



ULTRA BRIGHT LED LAMPS(ROUND TYPES)

| Package | Part No. | Chip | | Lens Appearance | Absolute Maximum Ratings | | | | Electro-optical Data(At 20mA) | | | Viewing Angle 2θ 1/2 (deg) | Drawing No. |
|------------------------------------|--------------|------------------------|--------------------------|-----------------|--------------------------|---------|---------|-----------|-------------------------------|-----|----------|----------------------------|-------------|
| | | Material Emitted Color | Peak Wave Length λ p(nm) | | Δ λ (nm) | Pd (mw) | If (mA) | Peak (mA) | Vf (V) | | Iv (mcd) | | |
| | | | | | | | | | Typ. | Max | Typ. | | |
| T-1 Standard 1.0" Lead 3φ | BL-BS0331 | GaAlAs/ SH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 300 | 30 | L-001 |
| | BL-BF0331 | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 500 | | |
| | BL-BU0331 | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 400 | | |
| | BL-BG3331 | InGaAlP/ Ultra Green | 574 | | 30 | 75 | 30 | 150 | 2.4 | 2.8 | 350 | | |
| | BL-BG4331 | InGaN/SiC/ Ultra Green | 502 | | 30 | 110 | 30 | 100 | 3.5 | 4.0 | 600 | | |
| | BL-BJ0331 | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 800 | | |
| | BL-BK3331 | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 900 | | |
| T-1 Standard 1.0" Lead 3φ | BL-BD0341 | GaAlAs/ DH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 400 | 30 | L-002 |
| | BL-BF1341 | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 600 | | |
| | BL-BU1341 | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 500 | | |
| | BL-BG2341 | InGaAlP/ Super Green | 662 | | 30 | 75 | 30 | 150 | 2.4 | 2.8 | 200 | | |
| | BL-BJ1341 | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 1000 | | |
| | BL-BJ2341 | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 1200 | | |
| | BL-BK4341 | InGaAlP/ Ultra Yellow | 587 | | 15 | 75 | 30 | 150 | 2.4 | 2.8 | 1200 | | |
| T-1 Narrow Viewing 1.0" Lead 3φ | BL-BD0331M | GaAlAs/ DH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 600 | 15 | L-003 |
| | BL-BF4331M | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 1000 | | |
| | BL-BU2331M | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 800 | | |
| | BL-BG4331M | InGaN/SiC/ Ultra Green | 502 | | 30 | 110 | 30 | 100 | 3.5 | 4.0 | 700 | | |
| | BL-BJ3331M | InGaAlP/ Ultra Orange | 630 | | 17 | 75 | 30 | 150 | 2.4 | 2.6 | 1200 | | |
| | BL-BJ5331M | InGaAlP/ Soft Orange | 610 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 1200 | | |
| | BL-BK6331M | InGaAlP/ Ultra Yellow | 592 | | 15 | 75 | 30 | 150 | 2.4 | 2.8 | 1400 | | |
| T-1 Low Profile 1.0" Lead 3φ | BL-BS0331K | GaAlAs/ SH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 250 | 32 | L-004 |
| | BL-BD0331K | GaAlAs/ DH Super Red | 660 | | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 300 | | |
| | BL-BF4331K | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 450 | | |
| | BL-BU0331K | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 400 | | |
| | BL-BG3331K | InGaAlP/ Ultra Green | 574 | | 30 | 75 | 30 | 150 | 2.4 | 2.8 | 300 | | |
| | BL-BJ0331K | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 600 | | |
| | BL-BK331K | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 700 | | |
| T-1 3/4 Standard 1.0"Lead 5φ | BL-BD03J4 | GaAlAs/ DH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 550 | 12 | L-005 |
| | BL-BG33J4 | InGaAlP/ Ultra Green | 574 | | 30 | 75 | 30 | 150 | 2.4 | 2.8 | 800 | | |
| | BL-BG43J4 | InGaN/SiC/ Ultra Green | 502 | | 30 | 110 | 30 | 100 | 3.5 | 4.0 | 1800 | | |
| | BL-BG63J4 | InGaN/SiC/ Ultra Green | 523 | | 36 | 110 | 30 | 150 | 3.5 | 4.0 | 1300 | | |
| | BL-BK23J4 | InGaAlP/ Ultra Yellow | 587 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 2000 | | |
| | BL-BK33J4 | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 2200 | | |
| T-1 3/4 Standard 1.0"Lead 5φ | BL-BD03J4G-1 | GaAlAs/ DH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 450 | 20 | L-006 |
| | BL-BG43J4G-1 | InGaN/SiC/ Ultra Green | 502 | | 30 | 110 | 30 | 100 | 3.5 | 4.0 | 1500 | | |
| | BL-BU13J4G-1 | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 550 | | |
| | BL-BJ13J4G-1 | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 1800 | | |
| | BL-BK23J4G-1 | InGaAlP/ Ultra Yellow | 587 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 1800 | | |
| | BL-BK33J4G-1 | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 1800 | | |
| | BL-BF43R4G-1 | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 1200 | | |
| T-1 3/4 Narrow Viewing 1.0"Lead 5φ | BL-BD03J7M | GaAlAs/ DDH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 1500 | 8 | L-007 |
| | BL-BF43R7M | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 4000 | | |
| | BL-BJ13J7M | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 3500 | | |
| | BL-BJ53J7M | InGaAlP/ Soft-Orange | 610 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 4000 | | |
| | BL-BK33J7M | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 4500 | | |
| | BL-BK63J7M | InGaAlP/ Ultra Yellow | 592 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 7000 | | |
| 4.3x5.1x 7.3mm 1.0" Lead Oval | BL-WD03J4 | GaAlAs/ DH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 350 | X-X 35 Y-Y 25 | L-008 |
| | BL-WG33J4 | InGaAlP/ Ultra Green | 574 | | 30 | 75 | 30 | 150 | 2.4 | 2.8 | 400 | | |
| | BL-WU13J4 | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 500 | | |
| | BL-WJ13J4 | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 1700 | | |
| | BL-WK33J4 | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 1800 | | |

