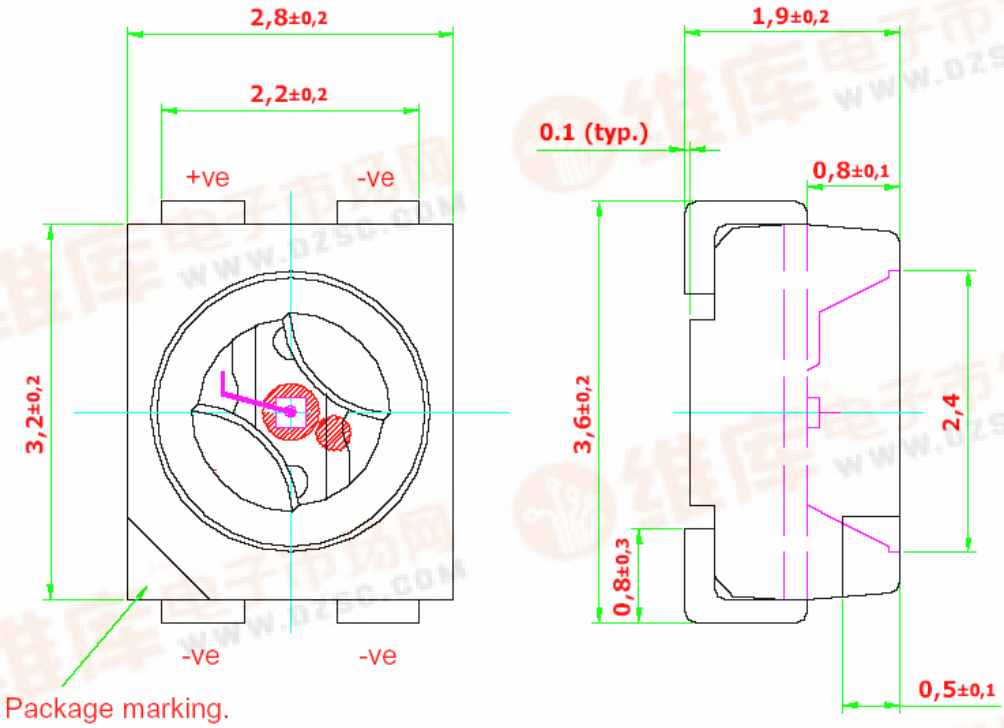
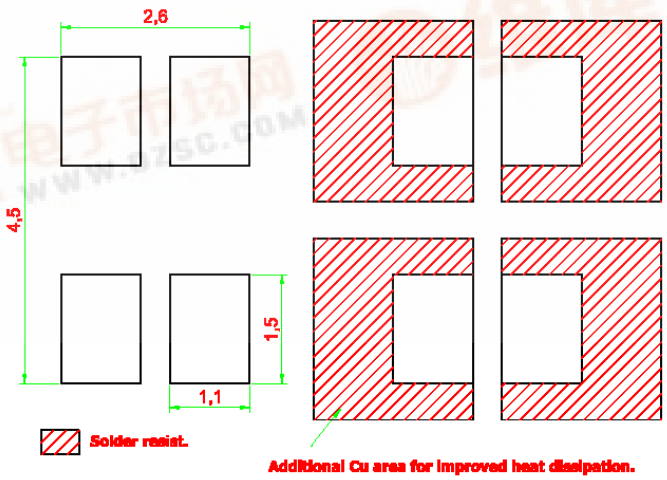
- **Feature:**

1. High brightness surface mount LED.
2. 120° viewing angle.
3. Small package outline (LxWxH) of 2.8 x 3.2 x 1.8 mm.
4. Qualified according to JEDEC moisture sensitivity Level 2.
5. Compatible to both IR reflow soldering and TTW soldering.

