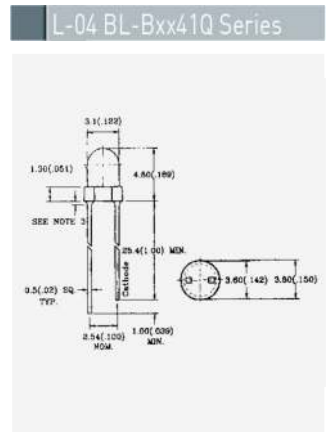
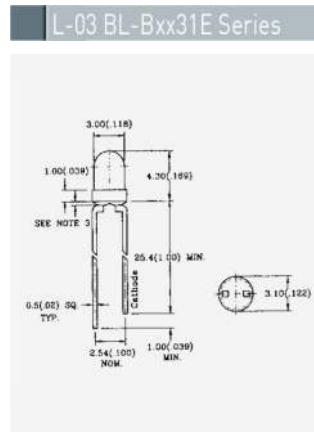
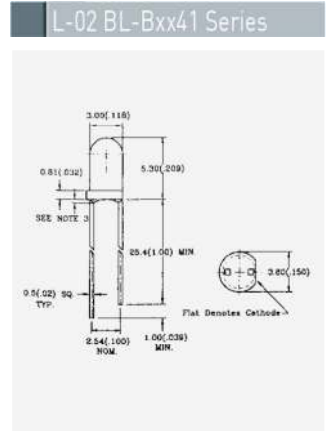
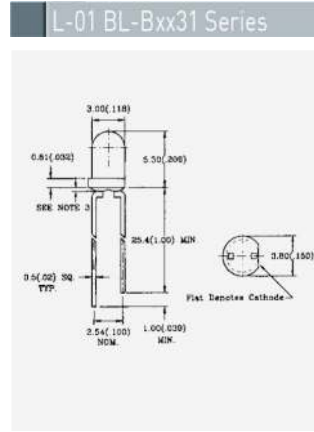


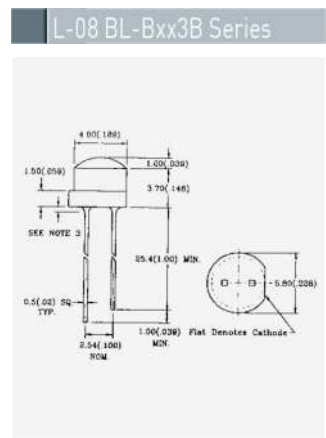
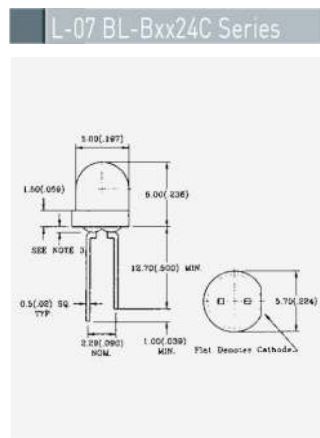
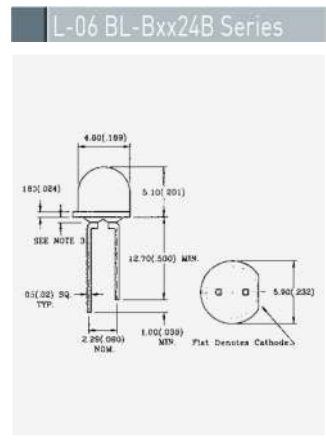
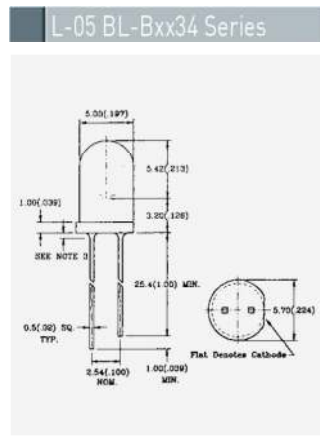
STANDARD LED LAMPS (ROUND TYPES)

| Package | Part No. | Chip | | Lens Appearance | Absolute Maximum Ratings | | | | Electro-optical Data (At 20mA) | | | Viewing Angle 2 θ 1/2 (deg) | Drawing No. |
|------------------------------------|-----------|---------------|---------------------------------|-----------------|--------------------------|---------|---------|--------------|--------------------------------|------|-------|------------------------------------|-------------|
| | | Emitted Color | Peak Wave Length λ (nm) | | λ (nm) | Pd (mW) | If (mA) | Peak If (mA) | WVI | | | | |
| | | | | | | | | | Typ. | Max. | | | |
| T-1 Standard 0.5" Lead 3 ϕ | BL-B1131 | Red | 655 | Red Diffused | 40 | 110 | 40 | 200 | 1.7 | 2.0 | 6.0 | 40 | L-01 |
| | BL-B5131 | Bright Red | 700 | Red Diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 8.0 | 40 | |
| | BL-B4531 | Hi-Eff Red | 635 | Red Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 40.0 | 40 | |
| | BL-B2131 | Green | 568 | Green Diffused | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 40.0 | 40 | |
| | BL-B3131 | Yellow | 585 | Yellow Diffused | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 30.0 | 40 | |
| | BL-B4131 | Orange | 635 | Orange Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 40.0 | 40 | |
| | BL-B5431 | Bright Red | 700 | Red Trans | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 50.0 | 30 | |
| | BL-B4331 | Hi-Eff Red | 635 | Red Trans | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 100.0 | 30 | |
| | BL-B2431 | Green | 568 | Green Trans | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 80.0 | 30 | |
| | BL-B3431 | Yellow | 585 | Yellow Trans | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 70.0 | 30 | |
| T-1 Standard 1.0" Lead 3 ϕ | BL-B4431 | Orange | 635 | Orange Trans | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 100.0 | 30 | L-02 |
| | BL-B1141 | Red | 655 | Red Diffused | 40 | 110 | 40 | 200 | 1.7 | 2.0 | 6.0 | 40 | |
| | BL-B5141 | Bright Red | 700 | Red Diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 8.0 | 40 | |
| | BL-B4541 | Hi-Eff Red | 635 | Red Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 40.0 | 40 | |
| | BL-B2141 | Green | 568 | Green Diffused | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 40.0 | 40 | |
| | BL-B3141 | Yellow | 585 | Yellow Diffused | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 30.0 | 40 | |
| | BL-B4141 | Orange | 635 | Orange Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 40.0 | 40 | |
| | BL-B5341 | Bright Red | 700 | Water Clear | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 50.0 | 30 | |
| | BL-B2341 | Green | 568 | Water Clear | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 80.0 | 30 | |
| | BL-B3341 | Yellow | 585 | Water Clear | 35 | 100 | 30 | 150 | 2.2 | 2.6 | 110.0 | 30 | |
| T-1 Low Profile 1.0" Lead 3 ϕ | BL-B3341 | Yellow | 585 | Water Clear | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 70.0 | 30 | L-03 |
| | BL-B4341 | Hi-Eff Red | 635 | Water Clear | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 100.0 | 30 | |
