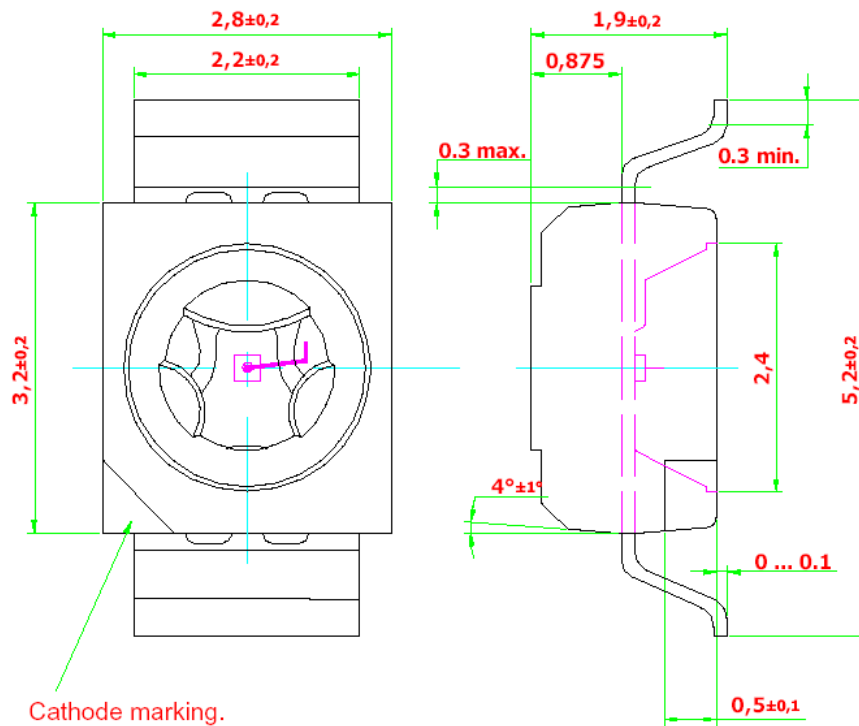




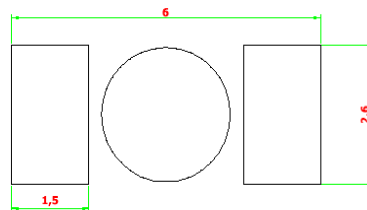
● Feature:

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.

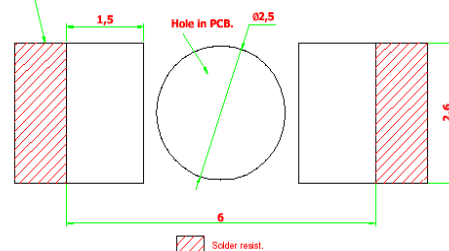
● Package Dimension:



Recommended Solder Pad



Additional Cu area for improved heat dissipation.



⊠ Solder resist.



● **Optical Characteristics:**

Part Number	Chip Technology / Color	Luminous Intensity @ If = 20mA Iv ( mcd )
<b>BL-PDR-GRS-C10</b>  <ul style="list-style-type: none"> <li>• BIN L1</li> <li>• BIN L2</li> <li>• BIN M1</li> <li>• BIN M2</li> </ul>	GaP /  Red, 625 nm	<b>11.2 ... 28.5</b>  11.2 ... 14.0 14.0 ... 18.0 18.0 ... 22.4 22.4 ... 28.5
<b>BL-PDR-GRS-C20</b>  <ul style="list-style-type: none"> <li>• BIN M1</li> <li>• BIN M2</li> <li>• BIN N1</li> <li>• BIN N2</li> </ul>		<b>28.5 ... 71.5</b>  28.5 ... 35.5 35.5 ... 45.0 45.0 ... 56.0 56.0 ... 71.5
<b>BL-PDO-GRS-C10</b>  <ul style="list-style-type: none"> <li>• BIN L1</li> <li>• BIN L2</li> <li>• BIN M1</li> <li>• BIN M2</li> </ul>	GaP /  Orange, 605 nm	<b>11.2 ... 28.5</b>  11.2 ... 14.0 14.0 ... 18.0 18.0 ... 22.4 22.4 ... 28.5
<b>BL-PDY-GRS-C10</b>  <ul style="list-style-type: none"> <li>• BIN L1</li> <li>• BIN L2</li> <li>• BIN M1</li> <li>• BIN M2</li> </ul>		<b>11.2 ... 28.5</b>  11.2 ... 14.0 14.0 ... 18.0 18.0 ... 22.4 22.4 ... 28.5
<b>BL-PDY-GRS-C20</b>  <ul style="list-style-type: none"> <li>• BIN M1</li> <li>• BIN M2</li> <li>• BIN N1</li> <li>• BIN N2</li> </ul>	<b>28.5 ... 71.5</b>  28.5 ... 35.5 35.5 ... 45.0 45.0 ... 56.0 56.0 ... 71.5	
<b>BL-PDG-GRS-C10</b>  <ul style="list-style-type: none"> <li>• BIN L1</li> <li>• BIN L2</li> <li>• BIN M1</li> <li>• BIN M2</li> </ul>	GaP /  Green, 570 nm	<b>11.2 ... 28.5</b>  11.2 ... 14.0 14.0 ... 18.0 18.0 ... 22.4 22.4 ... 28.5
<b>BL-PDG-GRS-C20</b>  <ul style="list-style-type: none"> <li>• BIN M1</li> <li>• BIN M2</li> <li>• BIN N1</li> <li>• BIN N2</li> </ul>		<b>18.0 ... 45.0</b>  18.0 ... 22.4 22.4 ... 28.5 28.5 ... 35.5 35.5 ... 45.0