- **Package Dimension:**



Recommended Solder Pad



● Optical Characteristics:

Part Number	Chip Technology Color	Viewing Angle	Luminous Intensity @ If @ 30mA Iv (mcd)
BL-PWB-SJS-C20	InGaN /	**120**	**90.0 … 180.0**
• BIN Q2	Blue, 470 nm		90.0 … 112.5
• BIN R1			112.5 … 140.0
• BIN R2			140.0 … 180.0
BL-PWB-SJS-C10			**112.5 … 224.0**
• BIN R1			112.5 … 140.0
• BIN R2			140.0 … 180.0
• BIN S1			180.0 … 224.0
BL-PWB-UJS-C10			**140.0 … 285.0**
• BIN R2			140.0 … 180.0
• BIN S1			180.0 … 224.0
• BIN S2			224.0 … 285.0
BL-PWC-CJS-C10	InGaN /	**120**	**180.0 … 450.0**
• BIN S1	Cyan, 505nm		180.0 … 224.0
• BIN S2			224.0 … 285.0
• BIN T1			285.0 … 355.0
• BIN T2			355.0 … 450.0
BL-PWC-SJS-C10			**285.0 … 715.0**
• BIN T1			285.0 … 355.0
• BIN T2			355.0 … 450.0
• BIN U1			450.0 … 560.0
• BIN U2			560.0 … 715.0
BL-PWC-SJS-C20			**450.0 … 1125.0**
• BIN U1			450.0 … 560.0
• BIN U2			560.0 … 715.0
• BIN V1			715.0 … 900.0
• BIN V2			900.0 … 1125.0
BL-PWC-UJS-C10			**450.0 … 1125.0**
• BIN U1			450.0 … 560.0
• BIN U2			560.0 … 715.0
• BIN V1			715.0 … 900.0
• BIN V2			900.0 … 1125.0

● Optical Characteristics:

Part Number	Chip Technology Color	Viewing Angle	Luminous Intensity @ If @ 30mA Iv (mcd)
BL-PWT-CJS-C10	InGaN /	**120**	**180.0 … 450.0**
• BIN S1	True Green, 525nm		180.0 … 224.0
• BIN S2			224.0 … 285.0
• BIN T1			285.0 … 355.0
• BIN T2			355.0 … 450.0
BL-PWT-SJS-C10			**285.0 … 715.0**
• BIN T1			285.0 … 355.0
• BIN T2			355.0 … 450.0
• BIN U1			450.0 … 560.0
• BIN U2			560.0 … 715.0
BL-PWT-SJS-C20			**450.0 … 1125.0**
• BIN U1			450.0 … 560.0
• BIN U2			560.0 … 715.0
• BIN V1			715.0 … 900.0
• BIN V2			900.0 … 1125.0
BL-PWT-UJS-C10			**450.0 … 1125.0**
• BIN U1			450.0 … 560.0
• BIN U2			560.0 … 715.0
• BIN V1			715.0 … 900.0
• BIN V2			900.0 … 1125.0
BL-PWW-SJD-C10	InGaN /	**120**	**285.0 … 715.0**
• BIN T1	White (0.31, 0.31)		285.0 … 355.0
• BIN T2			355.0 … 450.0
• BIN U1			450.0 … 560.0
• BIN U2			560.0 … 715.0
BL-PWW-UJD-C10			**450.0 … 1125.0**
• BIN U1			450.0 … 560.0
• BIN U2			560.0 … 715.0
• BIN V1			715.0 … 900.0
• BIN V2			900.0 … 1125.0

Note:

1. Other luminous intensity groups are also available upon request.
2. Luminous intensity is measured with an accuracy of ±11%.
3. Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each reel.
4. *InGaN wavelength is very sensitive to drive current. Operating at lower current is not recommended and may yield unpredictable performance Current pulsing should be used for dimming purposes.*
5. An optional Vf binning is also available upon request. Binning scheme is as per following table.

Absolute Maximum Ratings:

Parameter	Maximum Value	Unit
DC forward current.	30	mA
Peak pulse current; (tp ≤ 10 μs, Duty cycle = 0.005)	200	mA
Reverse voltage; Ir (max) = 10μA.	5	V
LED junction temperature.	125	°C
Operating temperature.	-40 … +100	°C
Storage temperature.	-40 … +100	°C
Power dissipation (at room temperature)	135	mW

Vf Binning:

Vf Bin @ 30mA	Forward voltage (V)
Standard	3.9 (typical), 4.55 (max)
30	3.35 … 3.65
31	3.65 … 3.95
32	3.95 … 4.25
33	4.25 … 4.55

