



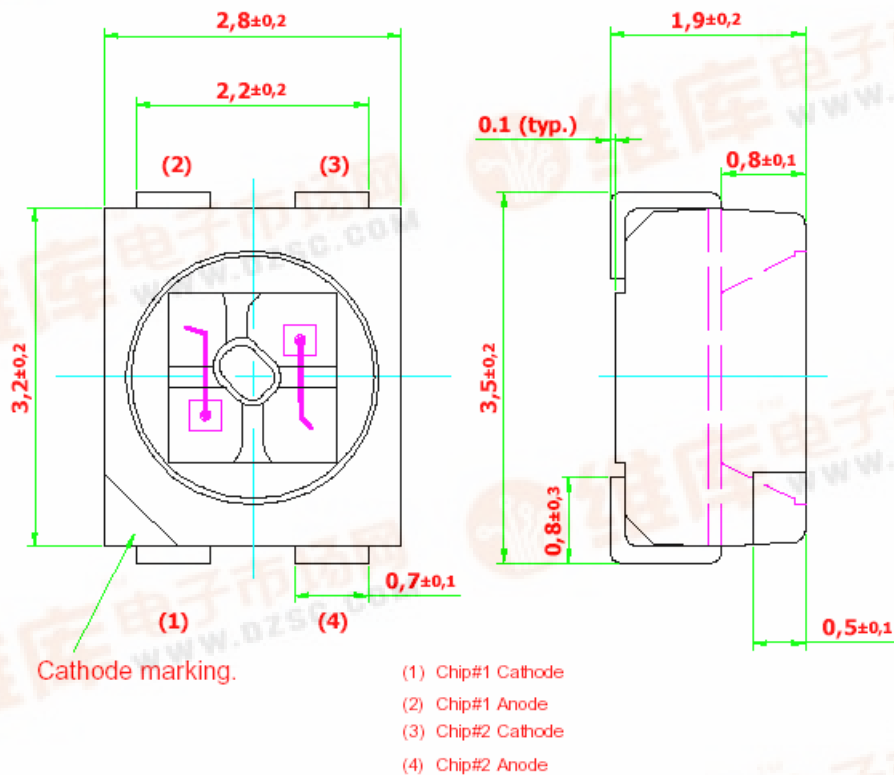
AMERICAN BRIGHT OPTOELECTRONICS CORP.

Bi-Color DOMILED BL-PMxx-xJS Series

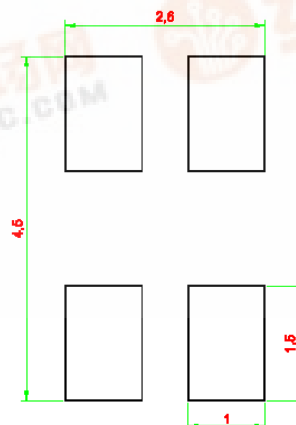
● **Feature:**

1. High brightness bi-color surface mount LED.
2. 120° viewing angle.
3. Small package outline (LxWxH) of 2.8 x 3.2 x 1.9 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





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● Optical Characteristics:

