

## High Power LED lamp

BL-HP20AxxxL-3W

### Features:

- ∅ 1W and 3W, 5W LEDs suitable for illumination lamps and decorative lighting
- ∅ Longer service and less luminosity loss, 50,000hours
- ∅ Different emitting colors are available
- ∅ Working current: 200-350mA, 700mA, 1050mA
- ∅ With or without heat sink are both available
- ∅ Lambertian, batwing and side emitting are all available
- ∅ Light output from 20 to 170 lumens


### Applications :

Commercial lighting  
Residential lighting  
Decorative lighting



### 3Watt Lambertian

Electrical-optical characteristics: (Ta=25°C) (Test Condition: IF=700mA)

| <b>3W Star with Lambertian type</b><br><br><b>Part Number</b> | <b>Chip</b>        |                            | <b>Lens Type</b> | <b>Forward Voltage(VF)<br/>Unit: V</b> |      | <b>Flux Unit:lm @700mA</b> |      | <b>Viewing Angle 2θ/2 (deg)</b> |
|---|--------------------|----------------------------|------------------|--|------|----------------------------|------|---------------------------------|
|   | Emitted Color      | λ <sub>p</sub> (nm) or CTT |                  | Typ                                    | Max  | Min.                       | Typ. |                                 |
|   |                    |                            |                  |  |      |                            |      |                                 |
| <b>BL-HP20AUECL-3W</b>  | Ultra Orange       | 630                        | Water Clear      | 2.2                                    | 2.75 | 40                         | 50   | 140                             |
| <b>BL-HP20AUYCL-3W</b>  | Ultra Yellow       | 590                        |                  | 2.2                                    | 2.75 | 50                         | 55   |                                 |
| <b>BL-HP20APGCL-3W</b>  | Ultra Pure Green   | 525                        |                  | 3.5                                    | 3.8  | 70                         | 90   |                                 |
| <b>BL-HP20ABGCL-3W</b>  | Ultra Bluish Green | 505                        |                  | 3.5                                    | 3.8  | 70                         | 90   |                                 |
| <b>BL-HP20AUBCL-3W</b>  | Ultra Blue         | 470                        |                  | 3.5                                    | 3.8  | 15                         | 20   |                                 |
| <b>BL-HP20AUWCL-3W</b>  | Ultra White        | 6000k                      |                  | 3.5                                    | 3.8  | 50                         | 60   |                                 |
| <b>BL-HP20AUW2CL-3W</b>   | Ultra Warm White   | 3200k                      |                  | 3.5                                    | 3.8  | 40                         | 50   |                                 |

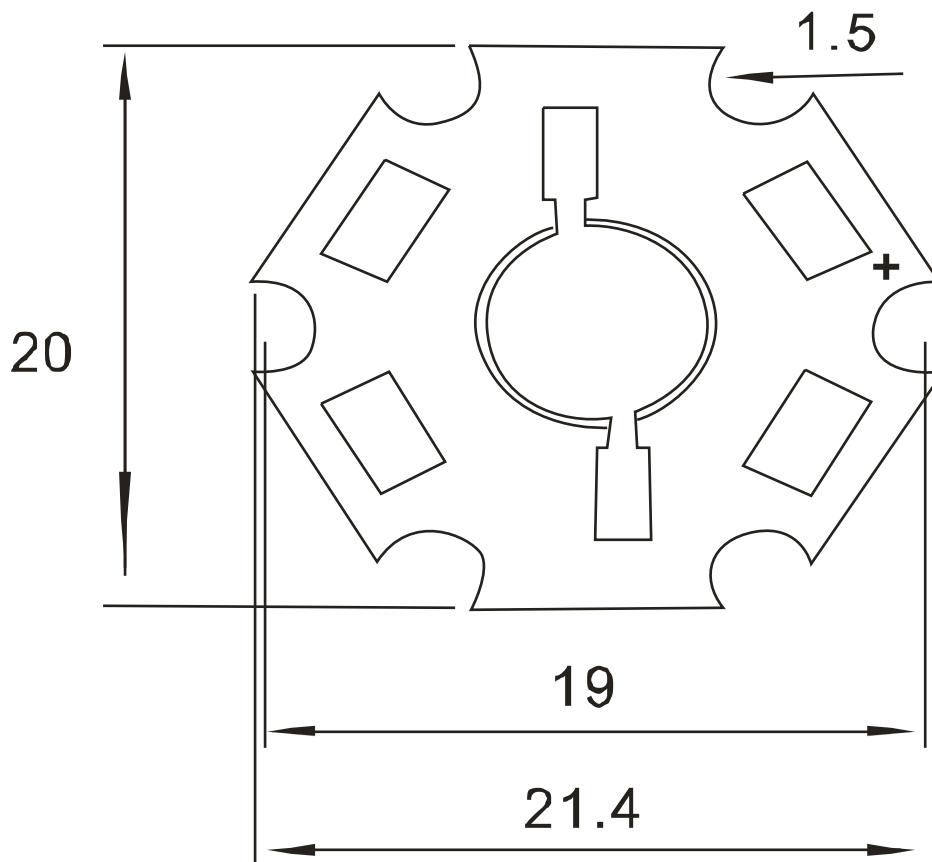
### Absolute maximum ratings (Ta=25°C)

