



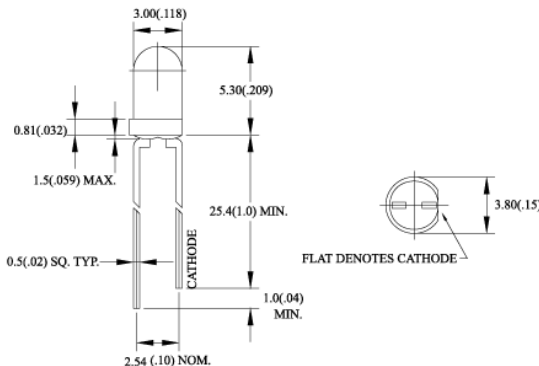
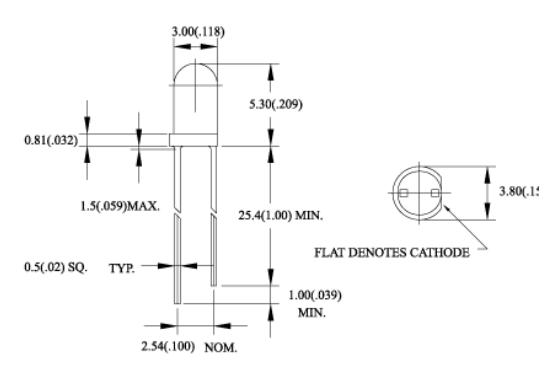
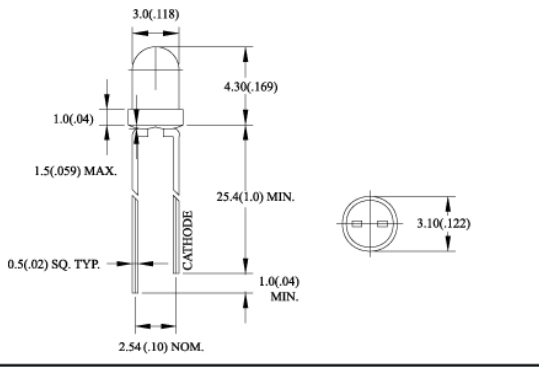
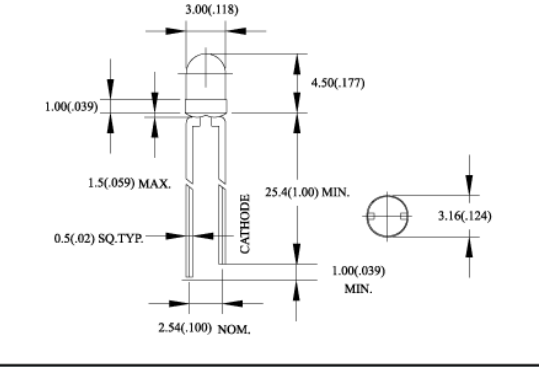
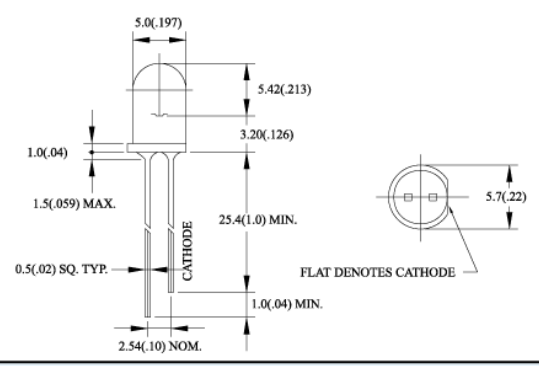
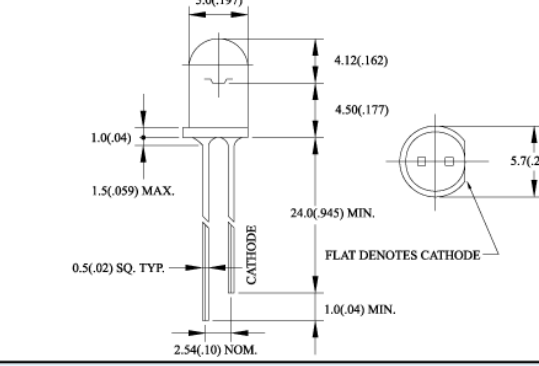
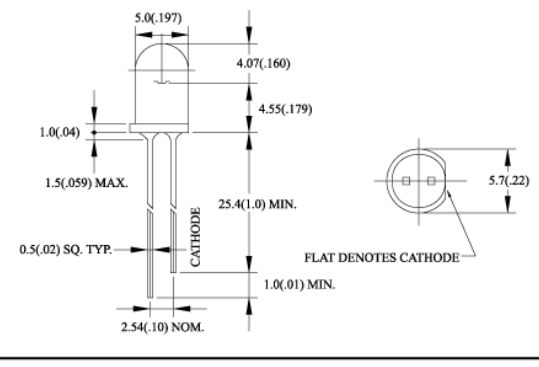
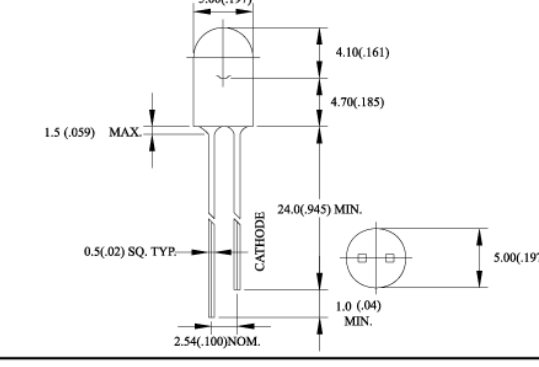
| Package                         | Part No.       | Chip                    |                           | Lens Appearance | Absolute Maximum Ratings |         |         | Electro-optical Data(At 2mA) |     |          | Viewing Angle 2 θ 1/2 (deg) | Drawing No. |
|---------------------------------|----------------|-------------------------|---------------------------|-----------------|--------------------------|---------|---------|------------------------------|-----|----------|-----------------------------|-------------|
|                                 |                | Material/ Emitted Color | Peak Wave Length λ p (nm) |                 | Δ λ (nm)                 | Pd (mw) | If (mA) | Vf (V)                       |     | Iv (mcd) |                             |             |
|                                 |                |                         |                           |                 |                          |         |         | Typ                          | Max |          |                             |             |
| T-1 Standard 1.0" Lead 3 ϕ      | BL-B5131-L     | GaP/GaP/ Bright Red     | 700                       | Red Diffused    | 90                       | 10      | 5       | 1.9                          | 2.2 | 1.0      | 40                          | L-144       |
|                                 | BL-B4531-L     | GaAsP/GaP/ Hi-Eff Red   | 635                       |                 | 45                       | 10      | 5       | 1.8                          | 2.2 | 6.0      |                             |             |
|                                 | BL-B2131-L     | GaP/GaP/ Green          | 568                       | Green Diffused  | 30                       | 10      | 5       | 1.9                          | 2.2 | 6.0      |                             |             |
|                                 | BL-BX1131-L    | GaP/GaP/ Hi-Eff Green   | 568                       |                 | 30                       | 10      | 5       | 1.8                          | 2.2 | 8.0      |                             |             |
|                                 | BL-B3131-L     | GaAsP/GaP/ Yellow       | 585                       | Yellow Diffused | 35                       | 10      | 5       | 1.9                          | 2.2 | 4.0      |                             |             |
|                                 | BL-B4131-L     | GaAsP/GaP/ Orange       | 635                       | Orange Diffused | 45                       | 10      | 5       | 1.8                          | 2.2 | 6.0      |                             |             |
|                                 | BL-B4331-L     | GaAsP/GaP/ Orange       | 635                       | Water Clear     | 45                       | 10      | 5       | 1.8                          | 2.2 | 12.0     | 30                          |             |
| T-1 Standard 1.0" Lead 3 ϕ      | BL-B5141-L     | GaP/GaP/ Bright Red     | 700                       | Red Diffused    | 90                       | 10      | 5       | 1.9                          | 2.2 | 1.0      | 40                          | L-145       |
|                                 | BL-B4541-L     | GaAsP/GaP/ Hi-Eff Red   | 635                       |                 | 45                       | 10      | 5       | 1.8                          | 2.2 | 6.0      |                             |             |
|                                 | BL-B2141-L     | GaP/GaP/ Green          | 568                       | Green Diffused  | 30                       | 10      | 5       | 1.9                          | 2.2 | 6.0      |                             |             |
