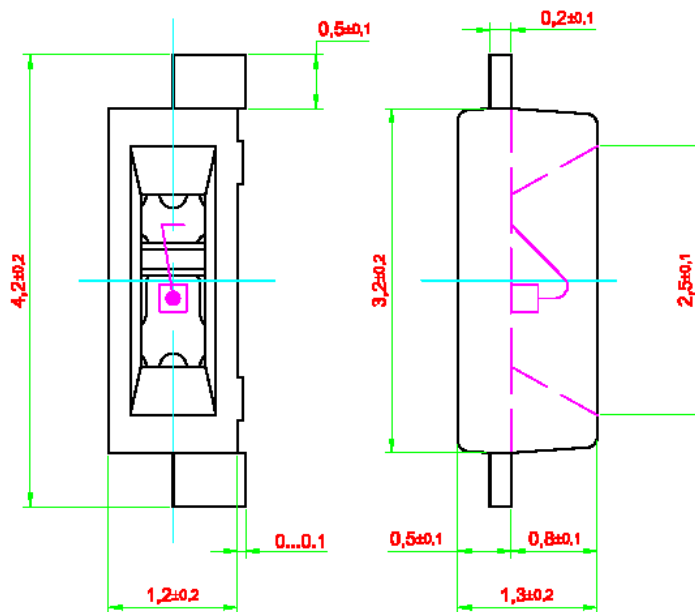




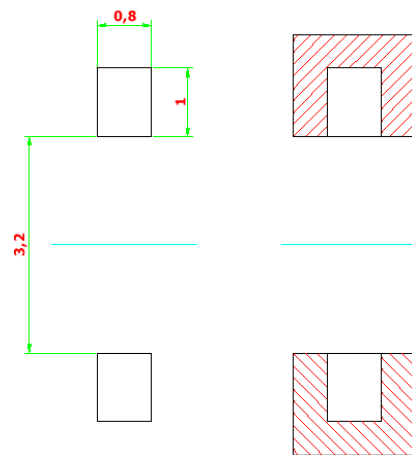
● Feature:

1. High brightness surface mount LED.
2. 120° viewing angle.
3. Small package outline.
4. Qualified according to JEDEC moisture sensitivity Level 2.
5. Compatible to both IR reflow soldering and TTW soldering.

● Package Dimension:



Recommended Solder Pad



Pad design for better heat dissipation.

Solder resist.



● Optical Characteristics:

| Part Number | Chip Technology Color | λ_{dom} (nm) | Luminous Intensity @ If = 20mA Iv (mcd) |
|--|--------------------------|---------------------------|---|
| BL-PSB-SSS-C10 <ul style="list-style-type: none"> • BIN P1 • BIN P2 • BIN Q1 • BIN Q2 | InGaN / Blue | 120 | 45.0 ... 112.5 45.0 ... 56.0 56.0 ... 71.5 71.5 ... 90.0 90.0 ... 112.5 |
| BL-PSB-USS-C10 <ul style="list-style-type: none"> • BIN Q1 • BIN Q2 • BIN R1 • BIN R2 | | | 71.5 ... 180.0 71.5 ... 90.0 90.0 ... 112.5 112.5 ... 140.0 140.0 ... 180.0 |
| BL-PST-SSS-C10 <ul style="list-style-type: none"> • BIN R1 • BIN R2 • BIN S1 • BIN S2 | InGaN / True Green | 120 | 112.5 ... 285.0 112.5 ... 140.0 140.0 ... 180.0 180.0 ... 224.0 224.0 ... 285.0 |
| BL-PST-SSS-C20 <ul style="list-style-type: none"> • BIN T1 • BIN T2 • BIN U1 | | | 285.0 ... 560.0 285.0 ... 355.0 355.0 ... 450.0 450.0 ... 560.0 |
| BL-PST-USS-C10 <ul style="list-style-type: none"> • BIN T1 • BIN T2 • BIN U1 • BIN U2 | | | 285.0 ... 715.0 285.0 ... 355.0 355.0 ... 450.0 450.0 ... 560.0 560.0 ... 715.0 |
| BL-PSW-SSD-C10 <ul style="list-style-type: none"> • BIN R1 • BIN R2 • BIN S1 • BIN S2 | InGaN / White | 120 | 112.5 ... 285.0 112.5 ... 140.0 140.0 ... 180.0 180.0 ... 224.0 224.0 ... 285.0 |
| BL-PSW-USD-C10 <ul style="list-style-type: none"> • BIN S1 • BIN S2 • BIN T1 • BIN T2 | | | 180.0 ... 450.0 180.0 ... 224.0 224.0 ... 285.0 285.0 ... 355.0 355.0 ... 450.0 |
| BL-PSW-USD-C20 <ul style="list-style-type: none"> • BIN T1 • BIN T2 • BIN U1 | | | 285.0 ... 560.0 285.0 ... 355.0 355.0 ... 450.0 450.0 ... 560.0 |



NOTE:

1. Luminous intensity is measured with an accuracy of $\pm 11\%$.
2. Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each reel.
3. Vf binning is available upon request. Binning scheme is as per following.

