SRS-S1 • DDY-SRS-S2 • DDY-SRS-T1 • DDY-SRS-T2 | | | 112.5 – 285.0 112.5 – 140.0 140.0 – 180.0 180.0 – 224.0 224.0 – 285.0 180.0 – 450.0 180.0 – 224.0 224.0 – 285.0 285.0 – 355.0 355.0 – 450.0 |

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| Part Ordering Number | Chip Technology / Color | Viewing Angle | Luminous Intensity @ IF=20mA Iv (mcd) |
|--|------------------------------------|---------------|--|
| DDY-TRS-TU2-1 <ul style="list-style-type: none"> • DDY-TRS-T1 • DDY-TRS-T2 • DDY-TRS-U1 • DDY-TRS-U2 | Ts AlInGaP Yellow, 590nm | 120 | 285.0 – 715.0 285.0 – 355.0 355.0 – 450.0 450.0 – 560.0 560.0 – 715.0 |
| DDG-CRS-PQ2-1 <ul style="list-style-type: none"> • DDG-CRS-P1 • DDG-CRS-P2 • DDG-CRS-Q1 • DDG-CRS-Q2 DDG-SRS-QR2-1 <ul style="list-style-type: none"> • DDG-SRS-Q1 • DDG-SRS-Q2 • DDG-SRS-R1 • DDG-SRS-R2 | As AlInGaP Green, 572nm | 120 | 45.0 – 112.5 45.0 – 56.0 56.0 – 71.5 71.5 – 90.0 90.0 – 112.5 71.5 – 180.0 71.5 – 90.0 90.0 – 112.5 112.5 – 140.0 140.0 – 180.0 |

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) |
|-----------------------|-------|------------------------------|
| DDH; Hyper-red | Full | 636 - 646 |
| DDS; Super-red | Full | 625 – 640 |
| DDR-CJ, -SJ; Red (AS) | Full | 620 – 630 |
| DDR-TJ; 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 |

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

Electrical Characteristics at Ta=25°C.

| Part Number | Vf @ If = 20mA | | Vr @ Ir = 100uA |
|---------------------------------|----------------|----------|-----------------|
| | Typ. (V) | Max. (V) | Min.(V) |
| DDA, DDS, DDR-CJS, DDR-SJS, DDG | 2.1 | 2.3 | 12 |
| DDH, DDO, DDY-CJS, DDY-SJS | | | |
| DDR-TJS, DDY-TJS | 2.2 | 2.6 | 12 |

Forward voltage, Vf is measured with an accuracy of ± 0.1 V.

Vf Binning.

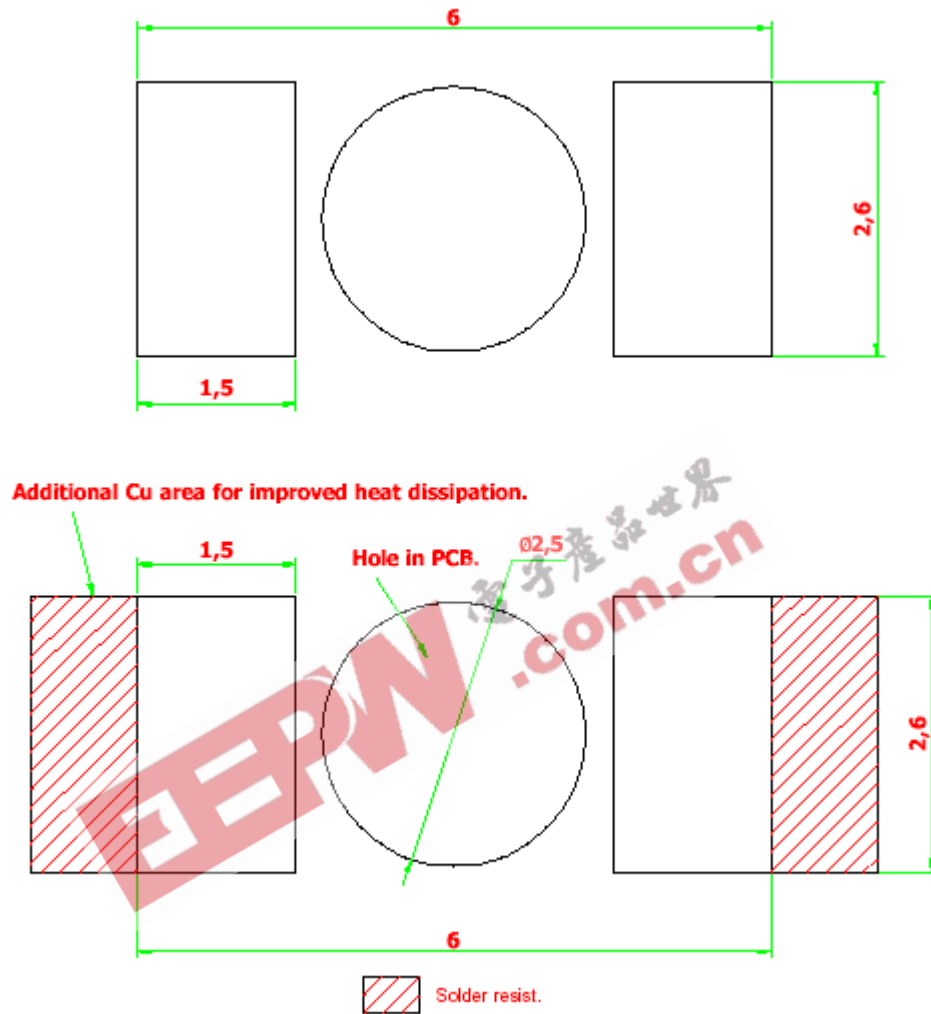
| Vf Bin @ 20mA | Forward Voltage (V) |
|---------------|---------------------|
| 01 | 1.55 ... 1.85 |
| 02 | 1.85 ... 2.15 |
| 03 | 2.15 ... 2.45 |
| 04 | 2.45 ... 2.75 |