|                                 | BL-BX1141-L    | GaP/GaP/ Hi-Eff Green   | 568                       |                 | 30                       | 10      | 5       | 1.8                          | 2.2 | 8.0      |                             |             |
|                                 | BL-B3141-L     | GaAsP/GaP/ Yellow       | 585                       | Yellow Diffused | 35                       | 10      | 5       | 1.9                          | 2.2 | 4.0      |                             |             |
|                                 | BL-B4141-L     | GaAsP/GaP/ Orange       | 635                       | Orange Diffused | 45                       | 10      | 5       | 1.8                          | 2.2 | 6.0      |                             |             |
|                                 | BL-B4341-L     | GaAsP/GaP/ Orange       | 635                       | Water Clear     | 45                       | 10      | 5       | 1.8                          | 2.2 | 12.0     | 30                          |             |
| T-1 Low Profile 1.0"Lead 5 ϕ    | BL-B4531E-L    | GaAsP/GaP/ Hi-Eff Red   | 635                       | Red Diffused    | 45                       | 10      | 5       | 1.8                          | 2.2 | 30.0     | 45                          | L-146       |
|                                 | BL-B2131E-L    | GaP/GaP/ Green          | 568                       | Green Diffused  | 30                       | 10      | 5       | 1.9                          | 2.2 | 30.0     |                             |             |
|                                 | BL-B3131E-L    | GaAsP/GaP/ Yellow       | 585                       | Yellow Diffused | 35                       | 10      | 5       | 1.9                          | 2.2 | 20.0     |                             |             |
|                                 | BL-B2431E-L    | GaP/GaP/ Green          | 568                       | Green Trans     | 30                       | 10      | 5       | 1.9                          | 2.2 | 65.0     | 40                          |             |
|                                 | BL-B3431E-L    | GaAsP/GaP/ Yellow       | 585                       | Yellow Trans    | 35                       | 10      | 5       | 1.9                          | 2.2 | 55.0     |                             |             |
|                                 | BL-B2331E-L    | GaP/GaP/ Green          | 568                       | Water Clear     | 30                       | 10      | 5       | 1.9                          | 2.2 | 65.0     |                             |             |
|                                 | BL-B3331E-L    | GaAsP/GaP/ Yellow       | 585                       |                 | 35                       | 10      | 5       | 1.9                          | 2.2 | 55.0     |                             |             |
| T-1 Low Profile 1.0"Lead 5 ϕ    | BL-B4531K-L    | GaAsP/GaP/ Hi-Eff Red   | 635                       | Red Diffused    | 45                       | 10      | 5       | 1.8                          | 2.2 | 30.0     | 45                          | L-147       |
|                                 | BL-B2131K-L    | GaP/GaP/ Green          | 568                       | Green Diffused  | 30                       | 10      | 5       | 1.9                          | 2.2 | 30.0     |                             |             |
|                                 | BL-B3131K-L    | GaAsP/GaP/ Yellow       | 585                       | Yellow Diffused | 35                       | 10      | 5       | 1.9                          | 2.2 | 20.0     |                             |             |
|                                 | BL-B2431K-L    | GaP/GaP/ Green          | 568                       | Green Trans     | 30                       | 10      | 5       | 1.9                          | 2.2 | 65.0     | 40                          |             |
