



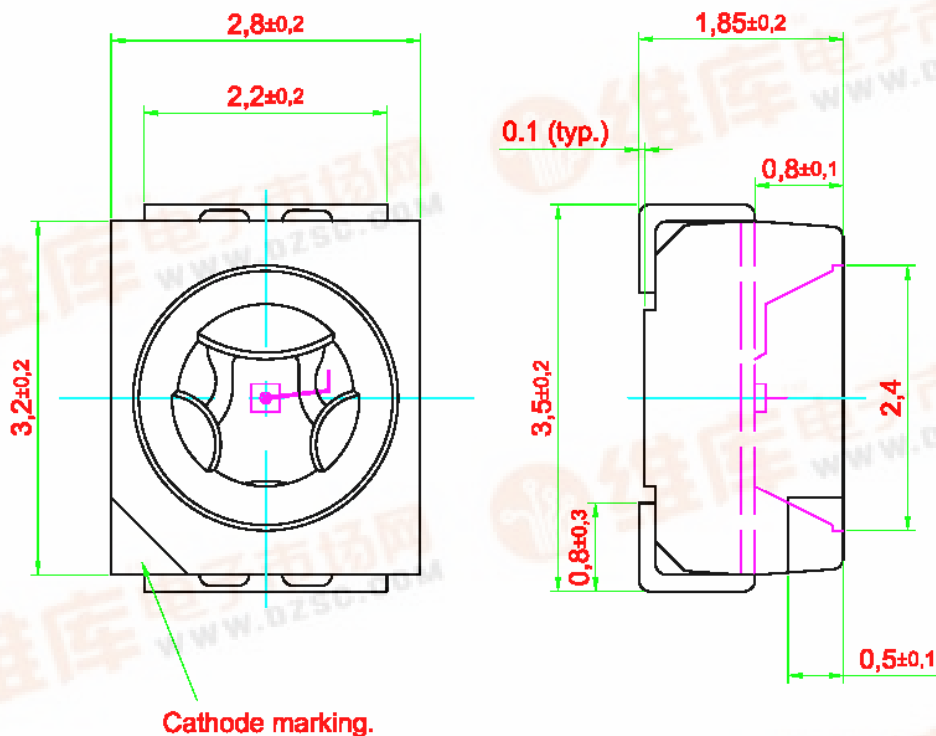
AMERICAN BRIGHT OPTOELECTRONICS CORP.

Gap DOMILED BL-PDx-GJS Series

● **Feature:**

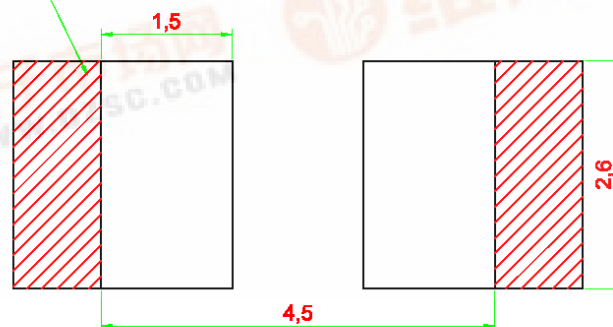
1. Surface mount LED.
2. 120° viewing angle.
3. Small package outline (LxWxH) of 3.2 x 2.8 x 1.8 mm.
4. Qualified according to JEDEC moisture sensitivity Level 2.
5. Compatible to both IR reflow soldering and TTW soldering.

● **Package Dimension:**



Recommended Solder Pad

Additional Cu area for improved heat dissipation.



Solder resist.