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

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  $V_f$  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	°C
Operating temperature.	-40 ... +100	°C
Storage temperature.	-40 ... +100	°C
Power dissipation ( at room temperature )	75	mW

●  **$V_f$  Binning:**

$V_f$ 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

Forward voltage,  $V_f$  is measured with an accuracy of  $\pm 0.1$  V.



● Wavelength Grouping:

Color	Group	Wavelength distribution (nm)
BL-PDR; Red	Full	620 – 635
	W	620 – 635
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  $\pm 1$  nm.

● Typical electro-optical characteristics curves:

Fig. 1 Relative luminous intensity vs. forward current.

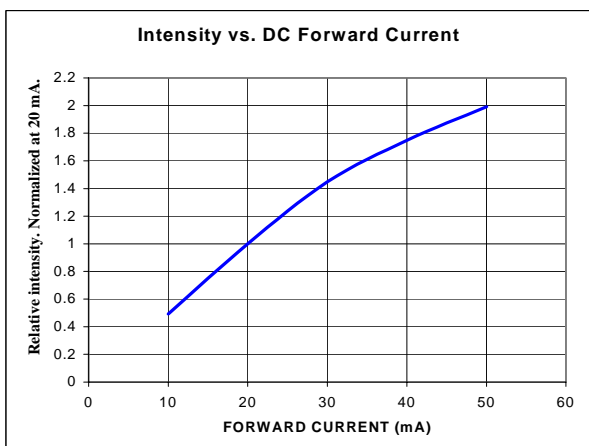


Fig. 2 Forward current vs. forward voltage.

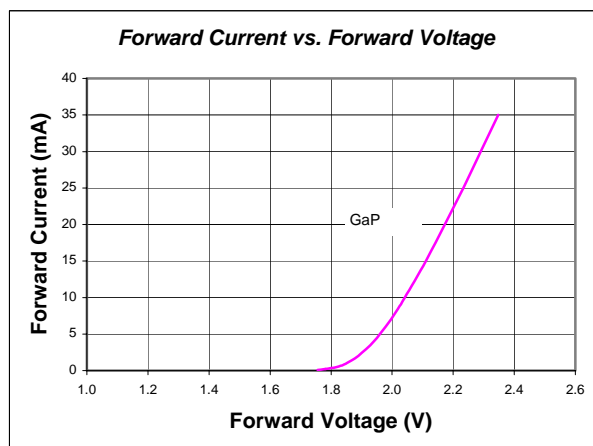




Fig. 3 Radiation pattern.

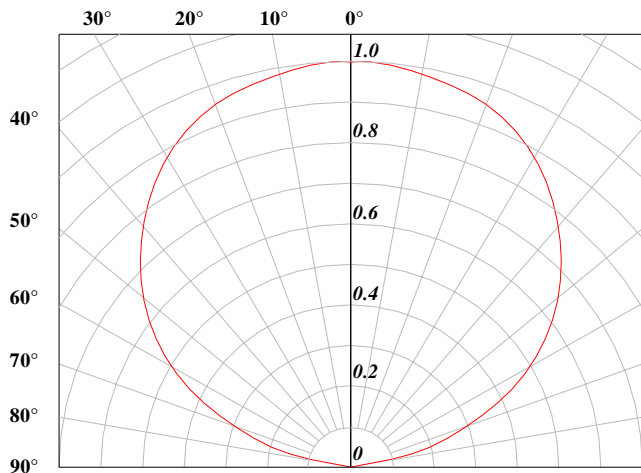


Fig. 4 Maximum forward current vs. temperature.