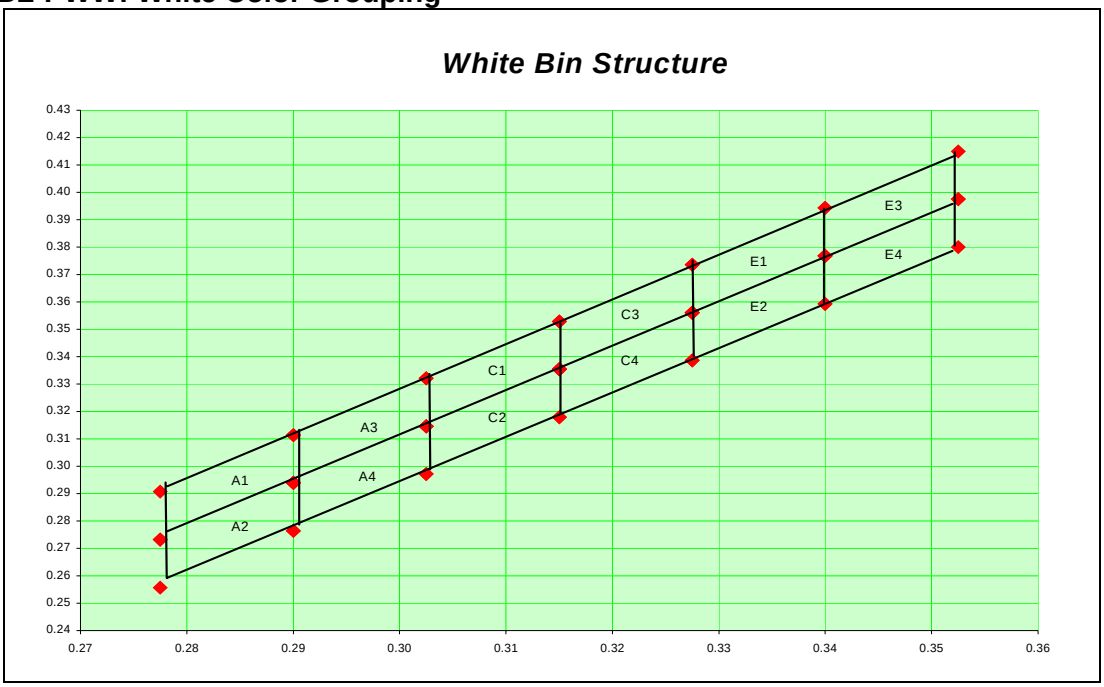
Forward voltage, Vf is measured with an accuracy of ±01 V.

Wavelength Grouping:

Color	Group	Wavelength (nm) @ 30mA
BL-PWB; Blue	Full	464 - 476
	W	464 - 468
	X	468 - 472
	Y	472 – 476
	Z	476 - 480
BL-PWC; Cyan	Full	499 - 511
	W	499 - 503
	X	503 - 507
	Y	507 - 511
BL-PWT; 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-PWW: White Color Grouping



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

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.

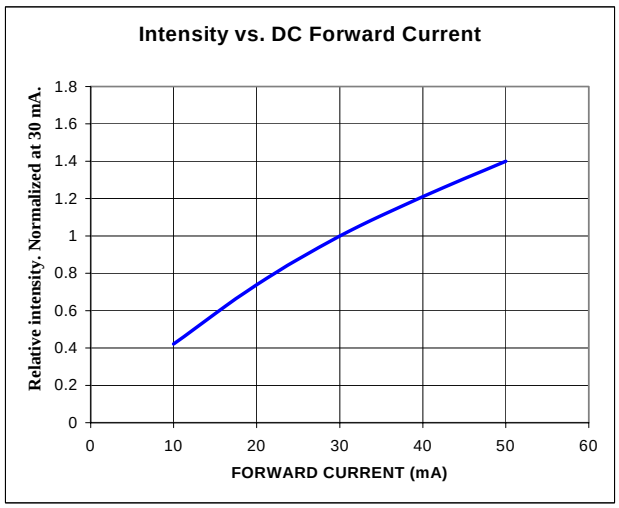


Fig.2 Forward current vs. forward voltage.