| | BL-B1131E | Red | 655 | Red Diffused | 40 | 110 | 40 | 200 | 1.7 | 2.0 | 6.0 | 50 | |
| | BL-B5131E | Bright Red | 700 | Red Diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 10.0 | 50 | |
| | BL-B4531E | Hi-Eff Red | 635 | Red Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 60.0 | 50 | |
| | BL-B2131E | Green | 568 | Green Diffused | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 70.0 | 50 | |
| | BL-B3131E | Yellow | 585 | Yellow Diffused | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 60.0 | 50 | |
| | BL-B4131E | Orange | 635 | Orange Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 60.0 | 50 | |
| | BL-B8131E | Amber | 610 | Orange Diffused | 35 | 100 | 30 | 150 | 2.0 | 2.6 | 70.0 | 50 | |
| | BL-B5331E | Bright Red | 700 | Water Clear | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 60.0 | 40 | |
| 3 ϕ Standard 1.0" Lead | BL-B2331E | Green | 568 | Water Clear | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 110.0 | 40 | L-04 |
| | BL-B3331E | Yellow | 585 | Water Clear | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 90.0 | 40 | |
| | BL-B4331E | Hi-Eff Red | 635 | Water Clear | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 100.0 | 40 | |
| | BL-B1141Q | Red | 655 | Red Diffused | 40 | 110 | 40 | 200 | 1.7 | 2.0 | 8.0 | 60 | |
| | BL-B5141Q | Bright Red | 700 | Red Diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 10.0 | 60 | |
| | BL-B4541Q | Hi-Eff Red | 635 | Red Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 60.0 | 60 | |
| | BL-B2141Q | Green | 568 | Green Diffused | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 70.0 | 60 | |
| | BL-B3141Q | Yellow | 585 | Yellow Diffused | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 60.0 | 60 | |
| | BL-B4141Q | Orange | 635 | Orange Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 60.0 | 60 | |
| | BL-B8141Q | Amber | 610 | Orange Diffused | 35 | 100 | 30 | 150 | 2.0 | 2.6 | 70.0 | 60 | |
| 3 ϕ Standard 1.0" Lead | BL-B5341Q | Bright Red | 700 | Water Clear | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 60.0 | 35 | L-04 |
| | BL-B2341Q | Green | 568 | Water Clear | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 110.0 | 35 | |
| | BL-B3341Q | Yellow | 585 | Water Clear | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 90.0 | 35 | |
| | BL-B4341Q | Hi-Eff Red | 635 | Water Clear | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 100.0 | 35 | |



STANDARD LED LAMPS (ROUND TYPES)

| Package | Part No. | Chip | | Lens Appearance | Absolute Maximum Ratings | | | Electro-optical Data (At 20mA) | | | Viewing Angle 2 θ 1/2 (deg) | Drawing No. | |
|-----------|------------|---------------|-----------------------------------|-----------------|--------------------------|---------|---------|--------------------------------|-------|------|------------------------------------|-------------|---------------|
| | | Emitted Color | Peak Wave Length λ_p (nm) | | J_c (mW) | Pd (mW) | If (mA) | Peak θ_{FWHM} | Vf(V) | | | | Iv Typ. (mcd) |
| | | | | | | | | | Typ. | Max. | | | |
| | BL-B1134 | Red | 655 | Red Diffused | 40 | 110 | 40 | 200 | 1.7 | 2.0 | 6.0 | 30 | L-05 |
| | BL-B5134 | Bright Red | 700 | Red Diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 9.0 | 30 | |
| | BL-B4534 | Hi-Eff Red | 635 | Red Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 80.0 | 30 | |
