

# PRODUCT SPECIFICATION

**Model No.: FYM-12883A/BX-XX**

| Descriptions & Features:                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>■ 1.2 inch (31.70mm) Matrix height, Dot Matrix Display</li> <li>■ 8*8 Array with X-Y Select.</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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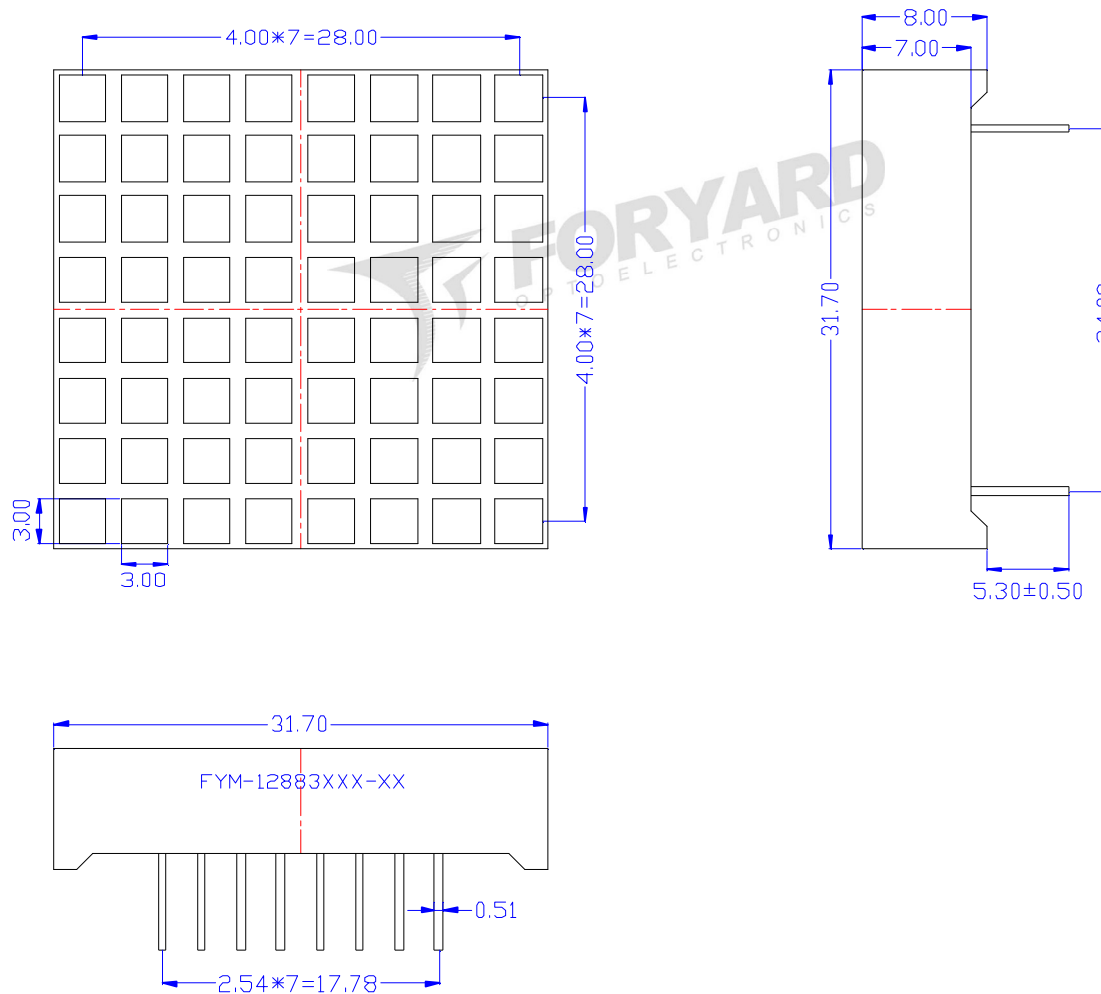
**E-mail:**Sales@foryard.com (General)

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■ -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

