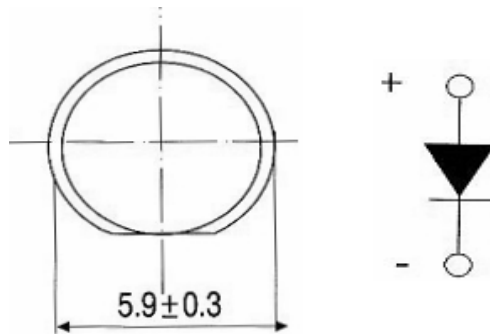
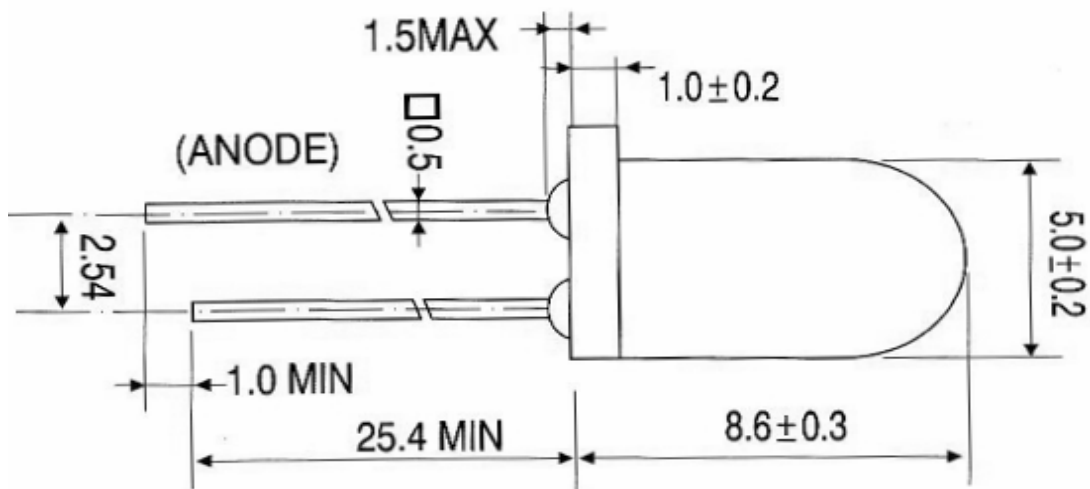




**Applications**

- Electronic Signs and Signals
- Small Area Illuminations
  - Back Lighting
  - Other Lighting

**Technical Drawing**



**Notes :**

All dimensions in mm tolerance is  $\pm 0.1\text{mm}$  unless otherwise noted.

|                             |                 |
|-----------------------------|-----------------|
| <b>Round LED<br/>Orange</b> |                 |
| Part No.:                   | <b>M13E4010</b> |
| Customer:                   |                 |

|       |      |      |       |        |      |       |            |
|-------|------|------|-------|--------|------|-------|------------|
| DRW:  | Dong | CHKD | Chang | MATL:  | Chui | DATE  | 04.12.2009 |
| APPD: | Ping |      |       | FINISH | Hui  | Sheet | 1 from 6   |



**Absolute Maximum Ratings**

Ta=25°C

| Item                   | Symbol            | AlGaInP    | Unit |
|------------------------|-------------------|------------|------|
| Power Dissipation      | P <sub>D</sub>    | ---        | mW   |
| DC Forward Current     | I <sub>F</sub>    | 20         | mA   |
| Pulsed Forward Current | I <sub>FP</sub> * | ---        | mA   |
| Reverse Voltage        | V <sub>R</sub>    | ---        | V    |
| Operating Temperature  | T <sub>OP</sub>   | ---        | °C   |
| Storage Temperature    | T <sub>ST</sub>   | -55 to 100 | °C   |

\* 0.1 msec pulse, 10% duty cycle

**Electrical / Optical Characteristics**

I<sub>F</sub>=20mA Ta=25°C

|                             |                   |      |                |
|-----------------------------|-------------------|------|----------------|
| <b>Emitting Color</b>       | Orange            |      |                |
| <b>Material</b>             | AlGaInP           |      |                |
| <b>Forward Voltage</b>      | typ.              | 2.0  | V <sub>F</sub> |
|                             | max.              | 2.4  | V <sub>F</sub> |
| <b>Wavelength typ.</b>      | λ <sub>D</sub>    | 615  | nm             |
|                             | λ <sub>P</sub>    | ---  | nm             |
|                             | Δλ                | ---  | nm             |
| <b>Color Temperature</b>    | min.              | ---  | K              |
|                             | max.              | ---  | K              |
| <b>Luminous Intensity *</b> | min.              | 430  | mcd            |
|                             | typ.              | 1150 | mcd            |
| <b>Reverse Current</b>      | max.              | ---  | μA             |
| <b>Viewing Angle</b>        | 2θ <sub>1/2</sub> | 10   |                |

\* Per NIST standards

**Round LED  
Orange**

Part No.: **M13E4010**

Customer:

|       |      |      |       |        |      |       |            |
|-------|------|------|-------|--------|------|-------|------------|
| DRW:  | Dong | CHKD | Chang | MATL:  | Chui | DATE  | 04.12.2009 |
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### Directive Characteristics

**Round LED  
Orange**

Part No.: **M13E4010**

Customer:

|       |      |      |       |        |      |       |            |
|-------|------|------|-------|--------|------|-------|------------|
| DRW:  | Dong | CHKD | Chang | MATL:  | Chui | DATE  | 04.12.2009 |
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Curve

**Round LED  
Orange**

Part No.: **M13E4010**

Customer:

|       |      |      |       |        |      |       |            |
|-------|------|------|-------|--------|------|-------|------------|
| DRW:  | Dong | CHKD | Chang | MATL:  | Chui | DATE  | 04.12.2009 |
| APPD: | Ping |      |       | FINISH | Hui  | Sheet | 4 from 6   |



**Solder Condition**

**Lead Free Solder**



|                             |                 |
|-----------------------------|-----------------|
| <b>Round LED<br/>Orange</b> |                 |
| Part No.:                   | <b>M13E4010</b> |
| Customer:                   |                 |

|       |      |      |       |        |      |       |            |
|-------|------|------|-------|--------|------|-------|------------|
| DRW:  | Dong | CHKD | Chang | MATL:  | Chui | DATE  | 04.12.2009 |
| APPD: | Ping |      |       | FINISH | Hui  | Sheet | 5 from 6   |



**Color table curve**



|                             |                 |
|-----------------------------|-----------------|
| <b>Round LED<br/>Orange</b> |                 |
| Part No.:                   | <b>M13E4010</b> |
| Customer:                   |                 |

|       |      |      |       |        |      |       |            |
|-------|------|------|-------|--------|------|-------|------------|
| DRW:  | Dong | CHKD | Chang | MATL:  | Chui | DATE  | 04.12.2009 |
| APPD: | Ping |      |       | FINISH | Hui  | Sheet | 6 from 6   |