Remark : 1.Hi-Eff Red / High-Efficiency Red.
 2.Trans / Transparent.
 3.2θ 1/2 The off-axis angle at which the luminous intensity is half the axial luminous intensity.



ULTRA BRIGHT LED LAMPS(ROUND TYPES)

| | |
|---------------------------------------|--|
| <p>L-001 BL-Bxx331 Series</p> | <p>L-002 BL-Bxx341 Series</p> |
| <p>L-003 BL-Bxx331M Series</p> | <p>L-004 BL-Bxx331K Series</p> |
| <p>L-005 BL-Bxxx3J4 Series</p> | <p>L-006 BL-Bxxx4G-1 Series</p> |
| <p>L-007 BL-Bxxx7M Series</p> | <p>L-008 BL-Wxx3J4 Series</p> |

Notes : 1.All Dimensions are in millimeters (inches).
2.Tolerance is $\pm 0.25\text{mm}$ (.010").

ULTRA BRIGHT LED LAMPS(ROUND TYPES)

| Package | Part No. | Chip | | Lens Appearance | Absolute Maximum Ratings | | | | Electro-optical Data(At 20mA) | | | Viewing Angle 2θ 1/2 (deg) | Drawing No. |
|------------------------------------|--------------|------------------------|-------------------------|-----------------|--------------------------|---------|---------|-----------|-------------------------------|-----|----------|----------------------------|-------------|
| | | Material Emitted Color | Peak Wave Length λp(nm) | | Δλ (nm) | Pd (mw) | If (mA) | Peak (mA) | Vf (V) | | Iv (mcd) | | |
| | | | | | | | | | Typ. | Max | Typ. | | |
| T-1 Standard 1.0" Lead 3φ | BL-BS0331 | GaAlAs/ SH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 300 | 30 | L-001 |
| | BL-BF0331 | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 500 | | |
| | BL-BU0331 | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 400 | | |
| | BL-BG3331 | InGaAlP/ Ultra Green | 574 | | 30 | 75 | 30 | 150 | 2.4 | 2.8 | 350 | | |
| | BL-BG4331 | InGaN/SiC/ Ultra Green | 502 | | 30 | 110 | 30 | 100 | 3.5 | 4.0 | 600 | | |
| | BL-BJ0331 | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 800 | | |
| | BL-BK3331 | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 900 | | |
| T-1 Standard 1.0" Lead 3φ | BL-BD0341 | GaAlAs/ DH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 400 | 30 | L-002 |
| | BL-BF1341 | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 600 | | |
| | BL-BU1341 | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 500 | | |
| | BL-BG2341 | InGaAlP/ Super Green | 662 | | 30 | 75 | 30 | 150 | 2.4 | 2.8 | 200 | | |
| | BL-BJ1341 | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 1000 | | |
| | BL-BJ2341 | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 1200 | | |
| | BL-BK4341 | InGaAlP/ Ultra Yellow | 587 | | 15 | 75 | 30 | 150 | 2.4 | 2.8 | 1200 | | |
| T-1 Narrow Viewing 1.0" Lead 3φ | BL-BD0331M | GaAlAs/ DH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 600 | 15 | L-003 |
| | BL-BF4331M | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 1000 | | |
| | BL-BU2331M | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 800 | | |
| | BL-BG4331M | InGaN/SiC/ Ultra Green | 502 | | 30 | 110 | 30 | 100 | 3.5 | 4.0 | 700 | | |
| | BL-BJ3331M | InGaAlP/ Ultra Orange | 630 | | 17 | 75 | 30 | 150 | 2.4 | 2.6 | 1200 | | |
| | BL-BJ5331M | InGaAlP/ Soft Orange | 610 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 1200 | | |
| | BL-BK6331M | InGaAlP/ Ultra Yellow | 592 | | 15 | 75 | 30 | 150 | 2.4 | 2.8 | 1400 | | |
| T-1 Low Profile 1.0" Lead 3φ | BL-BS0331K | GaAlAs/ SH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 250 | 32 | L-004 |
| | BL-BD0331K | GaAlAs/ DH Super Red | 660 | | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 300 | | |