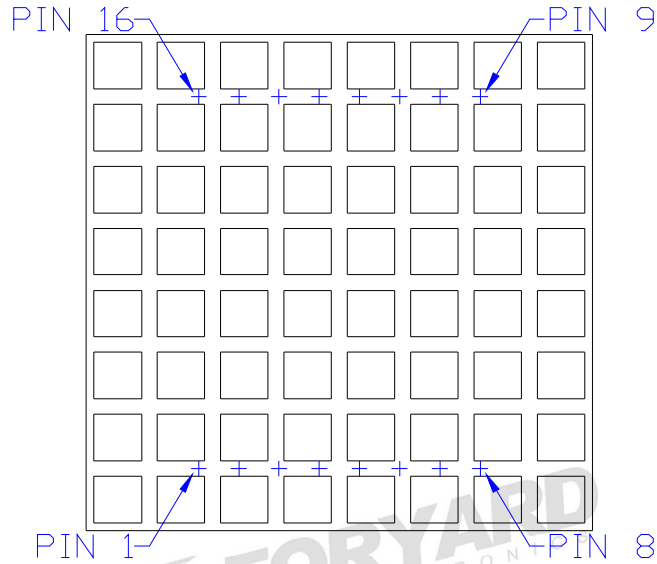


### Notes:

1. All pins are  $\Phi 0.51$  [.020]mm
2. Dimension in millimeter [inch], tolerance is  $\pm 0.25$  [.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.

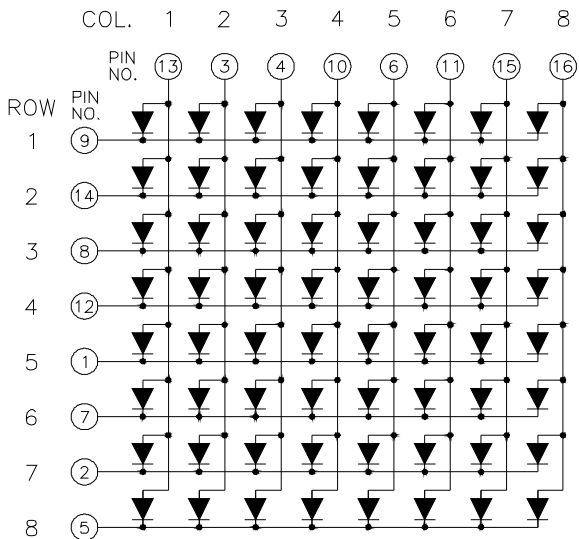
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## ■ All Light On Dot Feature & Pin Position

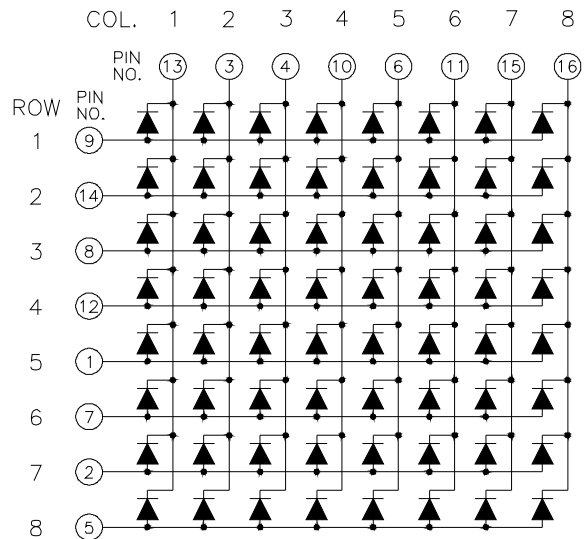


## ■ Internal Circuit Diagrams

FYM-12883Ax



FYM-12883Bx



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■ Absolute maximum ratings

(Ta=25℃)

| 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 | ℃    |
| Storage Temperature   | Tstr   | —               | -40   | +85 | ℃    |

■ Electrical-Optical Characteristics

● Color Code & Chip Characteristics:(Test Condition:IF=10mA)

(Ta=25℃)