Forward voltage, Vf is measured with an accuracy of ± 0.1 V

Absolute Maximum Ratings.

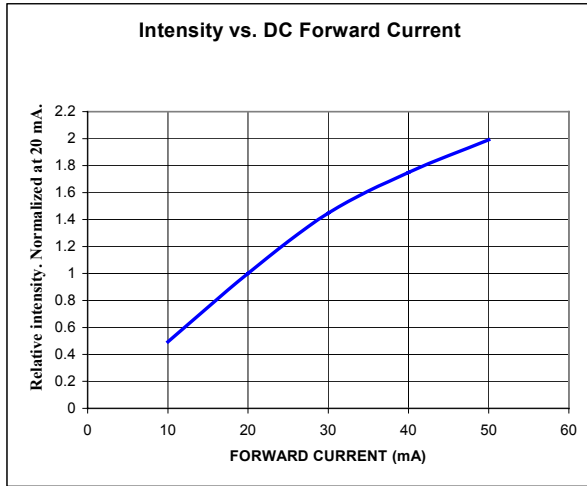
| | Maximum Value | Unit |
|---|---------------|--------------------|
| DC forward current. | 30 | mA |
| Peak pulse current; ($t_p \leq 10 \mu\text{s}$, Duty cycle = 0.005) | 1000 | mA |
| Reverse voltage. | 5 | V |
| LED junction temperature. | 125 | $^{\circ}\text{C}$ |
| Operating temperature. | -40 ... +100 | $^{\circ}\text{C}$ |
| Storage temperature. | -40 ... +100 | $^{\circ}\text{C}$ |
| Power dissipation (at room temperature) | 75 | mW |

Recommended Solder Pad

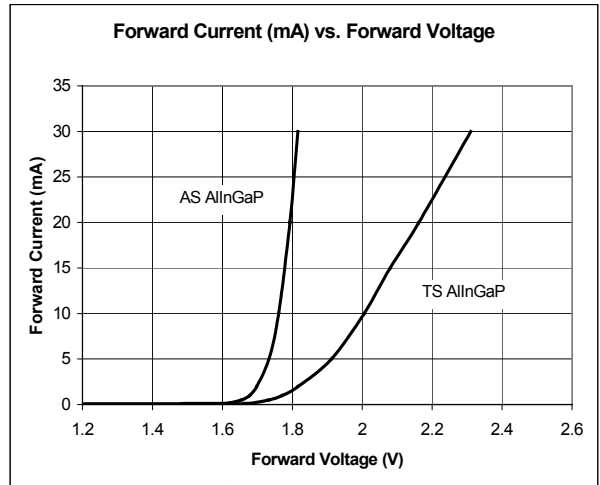


DOMINANT Semiconductors

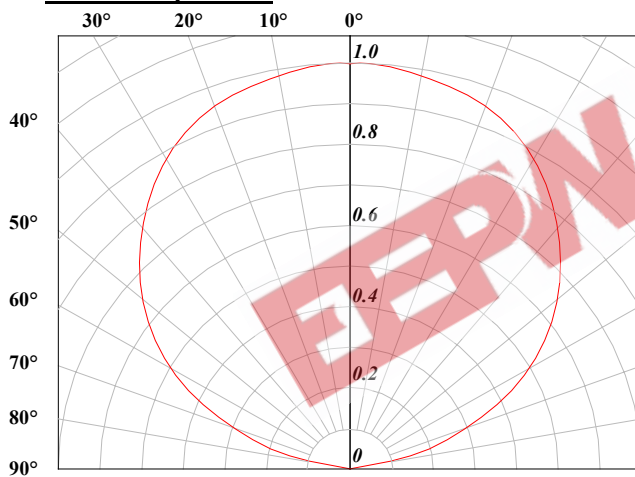
Relative intensity vs. forward current.