| | BL-BF4331K | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 450 | | |
| | BL-BU0331K | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 400 | | |
| | BL-BG3331K | InGaAlP/ Ultra Green | 574 | | 30 | 75 | 30 | 150 | 2.4 | 2.8 | 300 | | |
| | BL-BJ0331K | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 600 | | |
| | BL-BK331K | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 700 | | |
| T-1 3/4 Standard 1.0"Lead 5φ | BL-BD03J4 | GaAlAs/ DH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 550 | 12 | L-005 |
| | BL-BG33J4 | InGaAlP/ Ultra Green | 574 | | 30 | 75 | 30 | 150 | 2.4 | 2.8 | 800 | | |
| | BL-BG43J4 | InGaN/SiC/ Ultra Green | 502 | | 30 | 110 | 30 | 100 | 3.5 | 4.0 | 1800 | | |
| | BL-BG63J4 | InGaN/SiC/ Ultra Green | 523 | | 36 | 110 | 30 | 150 | 3.5 | 4.0 | 1300 | | |
| | BL-BK23J4 | InGaAlP/ Ultra Yellow | 587 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 2000 | | |
| | BL-BK33J4 | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 2200 | | |
| T-1 3/4 Standard 1.0"Lead 5φ | BL-BD03J4G-1 | GaAlAs/ DH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 450 | 20 | L-006 |
| | BL-BG43J4G-1 | InGaN/SiC/ Ultra Green | 502 | | 30 | 110 | 30 | 100 | 3.5 | 4.0 | 1500 | | |
| | BL-BU13J4G-1 | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 550 | | |
| | BL-BJ13J4G-1 | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 1800 | | |
| | BL-BK23J4G-1 | InGaAlP/ Ultra Yellow | 587 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 1800 | | |
| | BL-BK33J4G-1 | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 1800 | | |
| | BL-BF43R4G-1 | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 1200 | 25 | |
| T-1 3/4 Narrow Viewing 1.0"Lead 5φ | BL-BD03J7M | GaAlAs/ DDH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 1500 | 8 | L-007 |
| | BL-BF43R7M | GaAlAs/ DDH Super Red | 660 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 4000 | | |
| | BL-BJ13J7M | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 3500 | | |
| | BL-BJ53J7M | InGaAlP/ Soft-Orange | 610 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 4000 | | |
| | BL-BK33J7M | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 4500 | | |
| | BL-BK63J7M | InGaAlP/ Ultra Yellow | 592 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 7000 | | |
| 4.3x5.1x 7.3mm 1.0" Lead Oval | BL-WD03J4 | GaAlAs/ DH Super Red | 660 | Water Clear | 20 | 60 | 30 | 150 | 1.7 | 2.6 | 350 | X-X 35 Y-Y 25 | L-008 |
| | BL-WG33J4 | InGaAlP/ Ultra Green | 574 | | 30 | 75 | 30 | 150 | 2.4 | 2.8 | 400 | | |
| | BL-WU13J4 | InGaAlP/ Ultra Red | 645 | | 20 | 65 | 30 | 150 | 2.0 | 2.6 | 500 | | |
| | BL-WJ13J4 | InGaAlP/ Ultra Orange | 620 | | 17 | 65 | 30 | 150 | 2.0 | 2.6 | 1700 | | |
| | BL-WK33J4 | InGaAlP/ Ultra Yellow | 592 | | 15 | 65 | 30 | 150 | 2.0 | 2.6 | 1800 | | |

Remark : 1.Hi-Eff Red / High-Efficiency Red.
 2.Trans / Transparent.
 3.2θ 1/2 The off-axis angle at which the luminous intensity is half the axial luminous intensity.

ULTRA BRIGHT LED LAMPS(ROUND TYPES)

| L-001 BL-Bxx331 Series | L-002 BL-Bxx341 Series |
|-------------------------|--------------------------|
| | |
| L-003 BL-Bxx331M Series | L-004 BL-Bxx331K Series |
| | |
| L-005 BL-Bxxx3J4 Series | L-006 BL-Bxxx4G-1 Series |
| | |
| L-007 BL-Bxxx7M Series | L-008 BL-Wxx3J4 Series |
| | |

Notes : 1.All Dimensions are in millimeters (inches).
2.Tolerance is $\pm 0.25\text{mm}$ (.010").