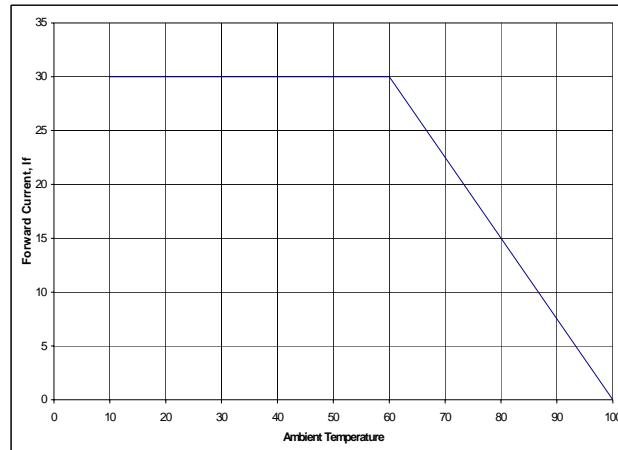


Fig. 5 Recommended IR-reflow Soldering Profile

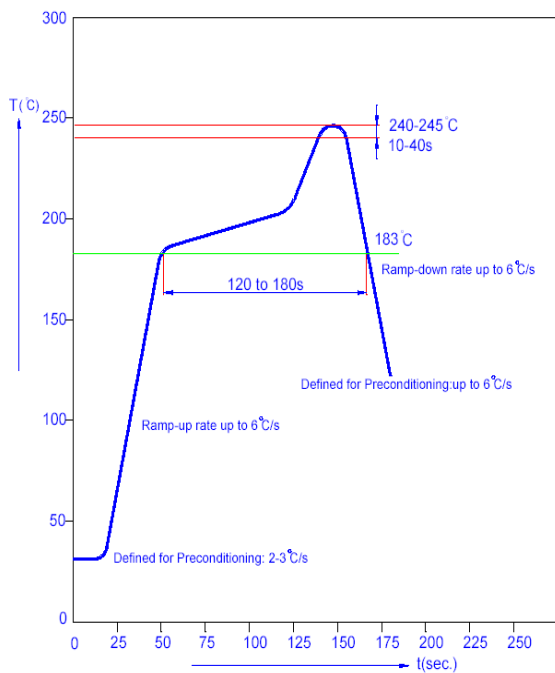
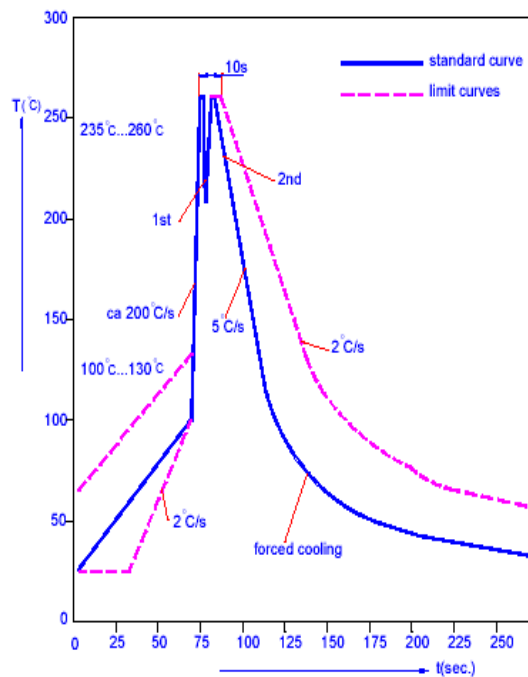


Fig. 6 Recommended TTW Soldering Profile

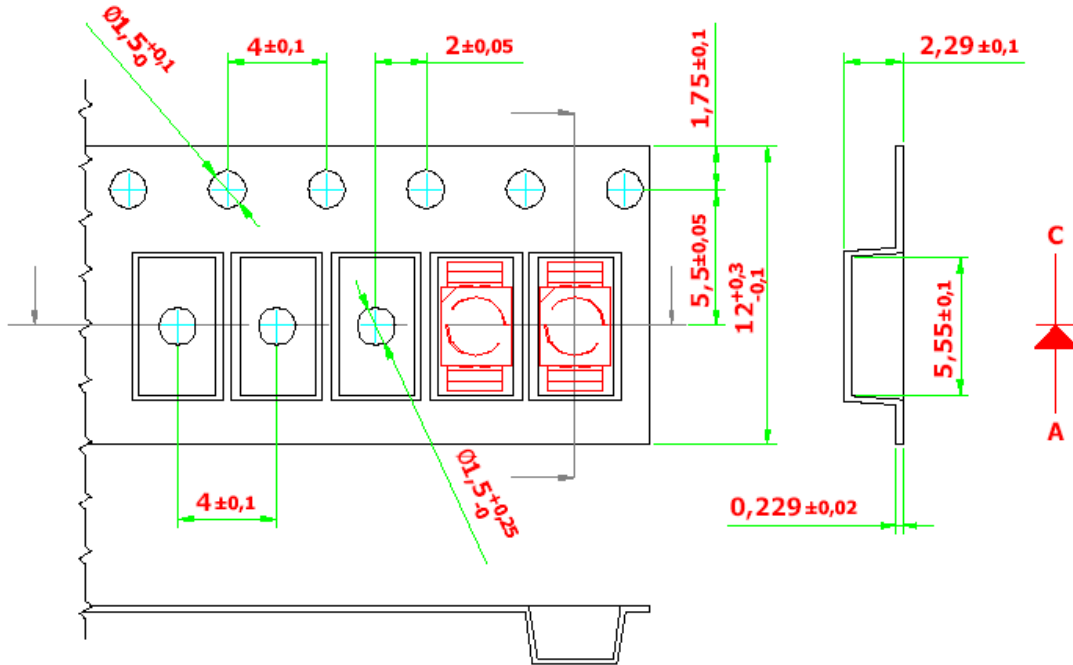




● Taping And Orientation

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.