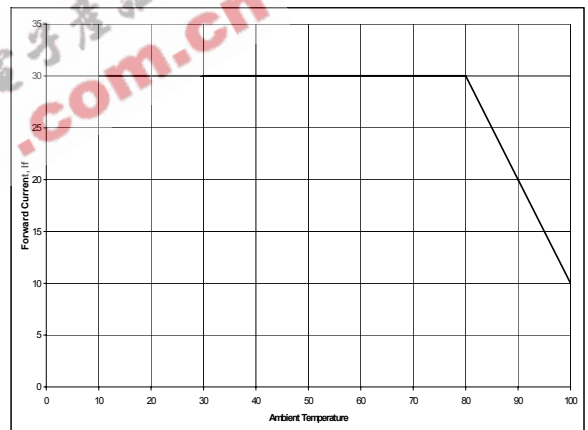
Forward current vs. forward voltage.



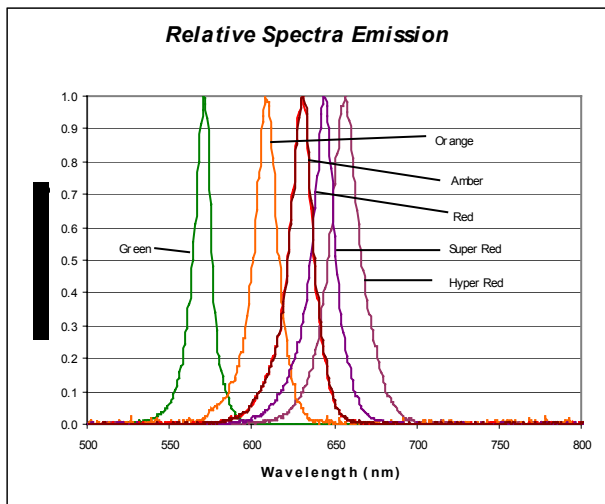
Radiation pattern.



Maximum forward current vs. temperature.



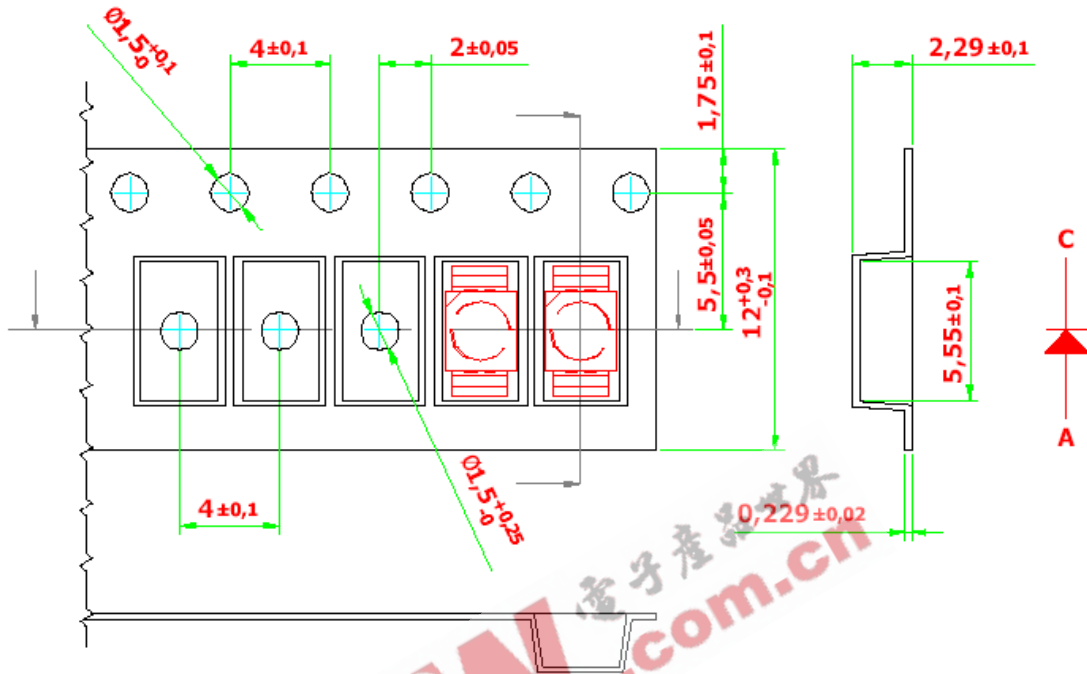
Relative Intensity vs. Wavelength



Taping And Orientation.