| | BL-B2134 | Green | 568 | Green Diffused | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 80.0 | 30 | |
| | BL-BX134 | Hi-Eff Green | 568 | Green Diffused | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 110.0 | 30 | |
| | BL-B3134 | Yellow | 585 | Yellow Diffused | 35 | 100 | 30 | 150 | 2.0 | 2.6 | 80.0 | 30 | |
| | BL-B4134 | Orange | 635 | Orange Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 80.0 | 30 | |
| | BL-B5434 | Bright Red | 700 | Red Trans | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 60.0 | 20 | |
| | BL-B4434 | Hi-Eff Red | 635 | Red Trans | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 200.0 | 20 | |
| | BL-B2434 | Green | 568 | Green Trans | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 200.0 | 20 | |
| | BL-B3434 | Yellow | 585 | Yellow Trans | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 180.0 | 20 | |
| | BL-B4434 | Orange | 635 | Orange Trans | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 200.0 | 20 | |
| BL-B5334 | Bright Red | 700 | Water Clear | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 60.0 | 20 | | |
| | BL-B1124B | Red | 655 | Red Diffused | 40 | 110 | 40 | 200 | 1.7 | 2.0 | 1.5 | 45 | L-06 |
| | BL-B5124B | Bright Red | 700 | Red Diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 2.0 | 45 | |
| | BL-B4524B | Hi-Eff Red | 635 | Red Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 12.0 | 45 | |
| | BL-B2124B | Green | 568 | Green Diffused | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 16.0 | 45 | |
| | BL-B3124B | Yellow | 585 | Yellow Diffused | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 12.0 | 45 | |
| BL-B4124B | Orange | 635 | Orange Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 12.0 | 45 | | |
| | BL-B1124C | Red | 655 | Red Diffused | 40 | 110 | 40 | 200 | 1.7 | 2.0 | 2.0 | 60 | L-07 |
| | BL-B5124C | Bright Red | 700 | Red Diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 3.0 | 60 | |
| | BL-B4524C | Hi-Eff Red | 635 | Red Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 16.0 | 60 | |
| | BL-B2124C | Green | 568 | Green Diffused | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 22.0 | 60 | |
| | BL-B3124C | Yellow | 585 | Yellow Diffused | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 16.0 | 60 | |
| BL-B4124C | Orange | 635 | Orange Diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 16.0 | 60 | | |
| | BL-B133B | Red | 655 | Water Clear | 40 | 40 | 40 | 200 | 1.7 | 2.0 | 8.0 | 50 | L-08 |
| | BL-B533B | Bright Red | 700 | Water Clear | 90 | 90 | 90 | 50 | 2.2 | 2.6 | 12.0 | 50 | |
| | BL-B433B | Hi-Eff Red | 635 | Water Clear | 45 | 45 | 45 | 150 | 2.0 | 2.6 | 55.0 | 50 | |
| | BL-B233B | Green | 568 | Water Clear | 30 | 30 | 30 | 150 | 2.2 | 2.6 | 60.0 | 50 | |
| | BL-B333B | Yellow | 585 | Water Clear | 35 | 35 | 35 | 150 | 2.1 | 2.6 | 50.0 | 50 | |
| | BL-B463B | Hi-Eff Red | 635 | Red Trans | 45 | 45 | 45 | 150 | 2.0 | 2.6 | 95.0 | 50 | |
| | BL-B543B | Bright Red | 700 | Red Trans | 90 | 90 | 90 | 50 | 2.2 | 2.6 | 12.0 | 50 | |
| | BL-B243B | Green | 568 | Green Trans | 30 | 30 | 30 | 150 | 2.2 | 2.6 | 60.0 | 50 | |



DUAL-CHIP & TRI-STATE LED LAMPS

| Package | Part No. | Chip | | Lens Appearance | Absolute Maximum Ratings | | | Electro-optical Data [At 20mA] | | Viewing Angle 2 θ 1/2 (deg) | Drawing No. | |