| Parameter   | UE  | UY  | BG  | PG  | UB  | UW  | Unit |
|---|---|-----|-----|-----|-----|-----|------|
| Forward Current I <sub>F</sub>                            | 30  | 30  | 30  | 30  | 30  | 30  | mA   |
| Power Dissipation P <sub>d</sub>                          | 65  | 65  | 110 | 110 | 120 | 120 | mW   |
| Reverse Voltage V <sub>R</sub>                            | 5   | 5   | 5   | 5   | 5   | 5   | V    |
| Peak Forward Current I <sub>PF</sub><br>(Duty 1/10 @1KHZ) | 150   | 150 | 150 | 150 | 100 | 100 | mA   |
| Operation Temperature T <sub>OPR</sub>                    | -40 to +80  |     |     |     |     |     | °C   |
| Storage Temperature T <sub>STG</sub>                      | -40 to +85  |     |     |     |     |     | °C   |
| Lead Soldering Temperature T <sub>SOL</sub>               | Max.260±5°C for 3 sec Max.<br>(1.6mm from the base of the epoxy bulb) |     |     |     |     |     | °C   |

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### Package configuration & Internal circuit diagram



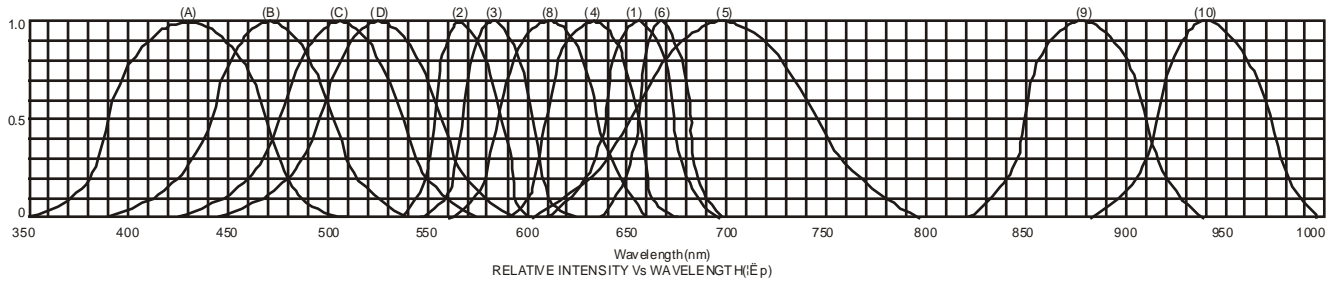
#### Notes:

1. All dimensions are in millimeters (inches)
2. Tolerance is 0.25(0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

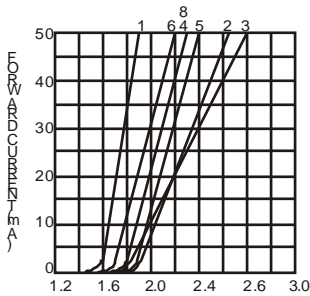
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**BL-HP20AxxxL-3W**

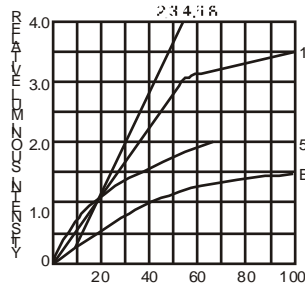
## Typical electrical-optical characteristics curves:



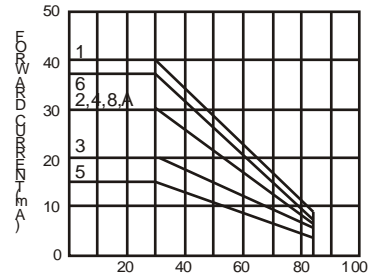
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) - GaN/SiC 430nm/Blue
- (B) - InGaN/SiC 470nm/Blue
- (C) - InGaN/SiC 505nm/Ultra Green
- (D) - InGaAlSiC 525nm/Ultra Green



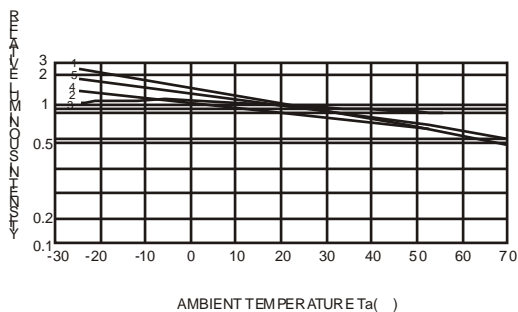
FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



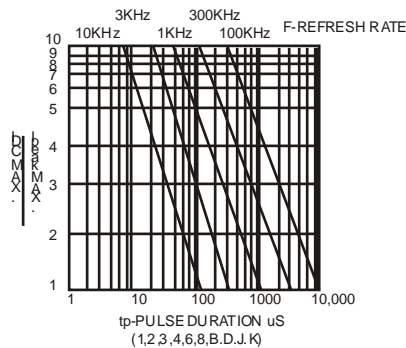
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



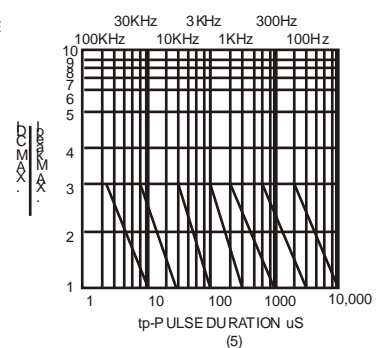
AMBIENT TEMPERATURE Ta ( )  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta ( )



tp-PULSE DURATION  $\mu$ S  
(1,2,3,4,6,8,B,D,J,K)



(5)

NOTE: 25 free air temperature unless otherwise specified

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## Packing and weighting

