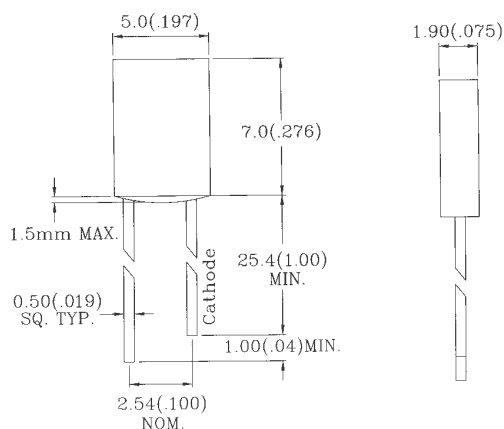
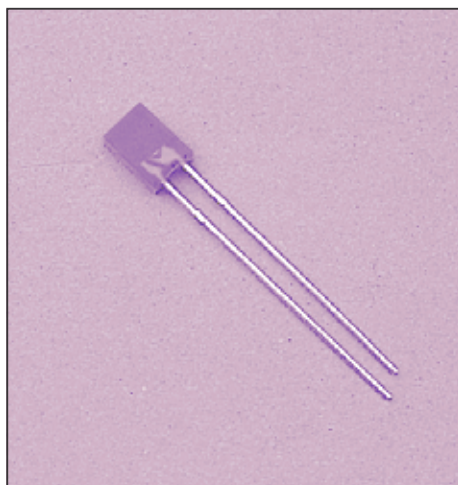
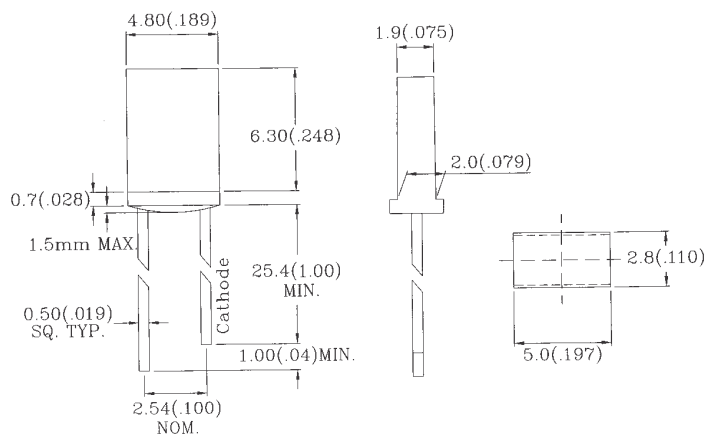
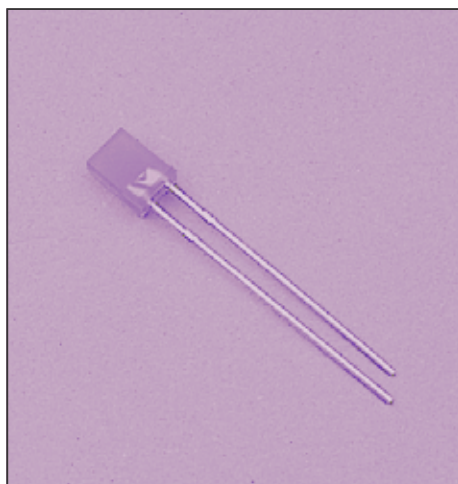


**L-403XX** 2.0x5.0x7.0 mm FLANGELESS RECTANGULAR LED LAMP


| Part No. | Chip         |               | Lens Color      | Wave Length<br>λ p(nm) | Electro-Optical Characteristics |      |             | View Angle<br>(deg) |
|----------|--------------|---------------|-----------------|------------------------|---------------------------------|------|-------------|---------------------|
|          | Raw Material | Emitted Color |                 |                        | Vf(V)20mA                       |      | Iv(mcd)20mA |                     |
|          |              |               |                 |                        | Typ.                            | Max. | Typ.        |                     |
| L-403HD  | GaP          | Red           | Red Diffused    | 700                    | 2.3                             | 2.8  | 3.0         | 120                 |
| L-403GD  | GaP          | Green         | Green Diffused  | 565                    | 2.2                             | 2.8  | 6.0         | 120                 |
| L-403YD  | GaAsP/GaP    | Yellow        | Yellow Diffused | 585                    | 2.1                             | 2.8  | 5.0         | 120                 |
| L-403ED  | GaAsP/GaP    | Hi.effi Red   | Red Diffused    | 635                    | 2.1                             | 2.8  | 8.0         | 120                 |
| L-403SRD | GaAlAs       | Super Red     | Red Diffused    | 660                    | 1.8                             | 2.2  | 15.0        | 120                 |

**L-413XX** 2.0x4.8x7.0 mm RECTANGULAR LED LAMP


| Part No. | Chip         |               | Lens Color      | Wave Length<br>λ p(nm) | Electro-Optical Characteristics |      |             | View Angle<br>(deg) |
|----------|--------------|---------------|-----------------|------------------------|---------------------------------|------|-------------|---------------------|
|          | Raw Material | Emitted Color |                 |                        | Vf(V)20mA                       |      | Iv(mcd)20mA |                     |
|          |              |               |                 |                        | Typ.                            | Max. | Typ.        |                     |
| L-413HD  | GaP          | Red           | Red Diffused    | 700                    | 2.3                             | 2.8  | 3.0         | 120                 |
| L-413GD  | GaP          | Green         | Green Diffused  | 565                    | 2.2                             | 2.8  | 6.0         | 120                 |
| L-413YD  | GaAsP/GaP    | Yellow        | Yellow Diffused | 585                    | 2.1                             | 2.8  | 5.0         | 120                 |
| L-413ED  | GaAsP/GaP    | Hi.effi Red   | Red Diffused    | 635                    | 2.1                             | 2.8  | 8.0         | 120                 |
| L-413SRD | GaAlAs       | Super Red     | Red Diffused    | 660                    | 1.8                             | 2.2  | 15.0        | 120                 |

1.All dimension are in millimeters (inches).

2.Tolerance is  $\pm 0.25$  mm (0.01") unless otherwise specified.