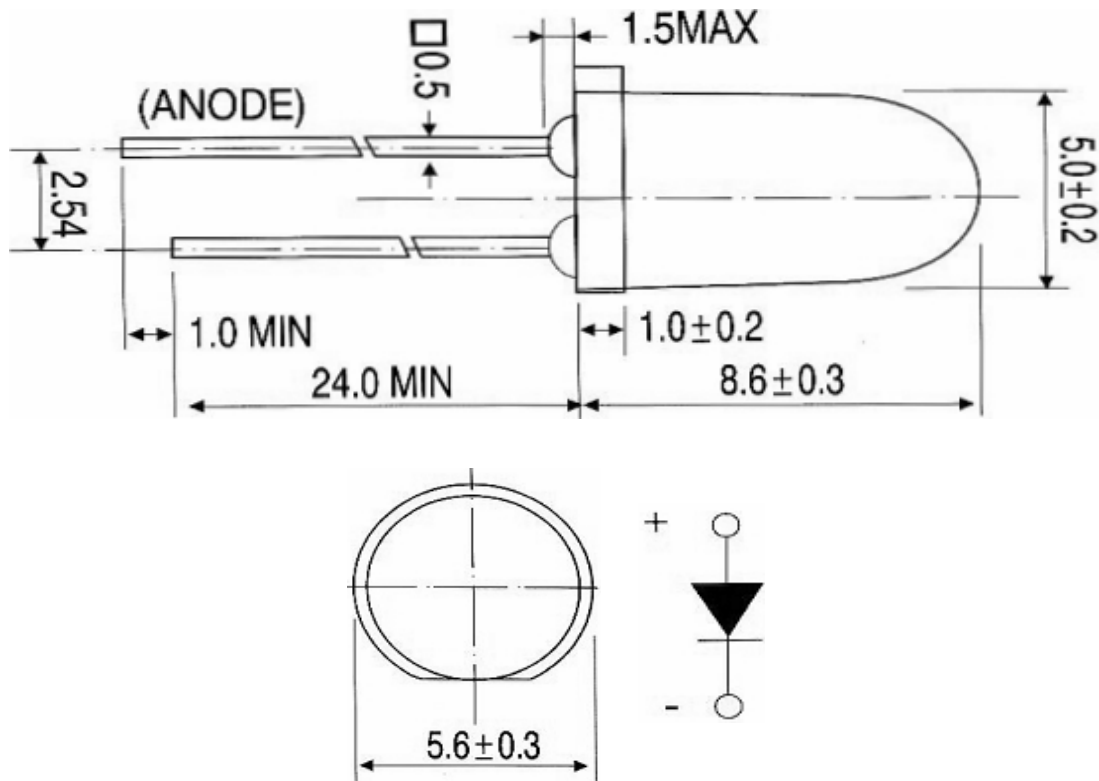




Applications

- 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.

| | |
|--------------------------------|-----------------|
| Round LED Red | |
| Part No.: | M13E5033 |
| Customer: | |

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 28.06.2010 |
| APPD: | Ping | | | FINISH | Hui | Sheet | 1 from 6 |



Absolute Maximum Ratings

| Item | Symbol | AlGaInP | Unit |
|------------------------|-------------------|------------|------|
| Power Dissipation | P _D | 140 | mW |
| DC Forward Current | I _F | 30 | mA |
| Pulsed Forward Current | I _{FP} * | 100 | mA |
| Reverse Voltage | V _R | 5 | V |
| Operating Temperature | T _{OP} | -40 to 80 | °C |
| Storage Temperature | T _{ST} | -40 to 100 | °C |

* 0.1 msec pulse, 10% duty cycle

Electrical / Optical Characteristics

| Ermitting Color | Red | | |
|----------------------|-------------------|--------|----------------|
| Material | AlGaInP | | |
| Forward Voltage | typ. | 1.9 | V _F |
| | max. | 2.3 | V _F |
| Wavelength typ. | λ _D | 620 | nm |
| | λ _P | 635 | nm |
| | Δλ | --- | nm |
| Color Temperature | min. | --- | K |
| | max. | --- | K |
| Luminous Intensity * | min. | 4000 | mcd |
| | typ. | 6000 | mcd |
| Reverse Current | max. | --- | μA |
| Viewing Angle | 2Θ _{1/2} | 6 ~ 10 | |

* Per NIST standards

| | |
|--------------------------------|-----------------|
| Round LED Red | |
| Part No.: | M13E5033 |
| Customer: | |

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 28.06.2010 |
| APPD: | Ping | | | FINISH | Hui | Sheet | 2 from 6 |



Directive Characteristics

**Round LED
Red**

Part No.: **M13E5033**

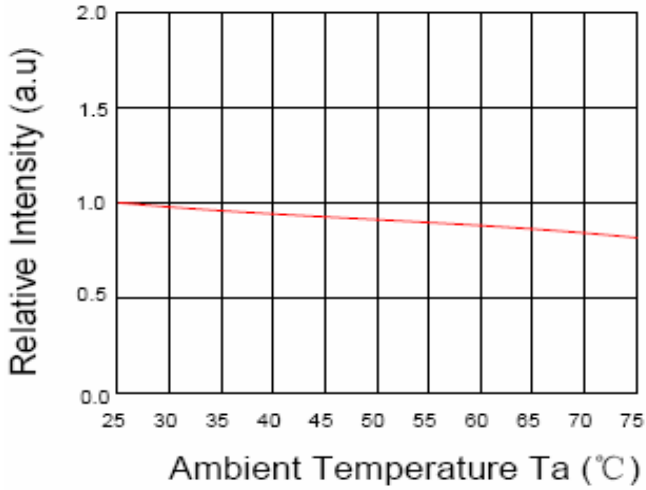
Customer:

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 28.06.2010 |
| APPD: | Ping | | | FINISH | Hui | Sheet | 3 from 6 |

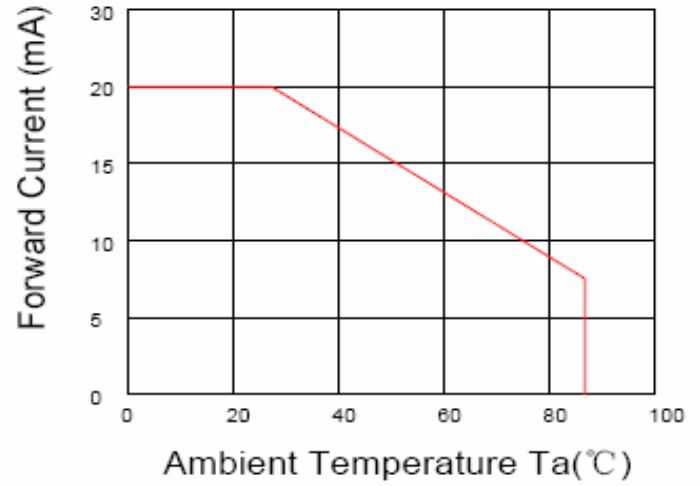


Curve

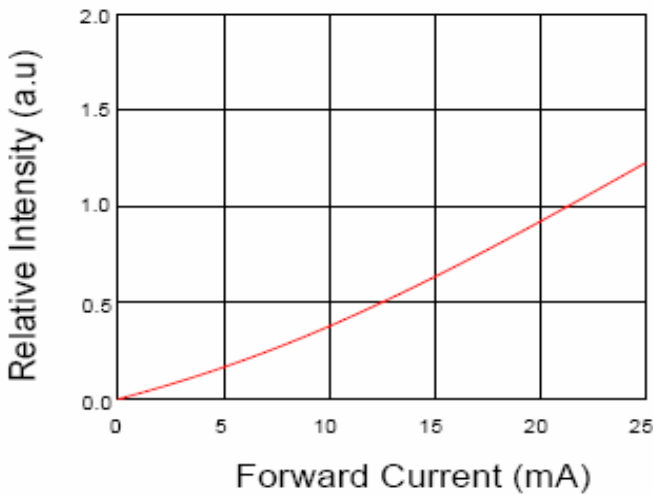
Relative Intensity VS. Ambient Temp



Forward Current VS. Ambient Temp



Forward Current VS. Relative Intensity



Round LED
Red

Part No.: **M13E5033**

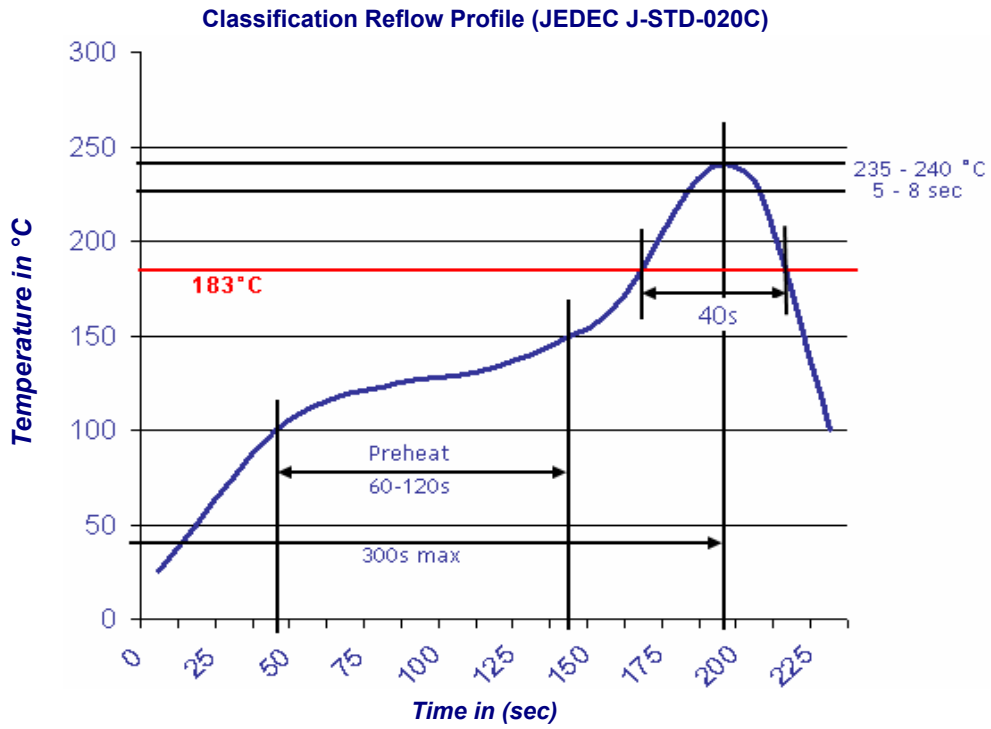
Customer:

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 28.06.2010 |
| APPD: | Ping | | | FINISH | Hui | Sheet | 4 from 6 |



Solder Condition

Lead Free Solder



| | |
|--------------------------|-----------------|
| Round LED Red | |
| Part No.: | M13E5033 |
| Customer: | |

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 28.06.2010 |
| APPD: | Ping | | | FINISH | Hui | Sheet | 5 from 6 |



Color table curve



| | |
|--------------------------|-----------------|
| Round LED Red | |
| Part No.: | M13E5033 |
| Customer: | |

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 28.06.2010 |
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