Part Number	Color λ_{dom} (nm)		Luminous Intensity @ If = 20mA . Iv (mcd)	
	Chip#1	Chip#2	Chip#1	Chip#2
BL-PMRG-SJS • BIN R Q • BIN R R • BIN S Q • BIN S R	Red 625	Green 570	112.5 ... 285.0 112.5 ... 180.0 112.5 ... 180.0 180.0...285.0 180.0... 285.0	71.5 ... 180.0 71.5 ... 112.5 112.5 ... 180.0 71.5 ... 112.5 112.5 ... 180.0
BL-PMSG-CJS • BIN Q P • BIN Q Q • BIN R P • BIN R Q	Super Red 632	Green 570	71.5 ... 180.0 71.5 ... 112.5 71.5 ... 112.5 112.5 180.0 112.5 180.0	45.0 ... 112.5 45.0 ... 71.5 71.5 ... 112.5 45.0 ... 71.5 71.5 ... 112.5
BL-PMST-CJS • BIN P R • BIN P S • BIN Q R • BIN Q S	Super Red 632	True Green 525	45.0 ... 112.5 45.0 ... 71.5 45.0 ... 71.5 71.5 ... 112.5 71.5 ... 112.5	112.5 ... 285.0 112.5 ... 180.0 180.0 ... 285.0 112.5 ... 180.0 180.0 ... 285.0
BL-PMSY-CJS • BIN P R • BIN P S • BIN Q R • BIN Q S	Super Red 632	Yellow 587	45.0 ... 112.5 45.0 ... 71.5 45.0 ... 71.5 71.5 ... 112.5 71.5 ... 112.5	112.5 ... 285.0 112.5 ... 180.0 180.0 ... 285.0 112.5 ... 180.0 180.0 ... 285.0
BL-PMYB-CJS • BIN R P • BIN R Q • BIN S P • BIN S Q	Yellow 587	Blue 470	112.5 ... 285.0 112.5 ... 180.0 112.5 ... 180.0 180.0 ... 285.0 180.0 ... 285.0	45.0 ... 112.5 45.0 ... 71.5 71.5 ... 112.5 45.0 ... 71.5 71.5 ... 112.5
BL-PMYT-CJS • BIN R R • BIN R S • BIN S R • BIN S S	Yellow 587	True Green 525	112.5 ... 285.0 112.5 ... 180.0 180.0 ... 285.0 112.5 ... 180.0 180.0 ... 285.0	112.5 ... 285.0 112.5 ... 180.0 180.0 ... 285.0 112.5 ... 180.0 180.0 ... 285.0

NOTE:

1. Luminous intensity is measured with an accuracy of $\pm 11\%$.



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● Absolute Maximum Ratings:

Parameter	Maximum Value		Unit
DC forward current.	AS AlInGaP 30	InGaN 20	mA
Peak pulse current. ($t_p \leq 10 \mu s$, Duty cycle = 0.005)	AS AlInGaP 1000	InGaN 200	mA
Reverse voltage.	5		V
LED junction temperature.	125		°C
Operating temperature.	-40 ... +100		°C
Storage temperature.	-40 ... +100		°C

● Optical Characteristics ($T_A = 25^\circ C$):

	V_f at $I_f=20mA$		View Angle
	Typ.	Max	
Red	2.2	2.45	120
Super Red	2.2	2.45	
Green	2.2	2.45	
True Green	3.7	4.25	
Blue	3.7	4.25	

● Vf Binning:

Vf Bin @ 20mA	Red, Yellow, Green; AlInGaP (V)	True Green & Blue InGaN (V)
00	1.25 ... 1.55	3.05 ... 3.35
01	1.55 ... 1.85	3.35 ... 3.65
02	1.85 ... 2.15	3.65 ... 3.95
03	2.15 ... 2.45	3.95 ... 4.25

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



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● Wavelength Grouping:

Color	Group	Wavelength distribution (nm)
Super-red	Full	625 – 640
Red	Full	620 - 630
Yellow	Full	582 – 594
	W	582 – 585
	X	585 – 588
	Y	588 - 591
	Z	591 - 594
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
True Green	Full	520 - 536
	W	520 - 524
	X	524 - 528
	Y	528 - 532
	Z	532 - 536
Blue	Full	464 - 476
	W	464 - 468
	X	468 - 472
	Y	472 - 476



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● Typical electro-optical characteristics curves:

Fig. 1 Relative luminous intensity vs. forward current.

