

# PRODUCT SPECIFICATION

**Model No.: FYLT-2031A/BX-XX**

| Descriptions & Features:  |
|---|
| <ul style="list-style-type: none"> <li>■ 0.20 Inch (5.08mm) digit height, Three Digit SMD Display</li> <li>■ Case mold type.</li> <li>■ RoHS compliant.</li> <li>■ Low current operation</li> <li>■ Low power consumption.</li> <li>■ Easy mounting on P.C. board or socket.</li> </ul> |



| CUSTOMER APPROVED SIGNATURES | APPROVED BY | CHECKED BY | PREPARED BY |
|------------------------------|-------------|------------|-------------|
|                              |             |            |             |

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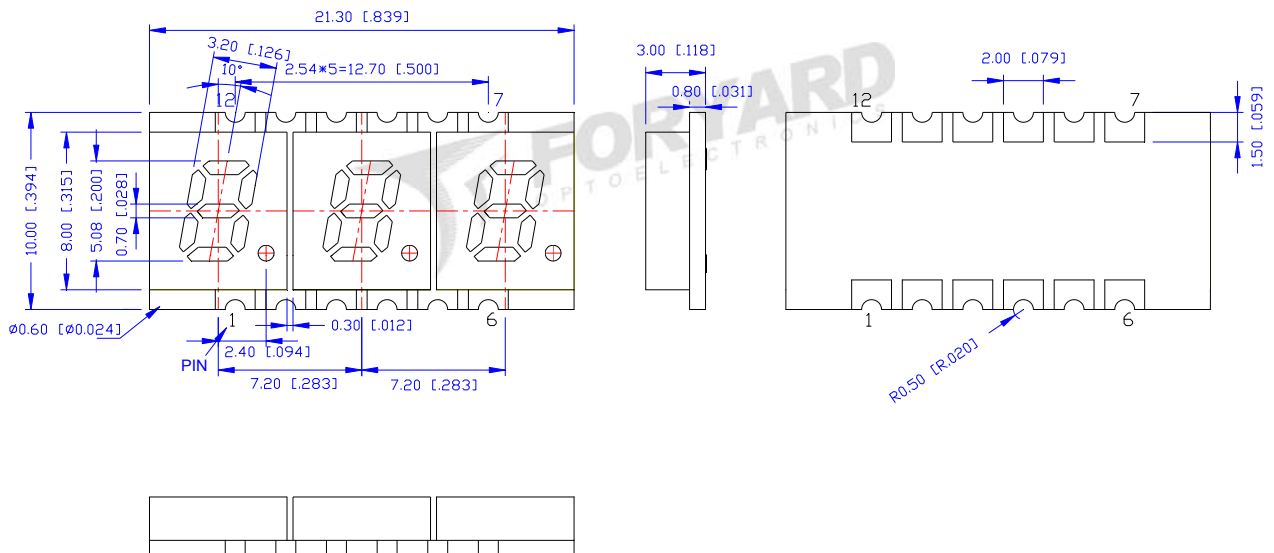
**E-mail:**Sales@foryard.com (General)

**Model No.: FYLT-2031A/BX-XX**

**■ -XX: REF Surface / Epoxy color**

| Color \ Number    | 0                                 | 1                           | 2                          | 3                           | 4                            |
|-------------------|-----------------------------------|-----------------------------|----------------------------|-----------------------------|------------------------------|
| REF Surface Color | <input type="radio"/> White       | <input type="radio"/> Black | <input type="radio"/> Gray | <input type="radio"/> Red   | <input type="radio"/> Green  |
| Epoxy Color       | <input type="radio"/> Water Clear | <input type="radio"/> White | <input type="radio"/> Red  | <input type="radio"/> Green | <input type="radio"/> Yellow |

**■ Mechanical Dimensions**

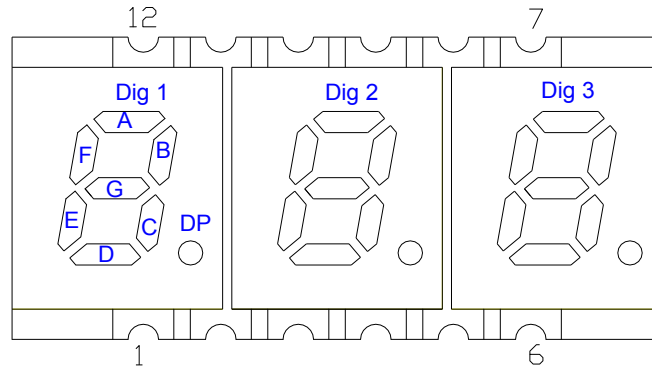


**Notes:**

1. All dimensions are in millimeters (inches)
2. Dimension in millimeter [inch], tolerance is  $\pm 0.25$  [0.010] and angle is  $\pm 1^\circ$  unless otherwise noted.
3. Bending  $\leq$  Length \* 1%.
4. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
5. The drawing is different from the actual one, please refer to the sample.