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● Optical Characteristics:

Part Number	Chip Technology / Color	Luminous Intensity @ $I_f = 20\text{mA}$ I_v (mcd)
BL-PDR-GJS-C10 - BIN L1 - BIN L2 - BIN M1 - BIN M2	GaP / Red, 625 nm	11.2 ... 28.5 11.2 ... 14.0 14.0 ... 18.0 18.0 ... 22.4 22.4 ... 28.5
BL-PDR-GJS-C20 - BIN M1 - BIN M2 - BIN N1 - BIN N2		28.5 ... 71.5 28.5 ... 35.5 35.5 ... 45.0 45.0 ... 56.0 56.0 ... 71.5
BL-PDO-GJS-C10 - BIN L1 - BIN L2 - BIN M1 - BIN M2	GaP / Orange, 605 nm	11.2 ... 28.5 11.2 ... 14.0 14.0 ... 18.0 18.0 ... 22.4 22.4 ... 28.5
BL-PDY-GJS-C10 - BIN L1 - BIN L2 - BIN M1 - BIN M2	GaP / Yellow, 587 nm	11.2 ... 28.5 11.2 ... 14.0 14.0 ... 18.0 18.0 ... 22.4 22.4 ... 28.5
BL-PDG-GJS-C20 - BIN L1 - BIN L2 - BIN M1 - BIN M2	GaP / Green, 570 nm	11.2 ... 28.5 11.2 ... 14.0 14.0 ... 18.0 18.0 ... 22.4 22.4 ... 28.5
BL-PDG-GJS-C30 - BIN M1 - BIN M2 - BIN N1 - BIN N2		18.0 ... 45.0 18.0 ... 22.4 22.4 ... 28.5 28.5 ... 35.5 35.5 ... 45.0

Forward voltage @ $I_f = 20\text{ mA}$.	Chip Type	Viewing angle at 50% I_v	Reverse current, I_R @ $V_R = 5\text{V}$, (max)
2.2 V (typ.); 2.6 V (max)	GaP	120°	100 μA



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NOTE:

1. Other luminous intensity groups are also available upon request.
2. Luminous intensity is measured with an accuracy of $\pm 11\%$.
3. Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each reel.
4. 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; ($t_p \leq 10 \mu s$, Duty cycle = 0.005)	500	mA
Reverse voltage.	5	V
LED junction temperature.	100	$^{\circ}C$
Operating temperature.	-40 ... +100	$^{\circ}C$
Storage temperature.	-40 ... +100	$^{\circ}C$
Power dissipation (at room temperature)	75	mW

● 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 ... 2.60



● **Wavelength Grouping:**

Color	Group	Wavelength distribution (nm)
BL-PDR; Red	Full	620 – 635
BL-PDA; Amber	Full	610 – 621
	W	610 - 615
	X	615 - 621
BL-PDO; Orange	Full	600 – 612
	W	600 - 603
	X	603 - 606
	Y	606 - 609
	Z	609 - 612
BL-PDY; Yellow	Full	582 – 594
	W	582 – 585
	X	585 – 588
	Y	588 - 591
	Z	591 - 594
BL-PDG; 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

Wavelength is measured with an accuracy of ± 1 nm.



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● Typical electro-optical characteristics curves:

Fig. 1 Relative luminous intensity vs. forward current.

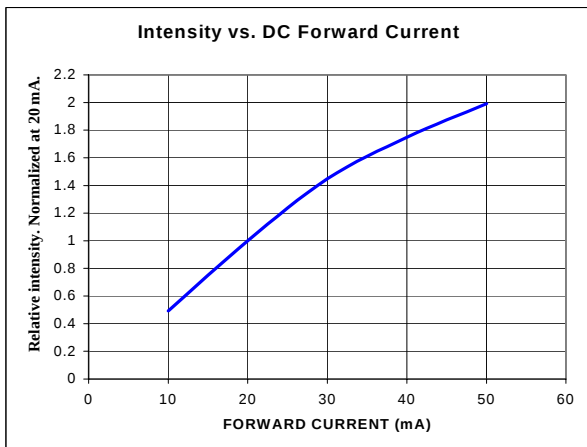


Fig. 2 Forward current vs. forward voltage.