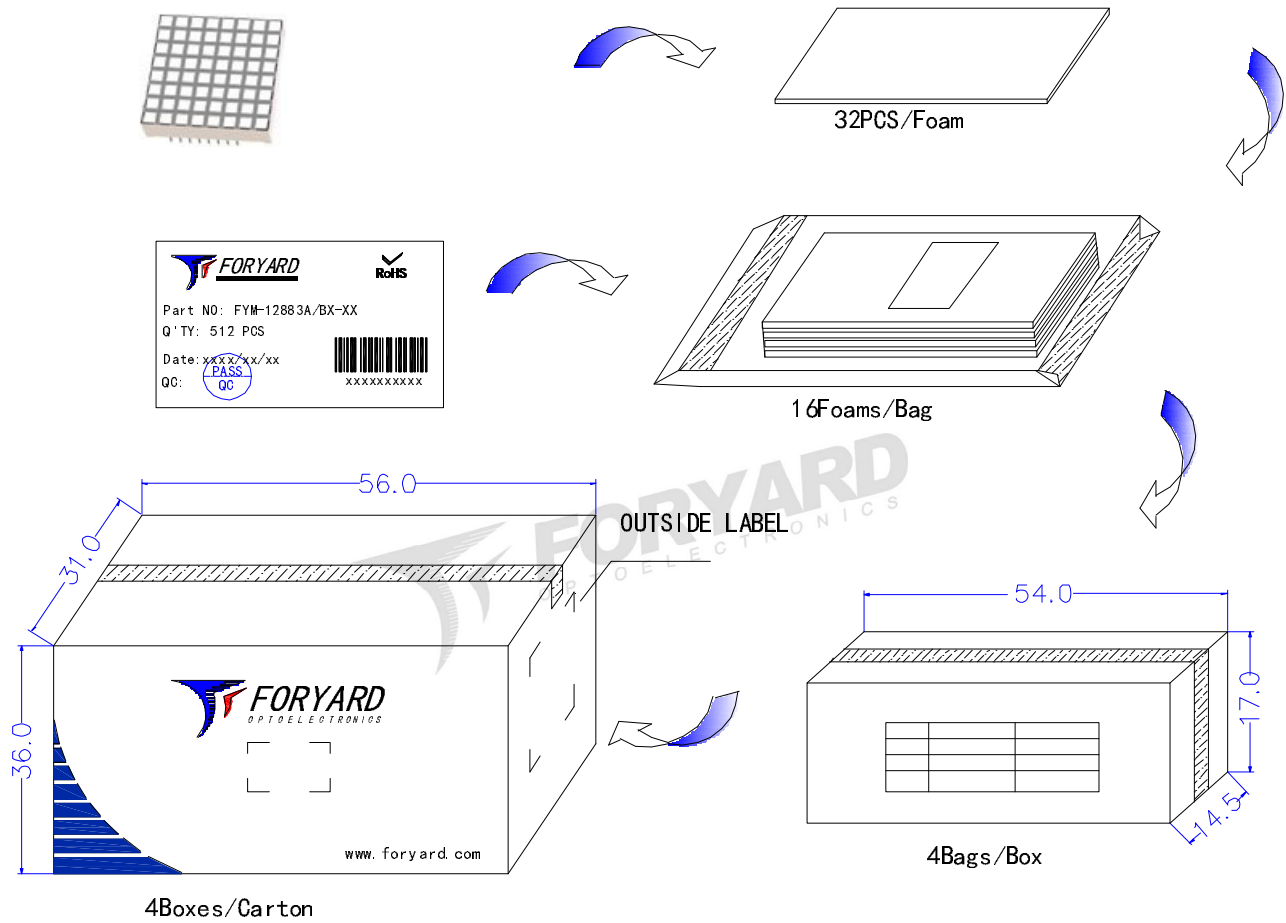
| Emitting Color                                                 | Dice Material      | Peak Wave Length(λ <sub>p</sub> ) | Spectral Line halfwidth (Δλ1/2) | Forward Voltage(VF) Unit:V |      | Luminous Intensity (I <sub>v</sub> ) Unit:mcd |            |
|----------------------------------------------------------------|--------------------|-----------------------------------|---------------------------------|----------------------------|------|-----------------------------------------------|------------|
|                                                                |                    |                                   |                                 | Typ                        | Max  |                                               |            |
| Standard brightness                                            |                    |                                   |                                 |                            |      |                                               |            |
| 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 |
| Ultra brightness                                               |                    |                                   |                                 |                            |      |                                               |            |
| 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(I <sub>v</sub> -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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## ■ Packing Diagram



OUTSIDE LABEL

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