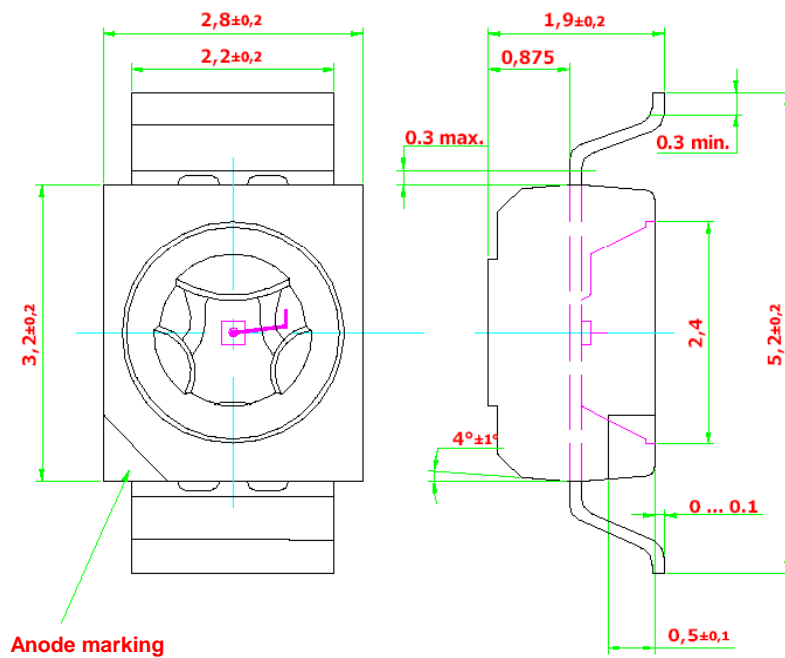




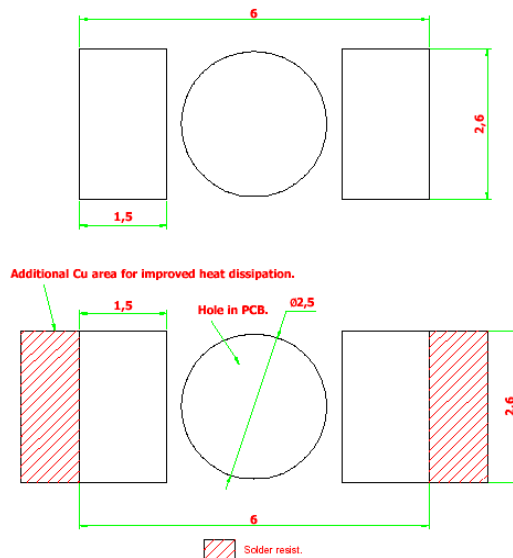
● Feature:

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





● Optical Characteristics:

Part Number	Chip Technology / Color (dom. WL)	Luminous Intensity @ If = 20mA Iv ( mcd )
<b>BL-PDH-GRS-C10</b>	AlGaAs/ Hyper Red, 645 nm	<b>18.0 ... 45.0</b>
• BIN M1		18.0 ... 22.4
• BIN M2		22.4 ... 28.5
• BIN N1		28.5 ... 35.5
• BIN N2		35.5 ... 45.0
<b>BL-PDH-GRS-C20</b>		<b>28.5 ... 71.5</b>
• BIN N1		28.5 ... 35.5
• BIN N2		35.5 ... 45.0
• BIN P1		45.0 ... 56.0
• BIN P2		56.0 ... 71.5

Forward voltage @ If=20 mA.	Chip Type	Viewing angle at 50% Iv	Reverse current, I <sub>R</sub> @ V <sub>R</sub> = 5V, (max)
1.9 V (typ.); 2.6 V (max)	AlGaAs	120°	100 μA

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. An optional Vf binning is also available upon request. Binning scheme is as per following table.