Reels come in quantity of 8000 units or 2000 units.

Reel diameters are 330 mm and 180 mm respectively.

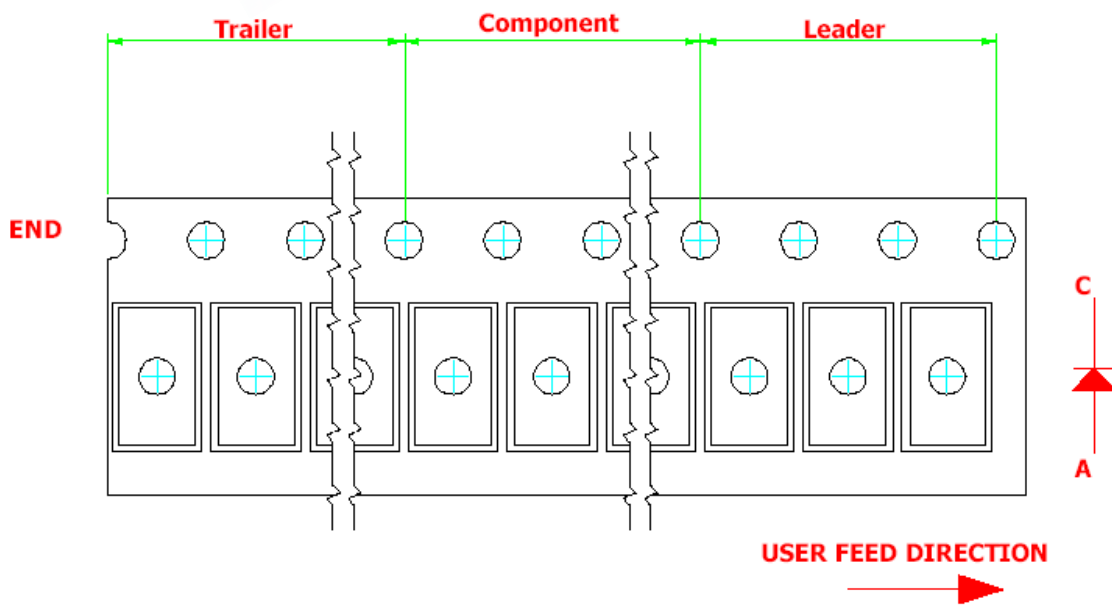


200 mm min. for $\varnothing 180$ reel.

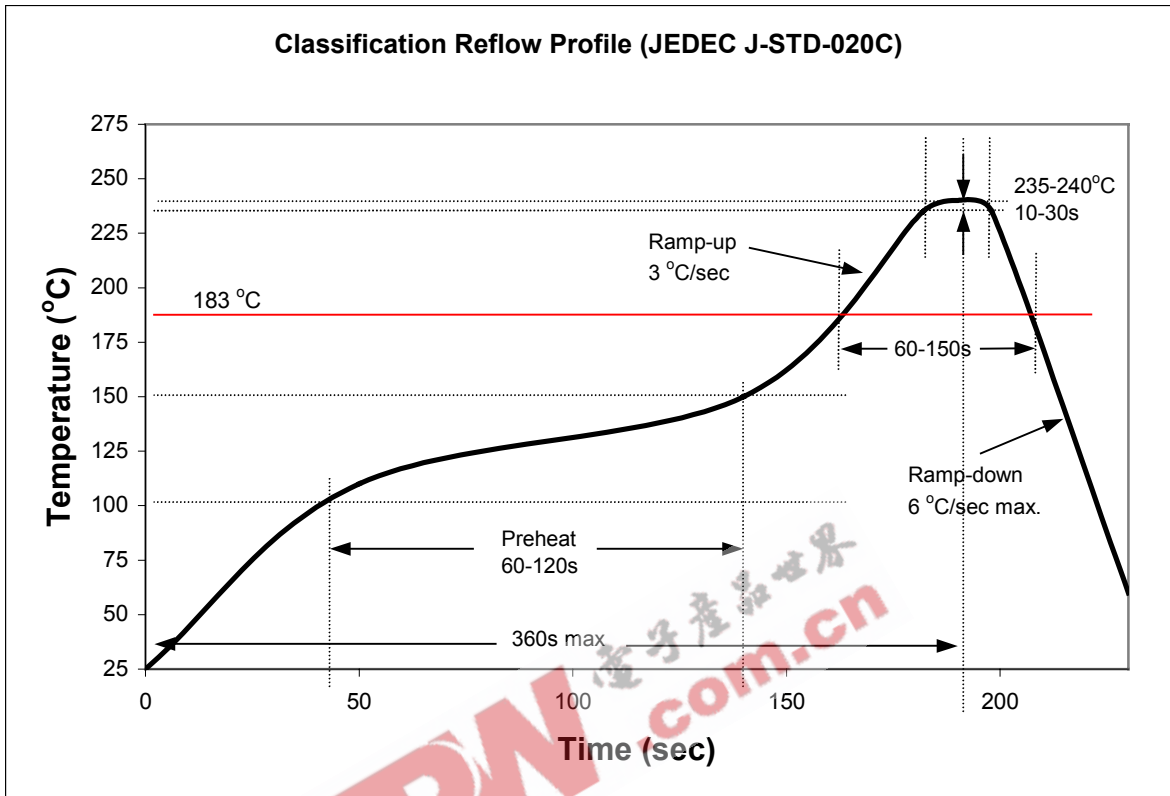
480 mm min. for $\varnothing 180$ reel.