● **Absolute Maximum Ratings:**

| Parameter | Maximum Value | Unit |
|--|---------------|-------------|
| DC forward current. | 20 | mA |
| Peak pulse current. ($t_p \leq 10 \mu s$, 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) | 80 | mW |

● **Vf Binning:**

| Vf Bin @ 20mA | Forward voltage (V) |
|---------------|---------------------|
| Standard | 3.05 ... 4.25 (max) |
| 00 | 3.05 ... 3.35 |
| 01 | 3.35 ... 3.65 |
| 02 | 3.65 ... 3.95 |
| 03 | 3.95 ... 4.25 |

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



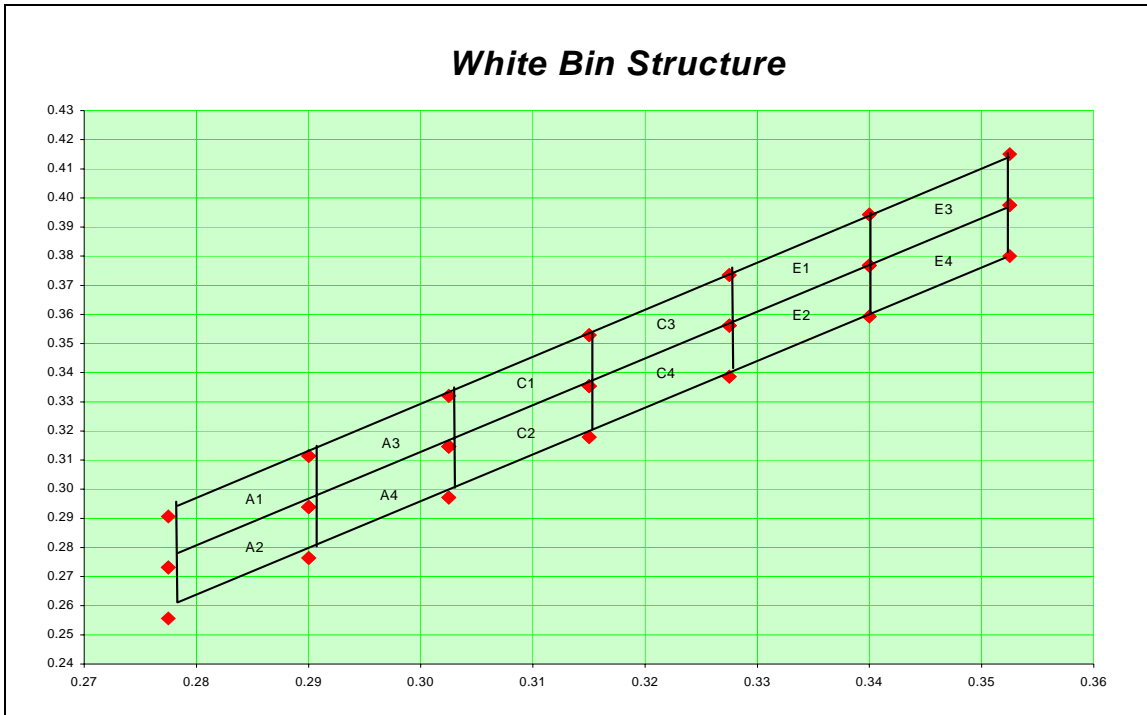
● **Wavelength Grouping:**

| Color | Group | Wavelength distribution (nm) |
|--------------------|--------------|-------------------------------------|
| BL-PSB; Blue | Full | 464 - 476 |
| | W | 464 - 468 |
| | X | 468 - 472 |
| | Y | 472 - 476 |
| BL-PST; True Green | Full | 520 - 536 |
| | W | 520 - 524 |
| | X | 524 - 528 |
| | Y | 528 - 532 |
| | Z | 532 - 536 |

Wavelength is measured with an accuracy of ± 1 nm.



● BL-PSW: White Color Grouping



White bin coordinate

Chromaticity coordinate groups are measured with an accuracy of ± 0.01 .

| W | | | | | | X | | | | | |
|-----|----|--------|--------|--------|--------|-----|----|--------|--------|--------|--------|
| Bin | | W | | | | Bin | | X | | | |
| 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 | | | | | | |



● Typical electro-optical characteristics curves:

Fig. 1 Relative luminous intensity vs. forward current.