|                                 | BL-B3431K-L    | GaAsP/GaP/ Yellow       | 585                       | Yellow Trans    | 35                       | 10      | 5       | 1.9                          | 2.2 | 55.0     |                             |             |
|                                 | BL-B2331K-L    | GaP/GaP/ Green          | 568                       | Water Clear     | 30                       | 10      | 5       | 1.9                          | 2.2 | 65.0     |                             |             |
|                                 | BL-B3331K-L    | GaAsP/GaP/ Yellow       | 585                       |                 | 35                       | 10      | 5       | 1.9                          | 2.2 | 55.0     |                             |             |
| T-13/4 Standard 1.0" Lead 5 ϕ   | BL-B5134-L     | GaP/GaP/ Bright Red     | 700                       | Red Diffused    | 90                       | 10      | 5       | 1.9                          | 2.2 | 3.5      | 35                          | L-148       |
|                                 | BL-B4534-L     | GaAsP/GaP/ Hi-Eff Red   | 635                       |                 | 45                       | 10      | 5       | 1.8                          | 2.2 | 4.5      |                             |             |
|                                 | BL-B2134-L     | GaP/GaP/ Green          | 568                       | Green Diffused  | 30                       | 10      | 5       | 1.9                          | 2.2 | 4.5      |                             |             |
|                                 | BL-BX1134-L    | GaP/GaP /Hi-Eff Green   | 568                       |                 | 30                       | 10      | 5       | 1.8                          | 2.2 | 5.0      |                             |             |
|                                 | BL-B3134-L     | GaAsP/GaP/ Yellow       | 585                       | Yellow Diffused | 35                       | 10      | 5       | 1.9                          | 2.2 | 4.0      |                             |             |
|                                 | BL-B4134-L     | GaAsP/GaP/ Orange       | 635                       | Orange Diffused | 45                       | 10      | 5       | 1.8                          | 2.2 | 5.0      |                             |             |
|                                 | BL-B4334-L     | GaAsP/GaP/ Orange       | 635                       | Water Clear     | 45                       | 10      | 5       | 1.8                          | 2.2 | 12.0     | 12                          |             |
| T-13/4 Standard 1.0" Lead 5 ϕ   | BL-B5134-1-L   | GaP/GaP/ Bright Red     | 700                       | Red Diffused    | 90                       | 10      | 5       | 1.9                          | 2.2 | 2.5      | 40                          | L-149       |
|                                 | BL-B4534-1-L   | GaAsP/GaP/ Hi-Eff Red   | 635                       |                 | 45                       | 10      | 5       | 1.8                          | 2.2 | 3.5      |                             |             |
|                                 | BL-B2134-1-L   | GaP/GaP/ Green          | 568                       | Green Diffused  | 30                       | 10      | 5       | 1.9                          | 2.2 | 3.5      |                             |             |
|                                 | BL-BX1134-1-L  | GaP/GaP /Hi-Eff Green   | 568                       |                 | 30                       | 10      | 5       | 1.9                          | 2.2 | 4.0      |                             |             |
|                                 | BL-B3134-1-L   | GaAsP/GaP/ Yellow       | 585                       | Yellow Diffused | 35                       | 10      | 5       | 1.9                          | 2.2 | 3.0      |                             |             |
|                                 | BL-B4134-1-L   | GaAsP/GaP/Orange        | 635                       | Orange Diffused | 45                       | 10      | 5       | 1.8                          | 2.2 | 3.5      |                             |             |