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

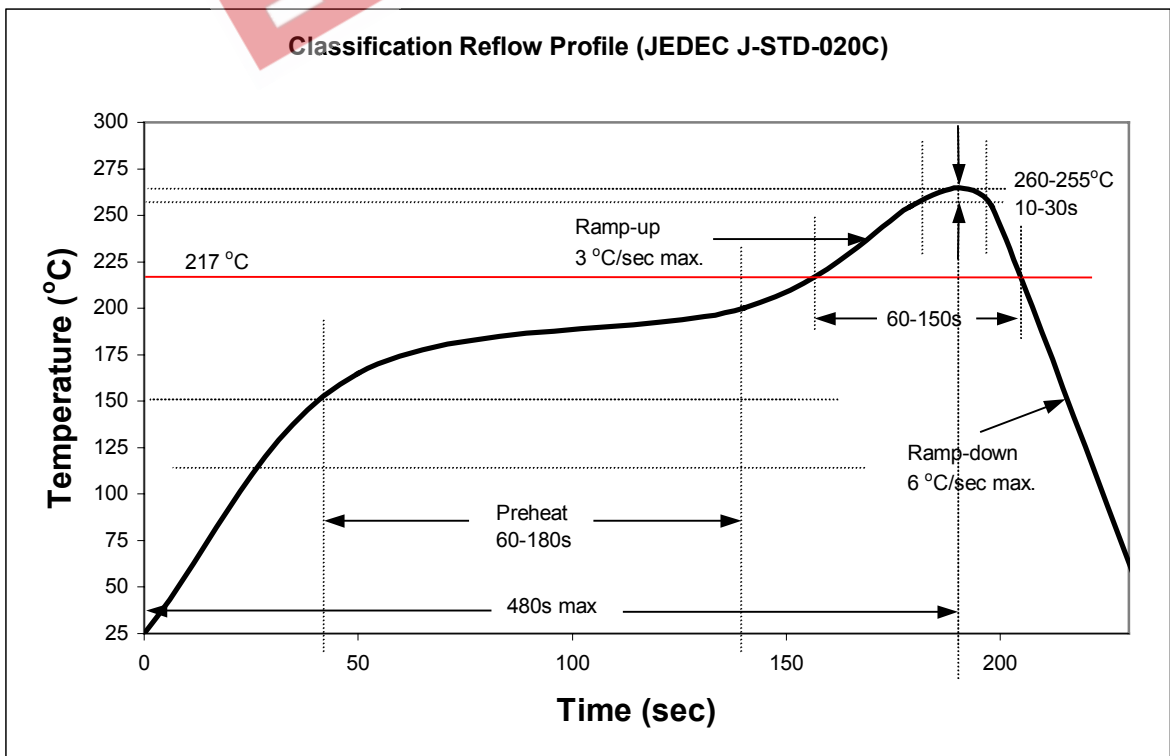
960 mm min. for $\varnothing 330$ reel.



Recommended Sn-Pb IR-Reflow Soldering Profile.



Recommended Pb Free IR-Reflow Soldering Profile.





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