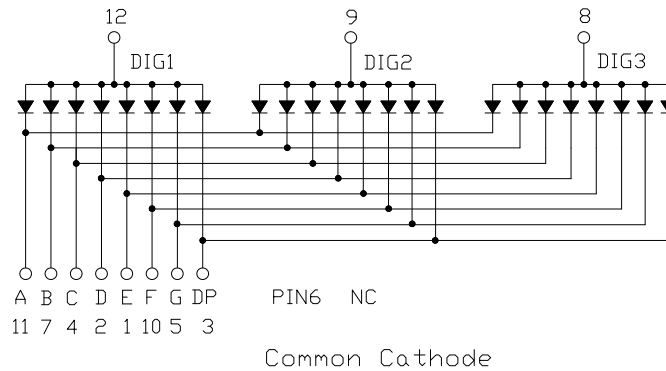
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**■ All Light On Segments Feature & Pad Position**

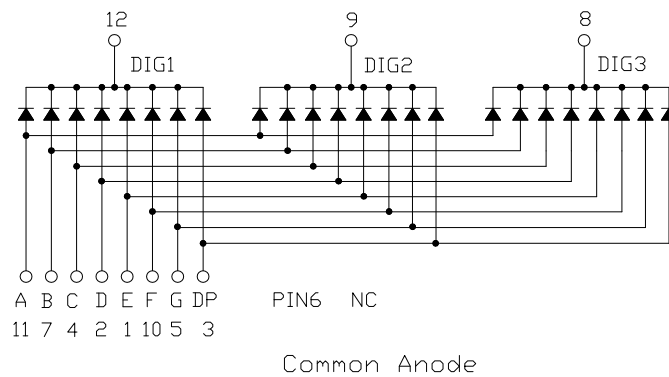


**■ Internal Circuit Diagrams**

FYLT-2031Ax



FYLT-2031Bx



**Model No.: FYLT-2031A/BX-XX**
**■ Absolute maximum ratings**

(Ta=25°C)

| Parameter             | Symbol | Test Condition  | Value |     | Unit |
|-----------------------|--------|-----------------|-------|-----|------|
|                       |        |                 | Min   | Max |      |
| Reverse Voltage       | VR     | IR=30           | 5     | —   | V    |
| Forward Current       | IF     | —               | —     | 30  | mA   |
| Power Dissipation     | Pd     | —               | —     | 100 | mW   |
| Pulse Current         | Ipeak  | Duty=0.1mS,1KHz | —     | 150 | mA   |
| Operating Temperature | Topr   | —               | -40   | +85 | °C   |
| Storage Temperature   | Tstr   | —               | -40   | +85 | °C   |

**■ Electrical-Optical Characteristics**
**● Color Code & Chip Characteristics:(Test Condition:IF=10mA)**

(Ta=25°C)

