

Round Type LED lamp

BL-L502

Features:

- Ø 5mm Round Type LED lamp
- Ø Ultra brightness.
- Ø Choice of various viewing angles.
- Ø Diffused, Transparent and Water clear lens are available.
- Ø IC compatible /Low current capability.
- Ø RoHs Compliance



Electrical-optical characteristics: (Ta=25°C) (Test Condition: IF=20mA)

| Part Number | Chip | | | Lens Type | Forward Voltage(VF) Unit:V | | Luminous Intensity (Iv) Unit:mcd | | Viewing Angle 2θ/2 (deg) |
|-------------|--------------------|------------|---------|-----------|-------------------------------|------|-------------------------------------|-------|--------------------------|
| | Emitted Color | Material | λp (nm) | | Typ | Max | Min. | Typ. | |
| | | | | | Water Clear | | | | |
| BL-L502SRC | Hi Red | AlGaAs,SH | 660 | | 1.85 | 2.20 | 50 | 250 | 20 |
| BL-L502LRC | Super Red | AlGaAs,DH | 660 | | 1.85 | 2.20 | 250 | 600 | |
| BL-L502URC | Ultra Red | AlGaAs,DDH | 660 | | 1.95 | 2.20 | 600 | 1000 | |
| BL-L502UEC | Ultra Orange | AlGaInP | 630 | | 2.10 | 2.50 | 800 | 2000 | |
| BL-L502UYC | Ultra Yellow | AlGaInP | 590 | | 2.10 | 2.50 | 1000 | 2200 | |
| BL-L502UGC | Ultra Green | AlGaInP | 574 | | 2.20 | 2.50 | 300 | 700 | |
| BL-L502PGC | Ultra Pure Green | InGaN | 525 | | 3.80 | 4.50 | 2000 | 5000 | |
| BL-L502BGC | Ultra Bluish Green | InGaN | 505 | | 3.80 | 4.50 | 1800 | 4000 | |
| BL-L502BC | Blue | InGaN | 430 | | 3.80 | 4.50 | 800 | 2000 | |
| BL-L502UBC | Ultra Blue | InGaN | 470 | | 2.70 | 4.20 | 2000 | 5000 | |
| BL-L502VC | UV | InGaN | 405 | | 3.80 | 4.50 | 80 | 150 | |
| BL-L502UWC | Ultra White | InGaN | / | | 2.70 | 4.20 | 3000 | 10000 | |

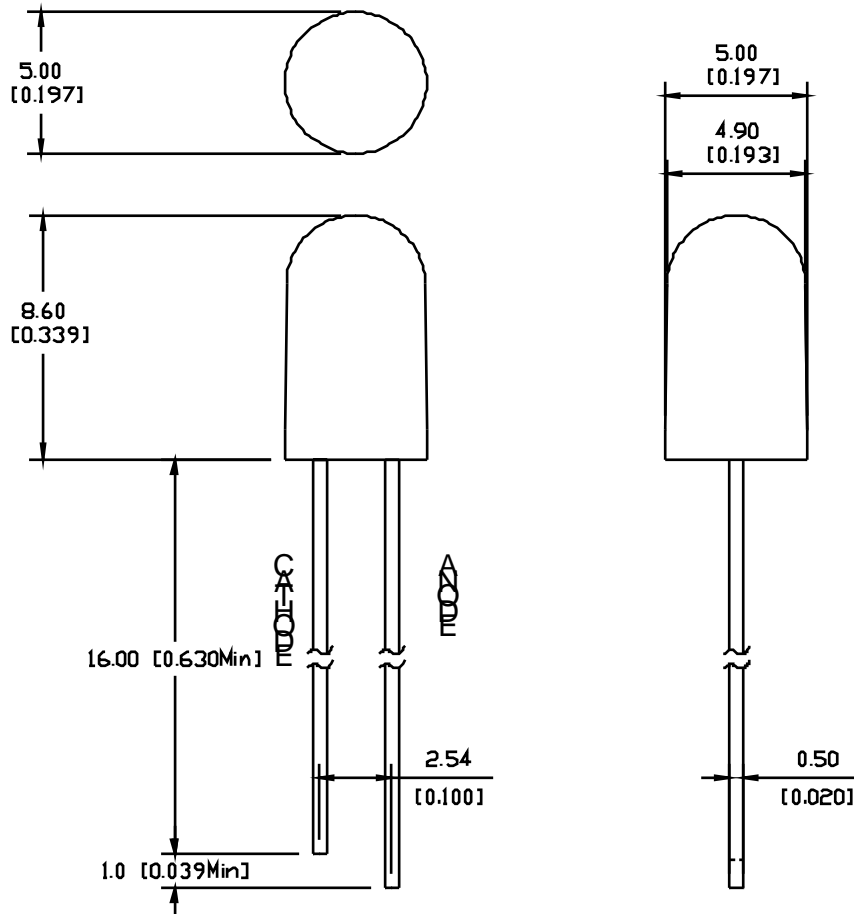
Absolute maximum ratings (Ta=25°C)

| Parameter | SR | LR | UR | UE | UY | UG | PG | BG | B | UB | UV | W | Unit |
|---|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Forward Current I _F | 25 | 25 | 25 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | mA |
| Power Dissipation P _d | 60 | 60 | 60 | 65 | 65 | 75 | 110 | 110 | 120 | 120 | 120 | 120 | mW |
| Reverse Voltage V _R | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | V |
| Peak Forward Current I _{PF} (Duty 1/10 @1KHZ) | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 100 | 100 | 100 | 100 | 100 | mA |
| Operation Temperature T _{OPR} | -40 to +80 | | | | | | | | | | | | °C |
| Storage Temperature T _{STG} | -40 to +85 | | | | | | | | | | | | °C |
| Lead Soldering Temperature TSOL | Max.260±5°C for 3 sec Max. (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 $\pm 0.25(0.01)$ unless otherwise noted.
3. Specifications are subject to change without notice.

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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



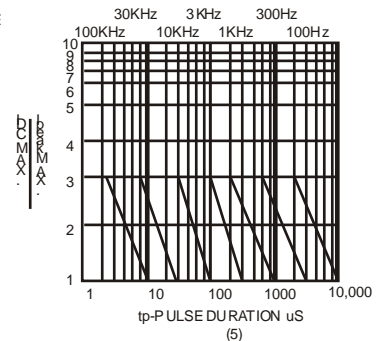
AMBIENT TEMPERATURE Ta()
FORWARD CURRENT VS. AMBIENT
TEMPERATURE



AMBIENT TEMPERATURE Ta()



tp-PULSE DURATION µs
(1,2,3,4,6,8,B,D,J,K)



tp-PULSE DURATION µs
(5)

NOTE:25 free air temperature unless otherwise specified

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Packing and weighting