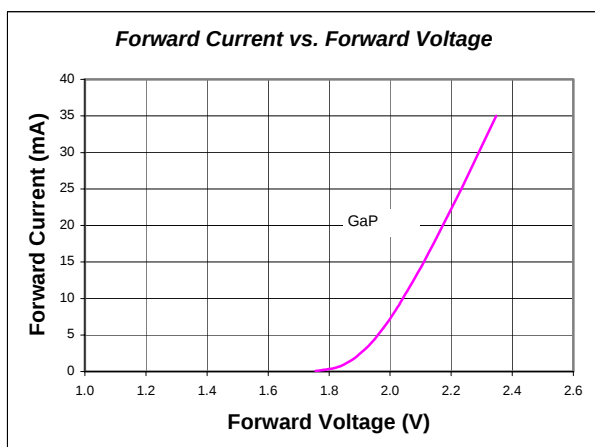


Fig. 3 Radiation pattern.

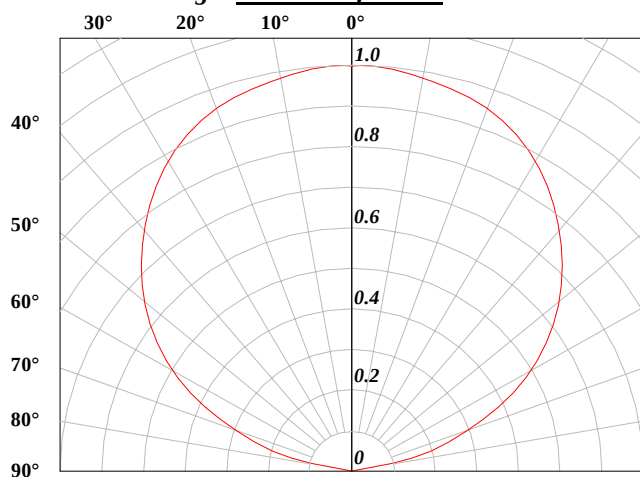


Fig. 4 Maximum forward current vs. temperature.

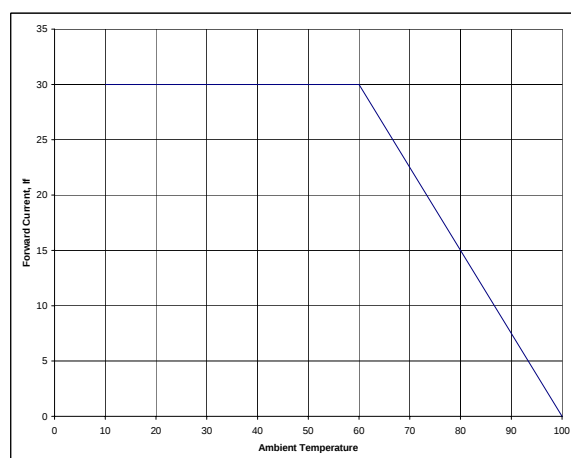




Fig. 5 Recommended IR-reflow Soldering Profile (acc. to IPC 9501)