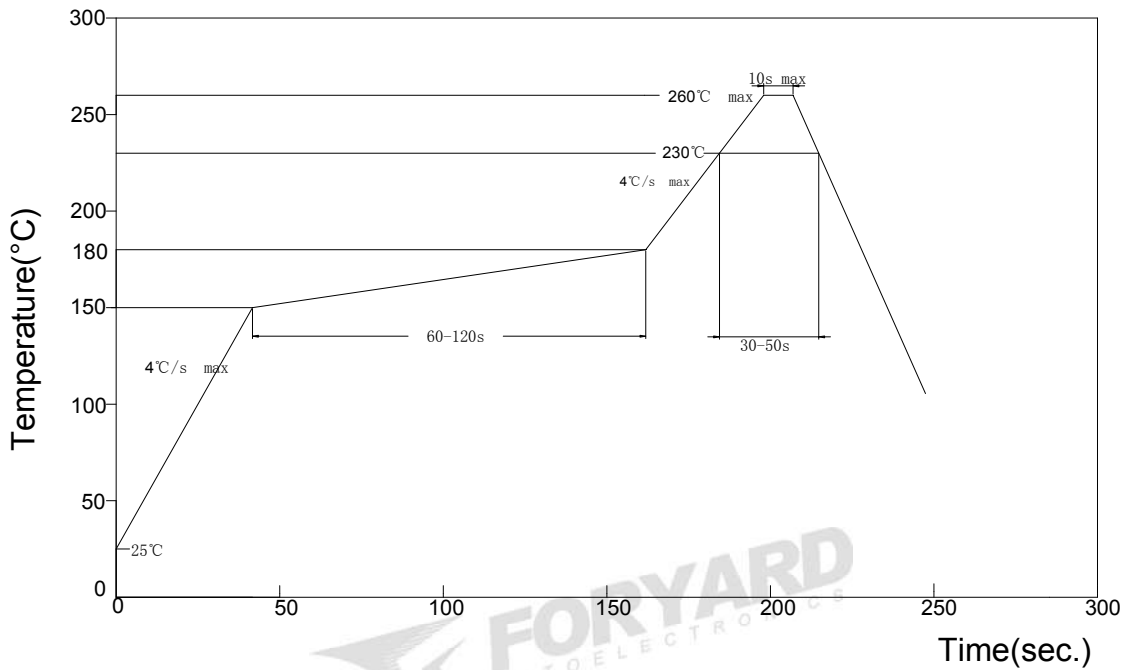
| Emitting Color                                    | Dice Material      | Peak Wave Length( $\lambda_p$ ) | Spectral Line halfwidth ( $\Delta\lambda_{1/2}$ ) | Forward Voltage(VF) Unit:V |      | Luminous Intensity (Iv) Unit:mcd |            |
|---|--------------------|---------------------------------|---|----------------------------|------|----------------------------------|------------|
|   |                    |                                 |   | Typ                        | Max  |                                  |            |
| <b>Standard brightness</b>                        |                    |                                 |   |                            |      |                                  |            |
| S   | Hi Red             | AlGaInP                         | 660nm   | 20nm                       | 2.00 | 2.50                             | 10~20      |
| D   | Super Red          | AlGaAs/DH                       | 650nm   | 20nm                       | 2.00 | 2.50                             | 15~30      |
| E   | Orange             | GaAsP                           | 625nm   | 35nm                       | 2.00 | 2.50                             | 10~21      |
| A   | Amber              | GaAsP                           | 610nm   | 35nm                       | 2.00 | 2.50                             | 10~20      |
| Y   | Yellow             | GaAsP                           | 590nm   | 35nm                       | 2.00 | 2.50                             | 10~20      |
| G   | Yellow Green       | AlGaInP                         | 570nm   | 10nm                       | 2.00 | 2.50                             | 10~20      |
| B   | Blue               | InGaN                           | 460nm   | 60nm                       | 3.00 | 3.80                             | 9~20(mw)   |
|   |                    |                                 | 470nm   |                            | 3.00 | 3.80                             | 9~20(mw)   |
| W   | White              | InGaN/GaN                       | X=0.29,Y=0.30                                     | CCT:9500K                  | 3.00 | 3.80                             | 60~120~180 |
| <b>Ultra brightness</b>                           |                    |                                 |   |                            |      |                                  |            |
| UHR   | Ultra Hi Red       | AlGaInP                         | 640nm   | 20nm                       | 2.00 | 2.50                             | 20~50      |
| UR  | Ultra Red          | AlGaInP                         | 635nm   | 20nm                       | 2.00 | 2.50                             | 40~70      |
| UE  | Ultra Orange       | AlGaInP                         | 625nm   | 20nm                       | 2.00 | 2.50                             | 40~85      |
| UA  | Ultra Amber        | AlGaInP                         | 610nm   | 20nm                       | 2.00 | 2.50                             | 30~105     |
| UY  | Ultra Yellow       | AlGaInP                         | 590nm   | 20nm                       | 2.00 | 2.50                             | 30~135     |
| UG  | Ultra Yellow Green | AlGaInP                         | 570nm   | 30nm                       | 2.00 | 2.50                             | 20~60      |
| PG  | Pure Green         | InGaN                           | 520nm   | 36nm                       | 3.00 | 3.80                             | 350~450    |
| UB  | Ultra Blue         | InGaN/GaN                       | 460nm   | 30nm                       | 3.00 | 3.80                             | 120~180    |
|   |                    | InGaN/GaN                       | 470nm   | 30nm                       | 3.00 | 3.80                             | 120~180    |
| UW  | Ultra White        | InGaN/GaN                       | X=0.29,Y=0.30                                     | CCT:9500K                  | 3.00 | 3.80                             | 280~600    |
| Segment-to-Segment Luminous Intensity ratio(Iv-M) |                    |                                 |   | 1.5:1                      |      |                                  |            |

Note:

- 1.Luminous Intensity is based on the Foryard standards.
- 2.Pay attention about static for InGaN