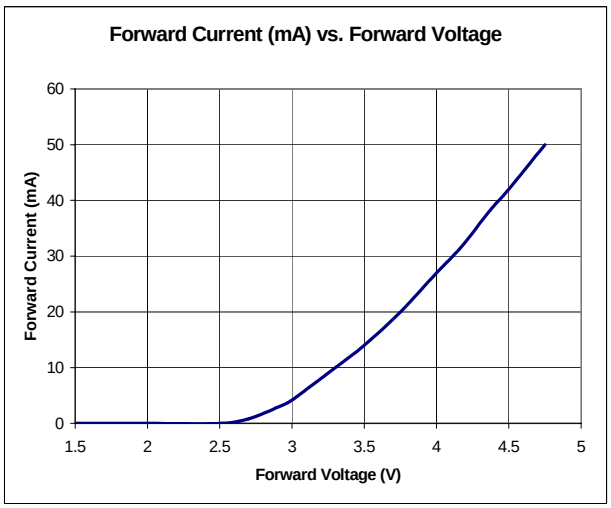


Fig.3 Radiation pattern.

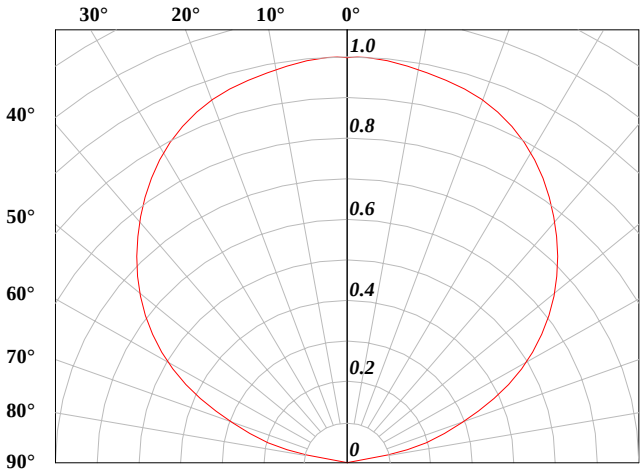


Fig.4 Maximum forward current vs. temperature.

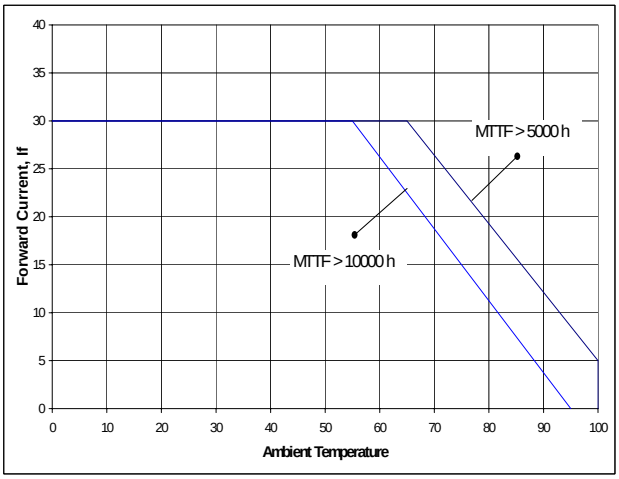


Fig.5 Relative Intensity vs Wavelength

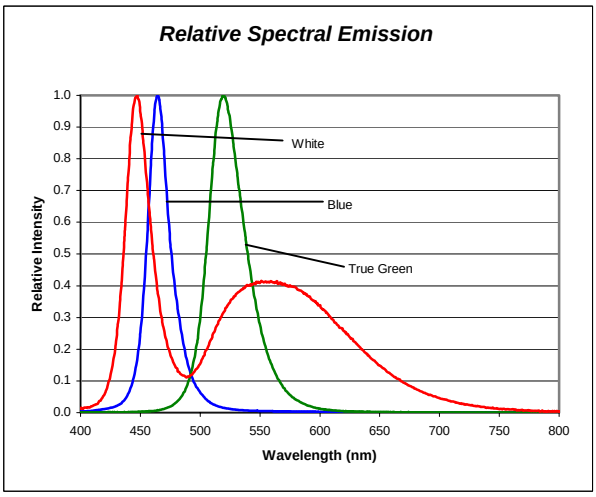


Fig.6 Dominant Wavelength vs Forward Current

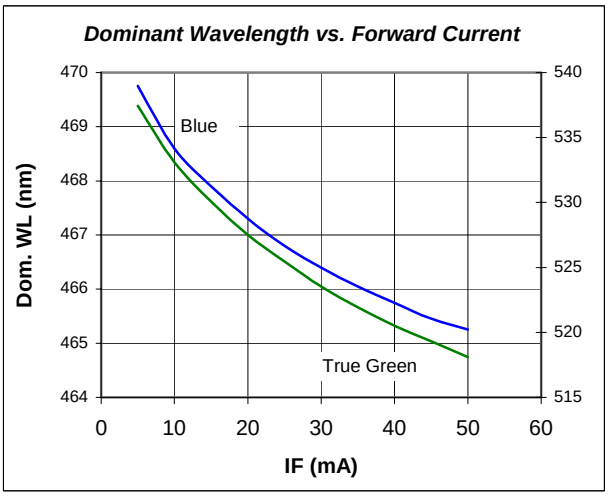


Fig. 7 Recommended IR-reflow Soldering Profile.