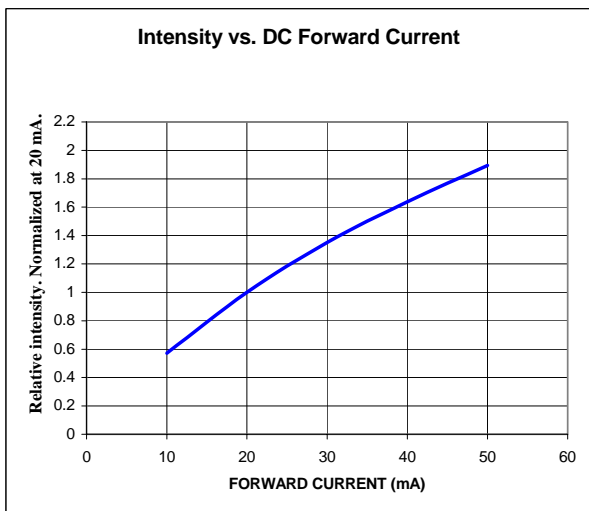


Fig. 2 Forward current vs. forward voltage.

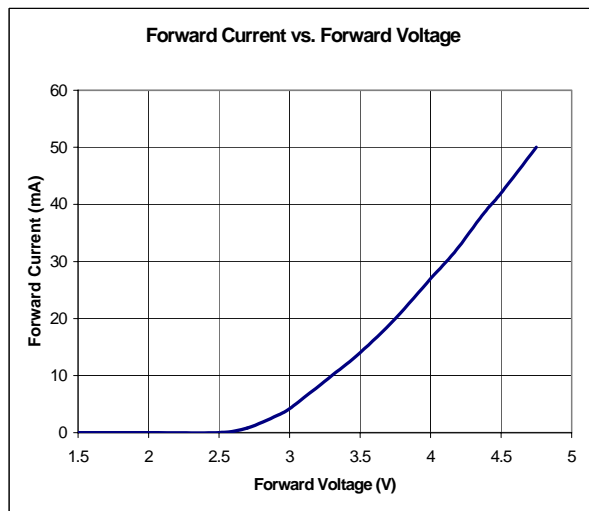


Fig. 3 Radiation pattern.