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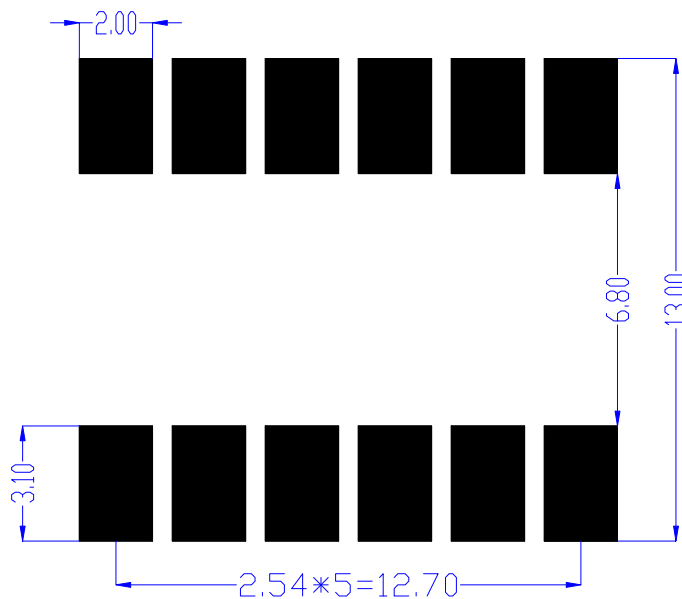
**IR Reflow Temperature / Time :**



**NOTES:**

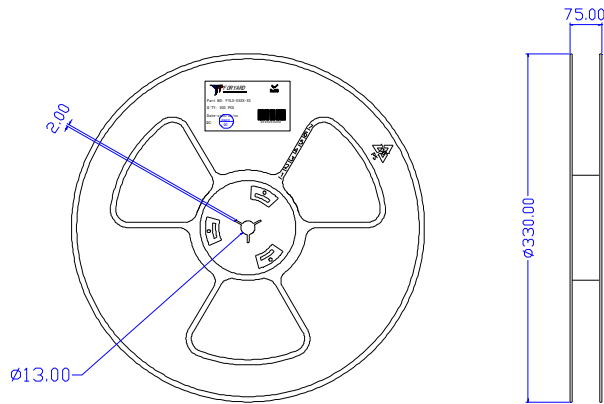
1. We recommend the reflow temperature 245°C (+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

**Soldering Pad Size**

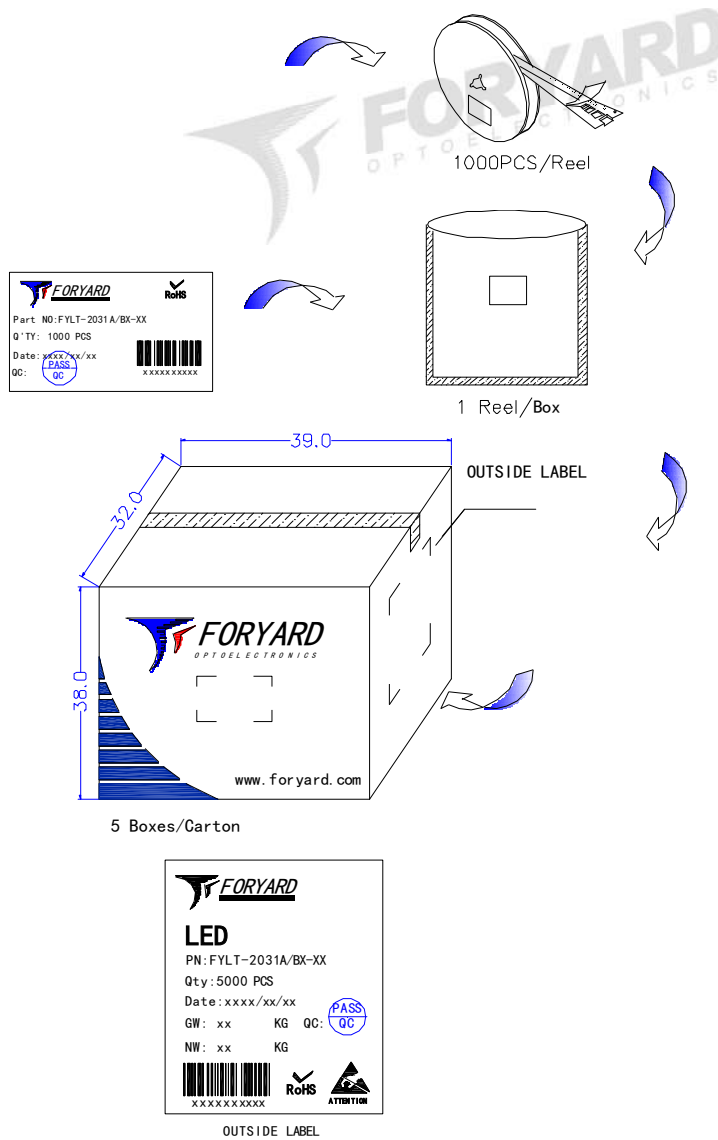


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**■ Reel Dimensions**



**■ Packing & Labe Specifications**



Note: The specifications are subject to change without notice. Please contact us for updated information.