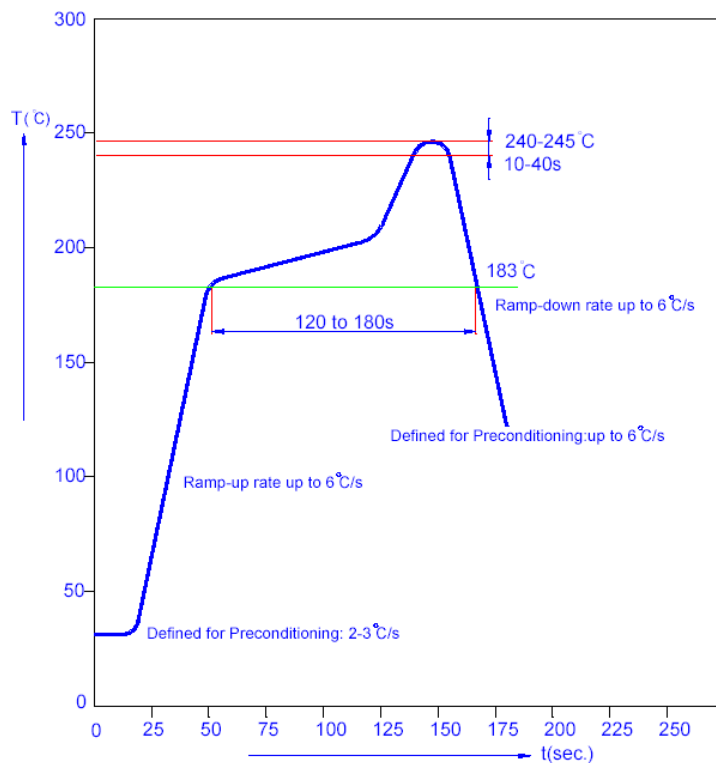
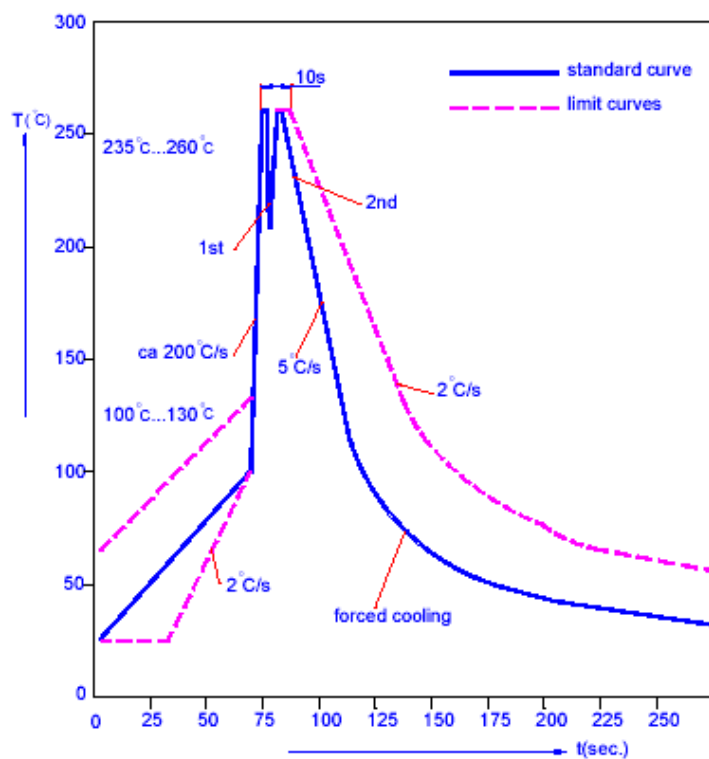
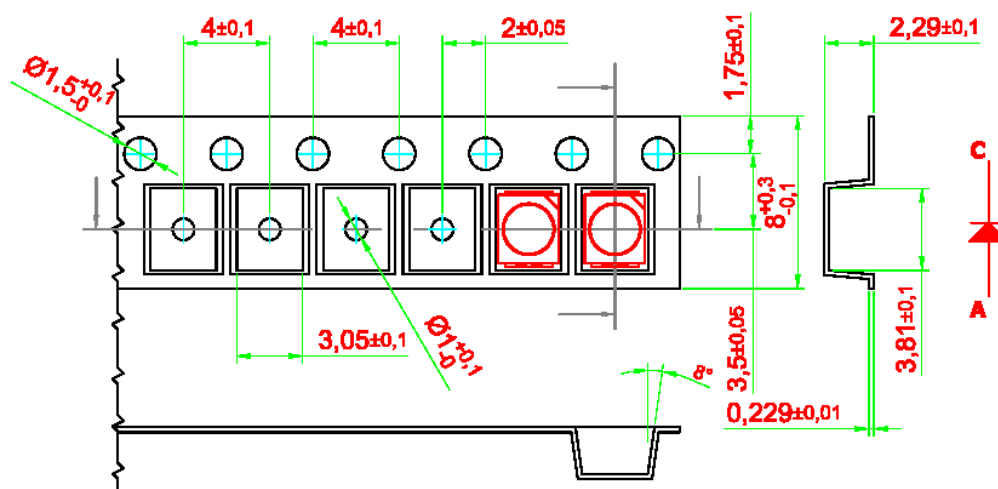


Fig. 6 Recommended TTW Soldering Profile (acc. to CECC 00802)



- **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.

