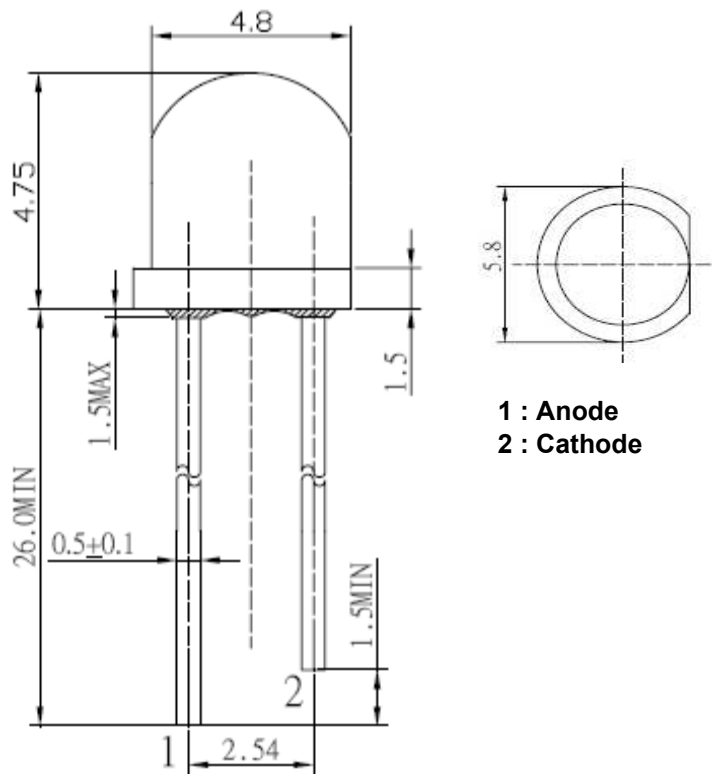




**Applications**

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

**Technical Drawing**



1 : Anode  
 2 : Cathode

**Notes :**

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

|                            |                 |
|----------------------------|-----------------|
| <b>Straw LED<br/>Green</b> |                 |
| Part No.:                  | <b>M13A4015</b> |
| Customer:                  |                 |

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



**Absolute Maximum Ratings**

| Item                   | Symbol            | InGaN      | Unit |
|------------------------|-------------------|------------|------|
| Power Dissipation      | P <sub>D</sub>    | 140        | mW   |
| DC Forward Current     | I <sub>F</sub>    | 30         | mA   |
| Pulsed Forward Current | I <sub>FP</sub> * | 70         | mA   |
| Reverse Voltage        | V <sub>R</sub>    | 5          | V    |
| Operating Temperature  | T <sub>OP</sub>   | -40 to 80  | °C   |
| Storage Temperature    | T <sub>ST</sub>   | -40 to 100 | °C   |

\* 0.1 msec pulse, 10% duty cycle

**Electrical / Optical Characteristics**

| Ermitting Color      | Green             |      |                |
|----------------------|-------------------|------|----------------|
| Material             | InGaN             |      |                |
| Forward Voltage      | typ.              | 1.9  | V <sub>F</sub> |
|                      | max.              | 2.3  | V <sub>F</sub> |
| Wavelength<br>typ.   | λ <sub>D</sub>    | 520  | nm             |
|                      | λ <sub>P</sub>    | 535  | nm             |
|                      | Δλ                | ---  | nm             |
| Color Temperature    | min.              | ---  | K              |
|                      | max.              | ---  | K              |
| Luminous Intensity * | min.              | 1200 | mcd            |
|                      | typ.              | 1800 | mcd            |
| Reverse Current      | max.              | ---  | μA             |
| Viewing Angle        | 2Θ <sub>1/2</sub> | 120  |                |

\* Per NIST standards

**Straw LED**  
**Green**

Part No.: **M13A4015**

Customer:

|       |      |      |       |        |      |       |            |
|-------|------|------|-------|--------|------|-------|------------|
| DRW:  | Dong | CHKD | Chang | MATL:  | Chui | DATE  | 28.06.2010 |
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### Directive Characteristics

**Straw LED  
Green**

Part No.: **M13A4015**

Customer:

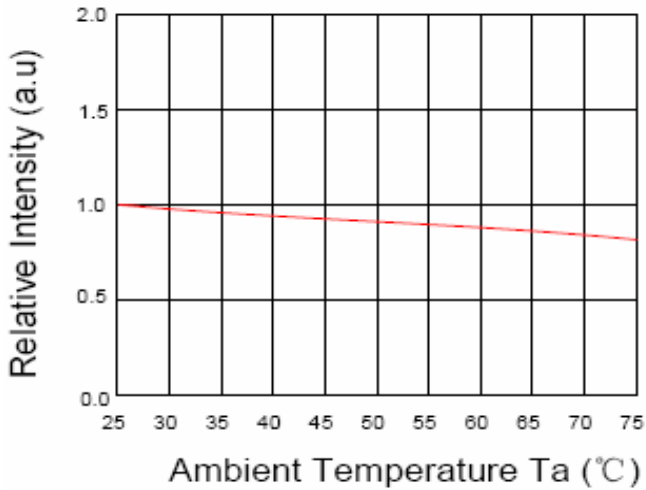
|       |      |      |       |        |      |       |            |
|-------|------|------|-------|--------|------|-------|------------|
| DRW:  | Dong | CHKD | Chang | MATL:  | Chui | DATE  | 28.06.2010 |
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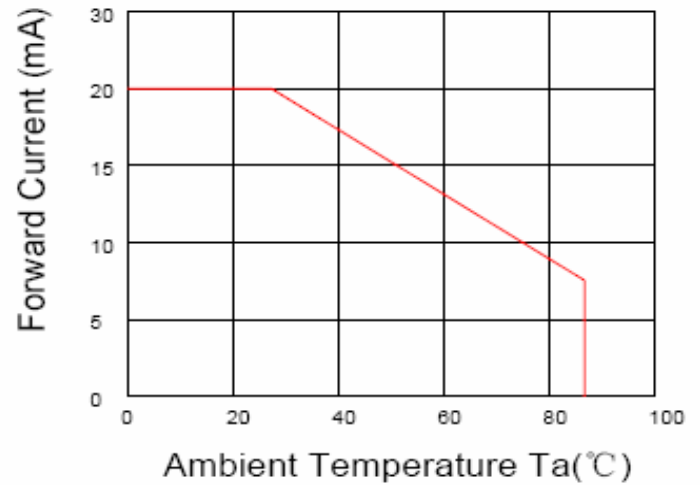