● Absolute Maximum Ratings:

	Maximum Value	Unit
DC forward current.	30	mA
Peak pulse current; (tp ≤ 10 μs, 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



● 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

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

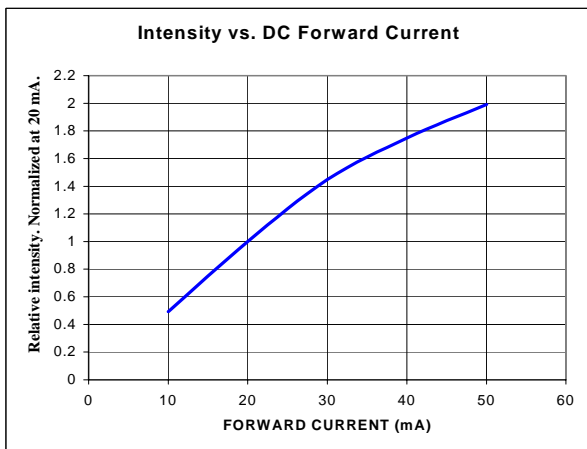
● Wavelength Grouping:

Color	Group	Wavelength distribution (nm)
BL-PDH; Hyper Red	Full	640 – 650

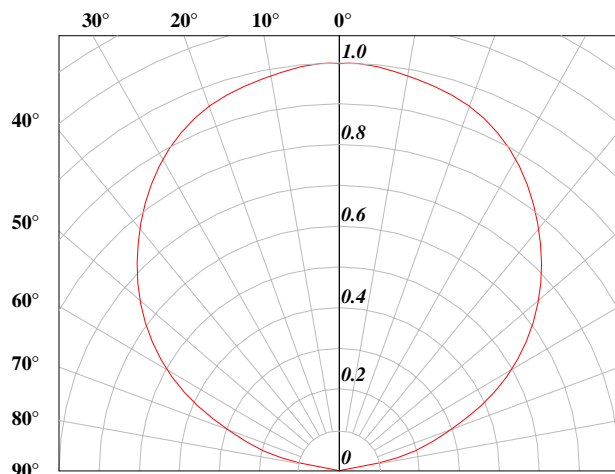
Wavelength is measured with an accuracy of  $\pm 1$  nm.

● Typical electro-optical characteristics curves:

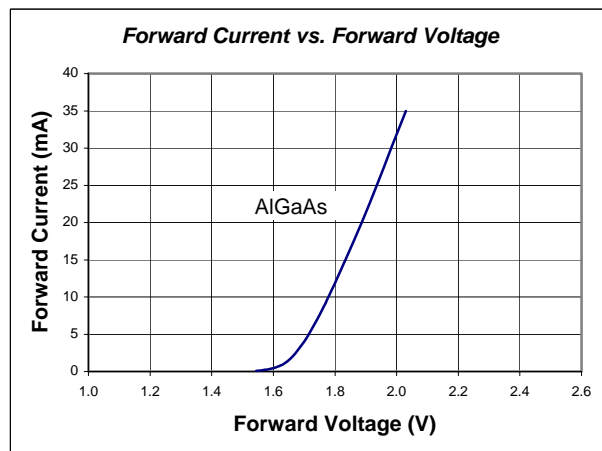
*Fig. 1 Relative luminous intensity vs. forward current.*