|---|----------------------|---------------|-----------------------------------|-----------------|--------------------------|------------|-----------------|--------------------------------|---------------------|------------------------------------|-------------|---------------------------|
| | | Emitted Color | Peak Wave Length λ_p (nm) | | I_f (mA) | P_d (mW) | Peak I_f (mW) | V _F Typ. | V _F Max. | | | I _v Typ. (mcd) |
| T-1 1.0" Lead Standard 3 ϕ | BL-BHG201 | Bright Red | 700 | White diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 7.0 | L-09 |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 35.0 | |
| | BL-BEG201 | Hi-Eff Red | 635 | White diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 25.0 | |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 35.0 | |
| | BL-BX134 BL-B3134 | Yellow | 585 | White diffused | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 20.0 | |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 35.0 | |
| T-13/4 1.0" Lead Standard 5 ϕ | BL-BHG204 | Bright Red | 700 | White diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 8.0 | L-10 |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 45.0 | |
| | BL-BEG204 | Hi-Eff Red | 635 | White diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 35.0 | |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 45.0 | |
| | BL-BYG204 | Yellow | 585 | White diffused | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 30.0 | |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 45.0 | |
| | BL-BHG204-A | Bright Red | 700 | White diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 3.5 | L-11 |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 20.0 | |
| | BL-BEG204-A | Hi-Eff Red | 635 | White diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 15.0 | |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 20.0 | |
| | BL-BYG204-A | Yellow | 585 | White diffused | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 10.0 | |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 20.0 | |
| BL-BHG204-B | Bright Red | 700 | White diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 3.5 | L-12 | |
| | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 20.0 | | |
| BL-BEG204-B | Hi-Eff Red | 635 | White diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 15.0 | | |
| | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 20.0 | | |
| BL-BYG204-B | Yellow | 585 | White diffused | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 10.0 | | |
| | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 20.0 | | |
| 2.0x5.0x7.0 1.0" Lead Rectangular | BL-RHG202N | Bright Red | 700 | White diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 0.8 | L-13 |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 7.0 | |
| | BL-REG202N | Hi-Eff Red | 635 | White diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 6.5 | |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 7.0 | |
| BL-BYG204-B | Yellow | 585 | White diffused | 35 | 100 | 30 | 150 | 2.1 | 2.6 | 5.5 | | |
| | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 7.0 | | |
| 2.0x5.0x7.0 1.0" Lead Rectangular | BL-RHG202B | Bright Red | 700 | White diffused | 90 | 50 | 15 | 50 | 2.2 | 2.6 | 0.8 | L-14 |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 7.0 | |
| | BL-REG202B | Hi-Eff Red | 635 | White diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 6.5 | |
| | | Green | 568 | | 30 | 100 | 30 | 150 | 2.2 | 2.6 | 7.0 | |
| BL-BYG204-B | Hi-Eff Red | 635 | White diffused | 45 | 100 | 30 | 150 | 2.0 | 2.6 | 6.5 | | |