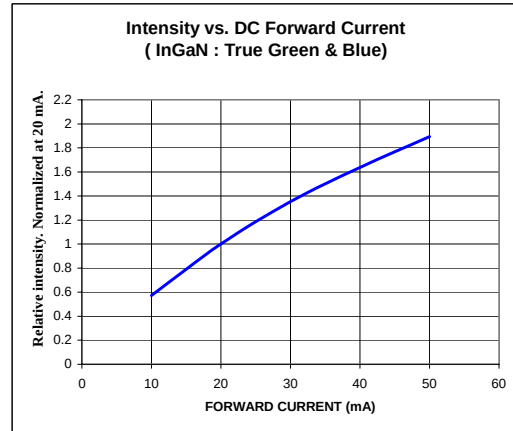
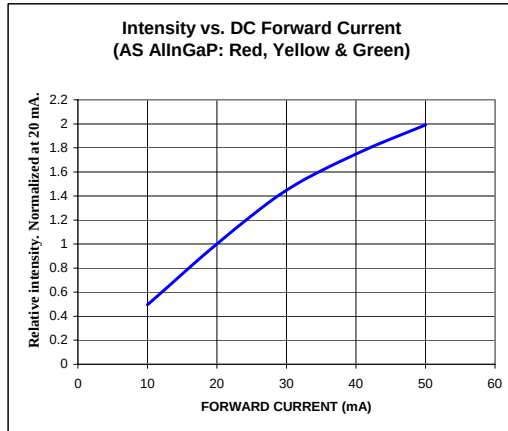


Fig. 2 Forward current vs. forward voltage

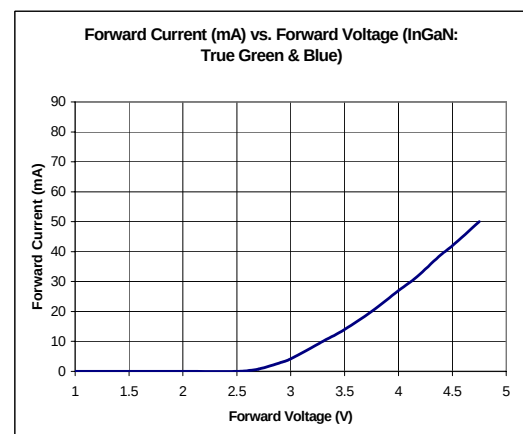
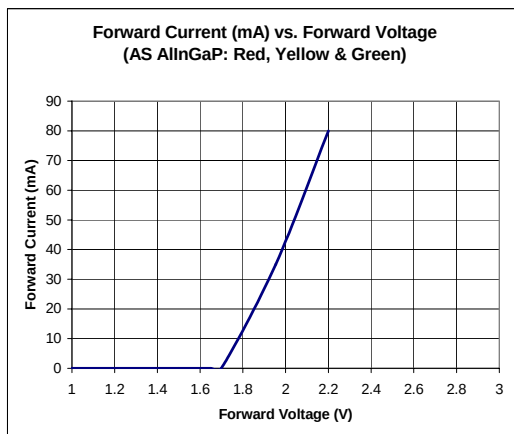


Fig. 3 Radiation pattern.

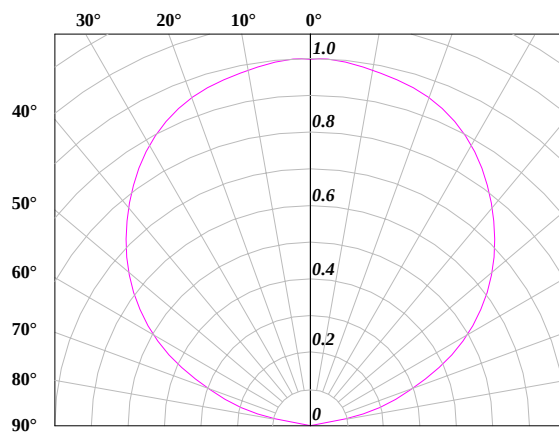
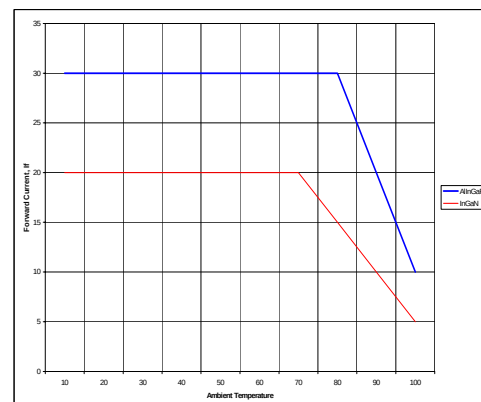


Fig. 4 Maximum forward current vs. temperature





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Fig. 5 Recommended IR-reflow Soldering Profile