|                                 | BL-B4334-1-L   | GaAsP/GaP/ Orange       | 635                       | Water Clear     | 45                       | 10      | 5       | 1.8                          | 2.2 | 10.0     | 20                          |             |
| T-13/4 Standard 1.0" Lead 5 ϕ   | BL-B5134G-1-L  | GaP/GaP/ Bright Red     | 700                       | Red Diffused    | 90                       | 10      | 5       | 1.9                          | 2.2 | 2.0      | 45                          | L-150       |
|                                 | BL-B4534G-1-L  | GaAsP/GaP/ Hi-Eff Red   | 635                       |                 | 45                       | 10      | 5       | 1.8                          | 2.2 | 3.0      |                             |             |
|                                 | BL-B2134G-1-L  | GaP/GaP/ Green          | 568                       | Green Diffused  | 30                       | 10      | 5       | 1.9                          | 2.2 | 3.0      |                             |             |
|                                 | BL-BX1134G-1-L | GaP/GaP/ Hi-Eff Green   | 568                       |                 | 30                       | 10      | 5       | 1.9                          | 2.2 | 4.0      |                             |             |
|                                 | BL-B3134G-1-L  | GaAsP/GaP/ Yellow       | 585                       | Yellow Diffused | 35                       | 10      | 5       | 1.9                          | 2.2 | 2.0      |                             |             |
|                                 | BL-B4334G-1-L  | GaAsP/GaP/ Orange       | 635                       | Water Clear     | 45                       | 10      | 5       | 1.8                          | 2.2 | 8.0      | 25                          |             |
| T-13/4 Flangeless 1.0" Lead 5 ϕ | BL-B5134N-1-L  | GaP/GaP/ Bright Red     | 700                       | Red Diffused    | 90                       | 10      | 5       | 1.9                          | 2.2 | 2.0      | 45                          | L-151       |
|                                 | BL-B4534N-1-L  | GaAsP/GaP/ Hi-Eff Red   | 635                       |                 | 45                       | 10      | 5       | 1.8                          | 2.2 | 3.0      |                             |             |
|                                 | BL-B2134N-1-L  | GaP/GaP/ Green          | 568                       | Green Diffused  | 30                       | 10      | 5       | 1.9                          | 2.2 | 3.0      |                             |             |
|                                 | BL-BX1134N-1-L | GaP/GaP/ Hi-Eff Green   | 568                       |                 | 30                       | 10      | 5       | 1.8                          | 2.2 | 3.5      |                             |             |
|                                 | BL-B3134N-1-L  | GaAsP/GaP/ Yellow       | 585                       | Yellow Diffused | 35                       | 10      | 5       | 1.9                          | 2.2 | 3.0      |                             |             |

Remark : 1.Hi-Eff Red / High-Efficiency Red.

2.Trans / Transparent.

3.2 θ 1/2 The off-axis angle at which the luminous intensity is half the axial luminous intensity.



|                                                                                                                                    |                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>L-144</b><br><b>BL-Bxx31-L Series</b><br>      | <b>L-145</b><br><b>BL-Bxx41-L Series</b><br>      |
| <b>L-146</b><br><b>BL-Bxx31E-L Series</b><br>    | <b>L-147</b><br><b>BL-Bxx31K-L Series</b><br>    |
| <b>L-148</b><br><b>BL-Bxx34-L Series</b><br>    | <b>L-149</b><br><b>BL-Bxx34-1-L Series</b><br>  |
| <b>L-150</b><br><b>BL-Bxx34G-1-L Series</b><br> | <b>L-151</b><br><b>BL-Bxx34N-1-L Series</b><br> |

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