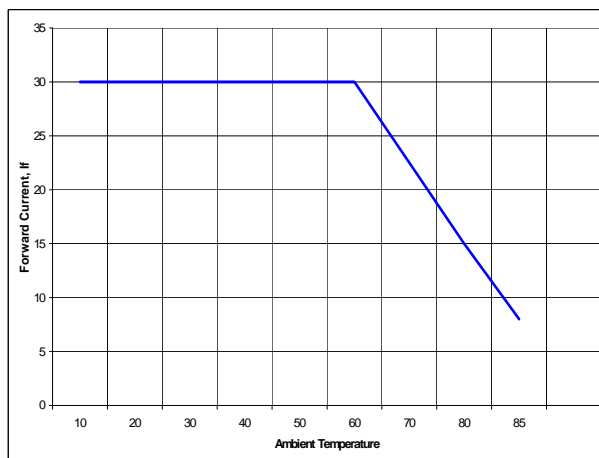
*Fig. 3 Radiation pattern*



*Fig. 2 Forward current vs. forward voltage.*

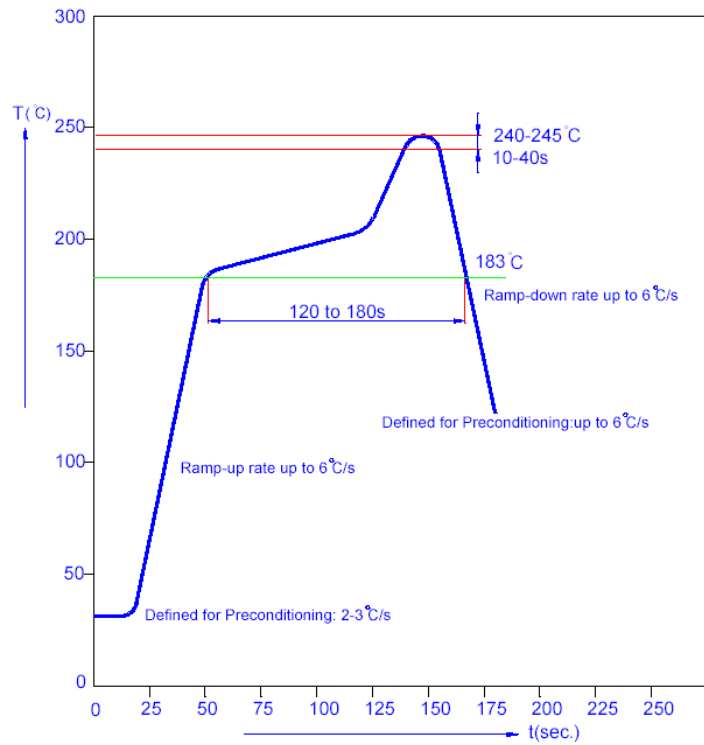


*Fig. 4 Maximum forward current vs. temperature.*

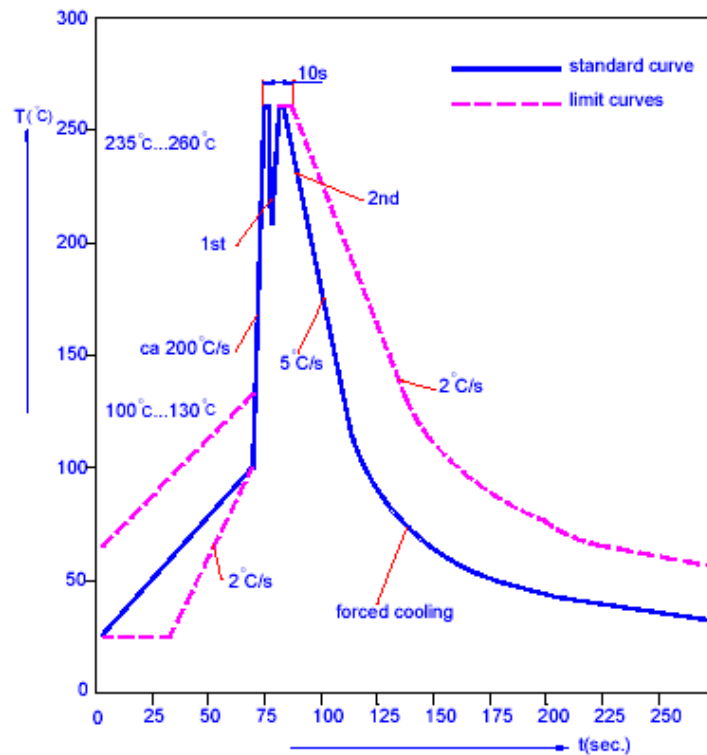




**Fig. 6 Recommended IR-reflow Soldering Profile**



**Fig. 6 Recommended TTW Soldering Profile**

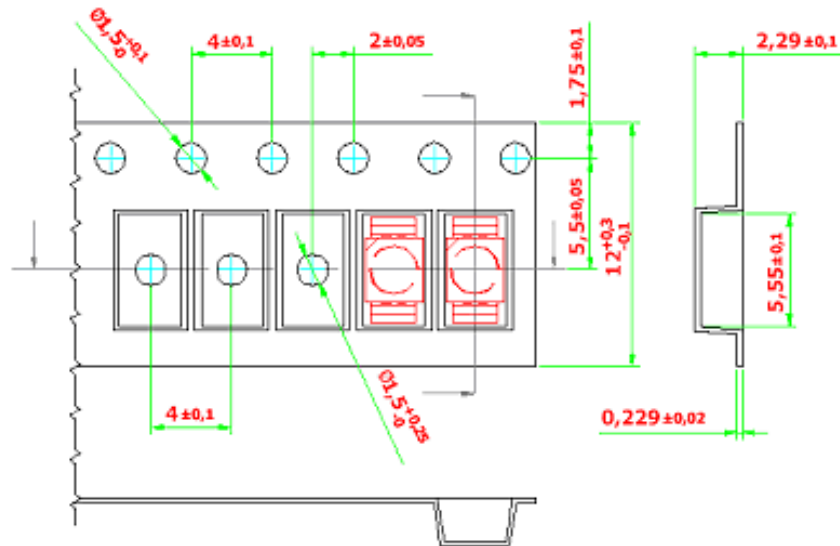




● Taping And Orientation:

Reels come in quantity of 2000 units.

Reel diameter is 180 mm.



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.