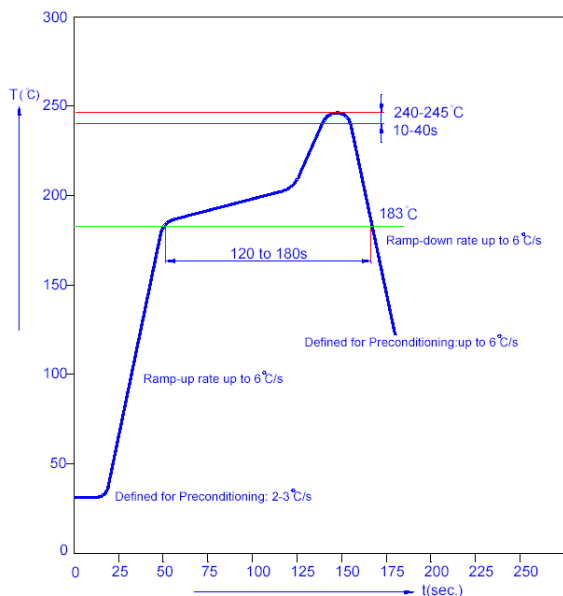
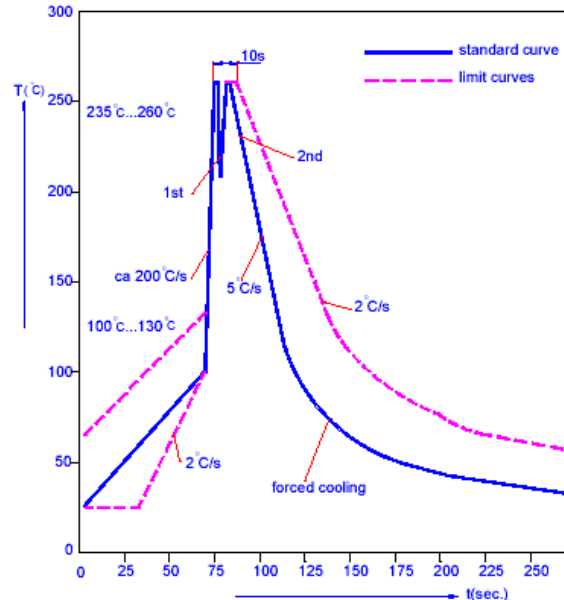
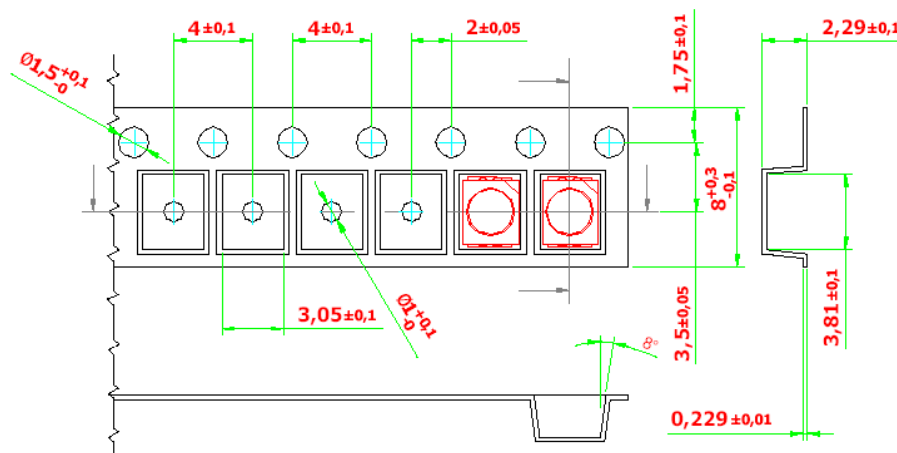


Fig. 6 Recommended TTW Soldering Profile



- **Taping And Orientation:** Reels come in quantity of 2000 units. Reel diameters is 180 mm.



200 mm min. for Ø180 reel.
200 mm min. for Ø330 reel.

480 mm min. for Ø180 reel.
960 mm min. for Ø330 reel.