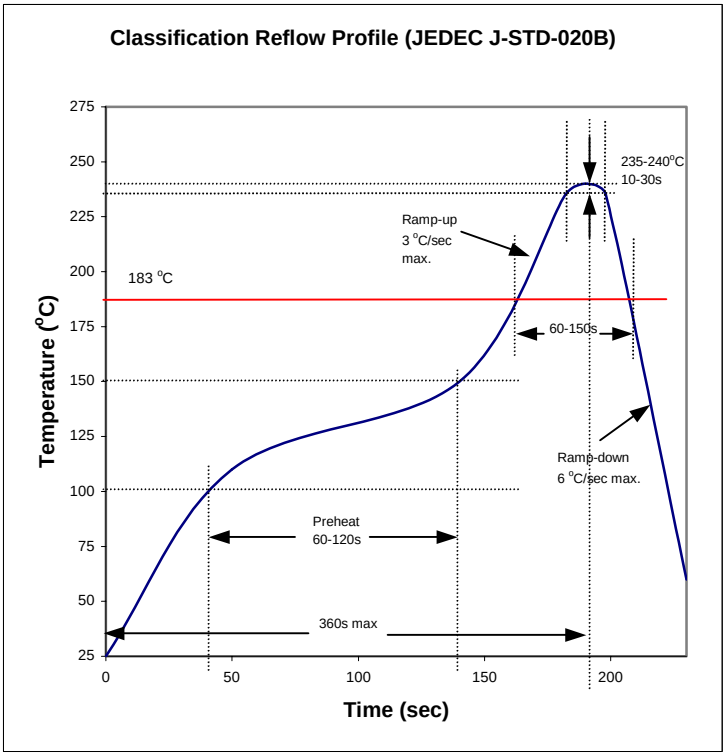
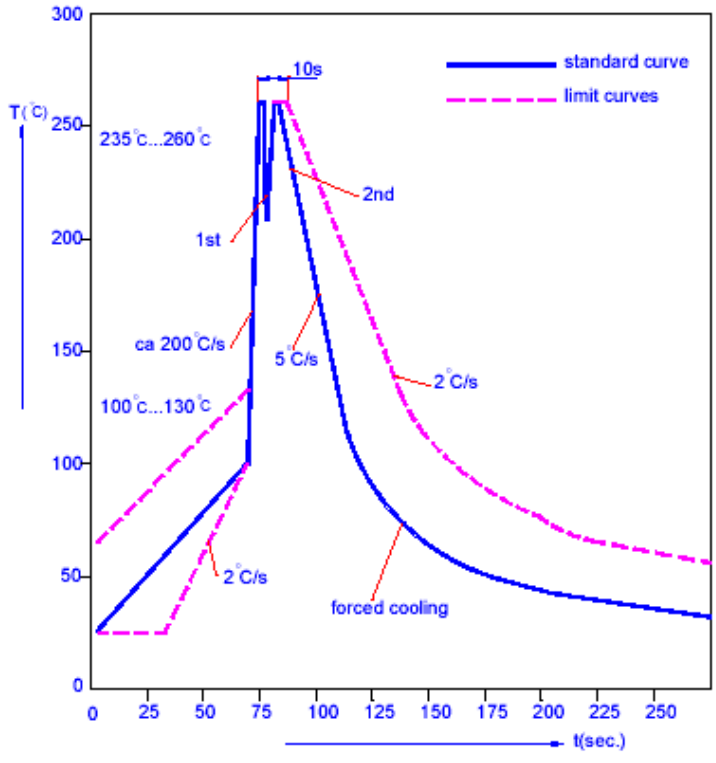


Fig. 8 Recommended TTW Soldering Profile.



- **Taping And Orientation:**

  Reels come in quantity of 2000 units.

  Reel diameter is 180 mm.