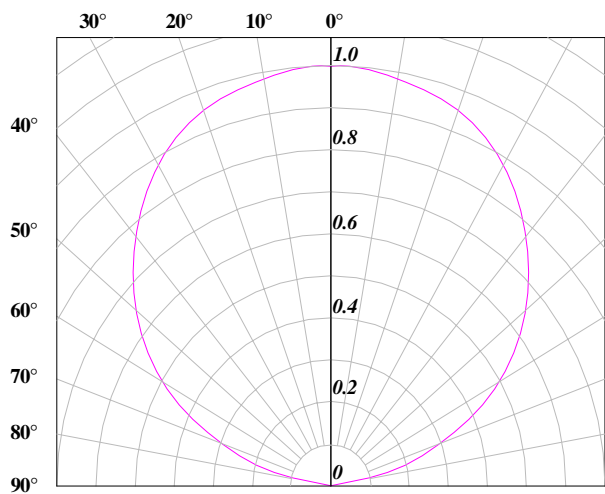


Fig. 4 Maximum current vs. ambient temperature

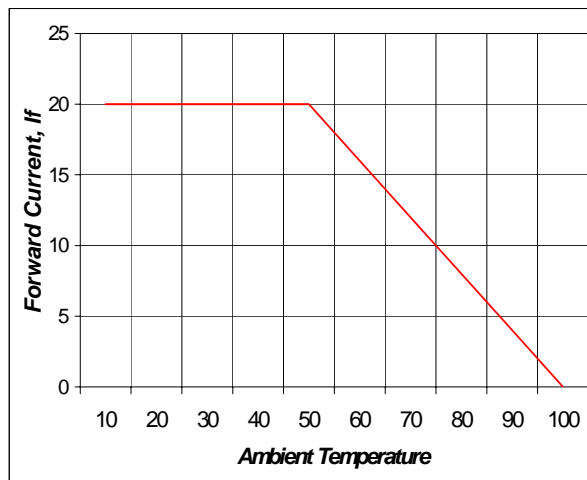


Fig. 5 Relative Intensity vs. Wavelength

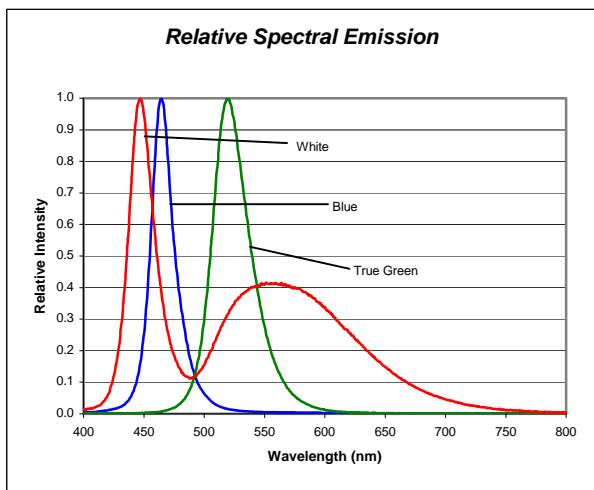




Fig. 6 Recommended IR-reflow Soldering Profile (acc. To IPC 9501).

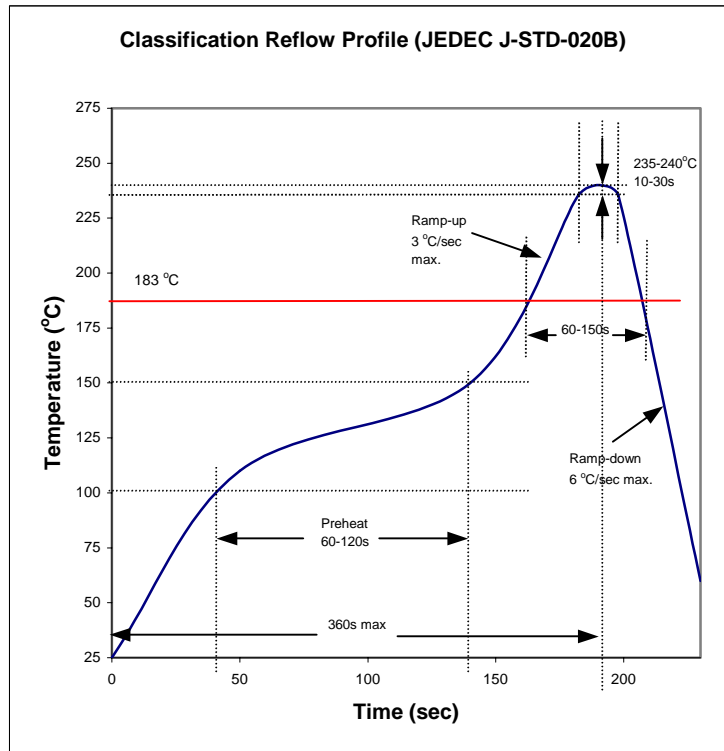
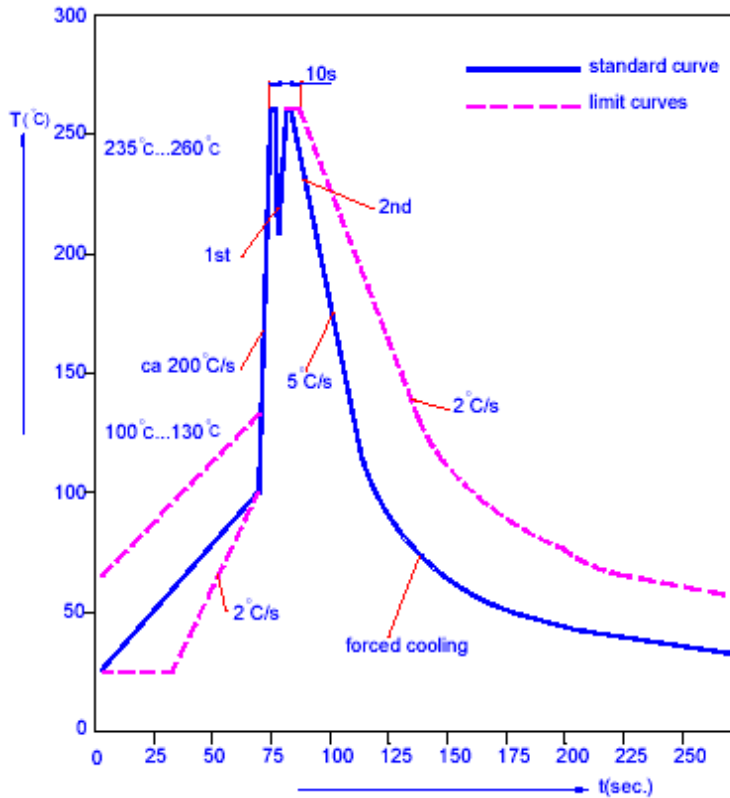


Fig. 7 Recommended TTW Soldering Profile (acc. to CECC 00802).





● **Taping And Orientation:**

Reels come in quantity of 10,000 units or 2500 units.

Reel diameters are 330 mm and 180 mm respectively.