**Curve**

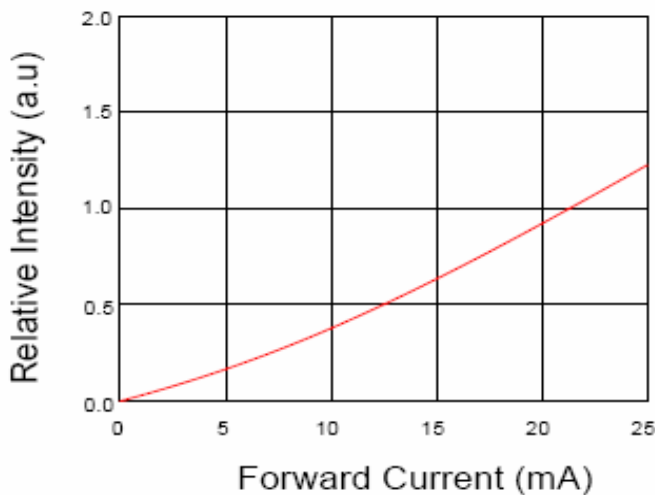
Relative Intensity VS. Ambient Temp



Forward Current VS. Ambient Temp



Forward Current VS. Relative Intensity



**Straw LED  
Green**

Part No.: **M13A4015**

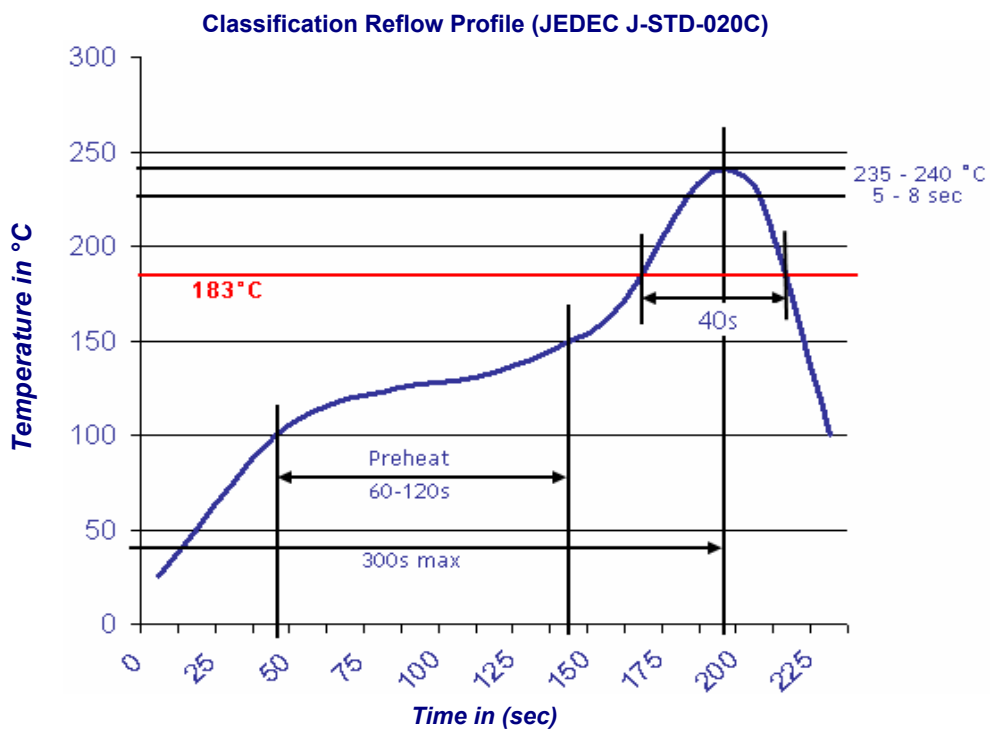
Customer:

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



**Solder Condition**

**Lead Free Solder**



|                            |                 |
|----------------------------|-----------------|
| <b>Straw LED<br/>Green</b> |                 |
| Part No.:                  | <b>M13A4015</b> |
| Customer:                  |                 |

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



**Color table curve**



|                            |                 |
|----------------------------|-----------------|
| <b>Straw LED<br/>Green</b> |                 |
| Part No.:                  | <b>M13A4015</b> |
| Customer:                  |                 |

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

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