

# PRODUCT SPECIFICATION

**Model No.: FYM-7881C/DX-XX**

## Descriptions & Features:

- 0.70 inch (20.20mm) Matrix height, Dot Matrix Display
- 8\*8 Array with X-Y Select.
- Case mold type.
- RoHS compliant.
- Low current operation
- Low power consumption.
- Easy mounting on P.C. board or socket.



| CUSTOMER APPROVED<br>SIGNATURES | APPROVED BY | CHECKED BY | PREPARED BY |
|---------------------------------|-------------|------------|-------------|
|                                 |             |            |             |

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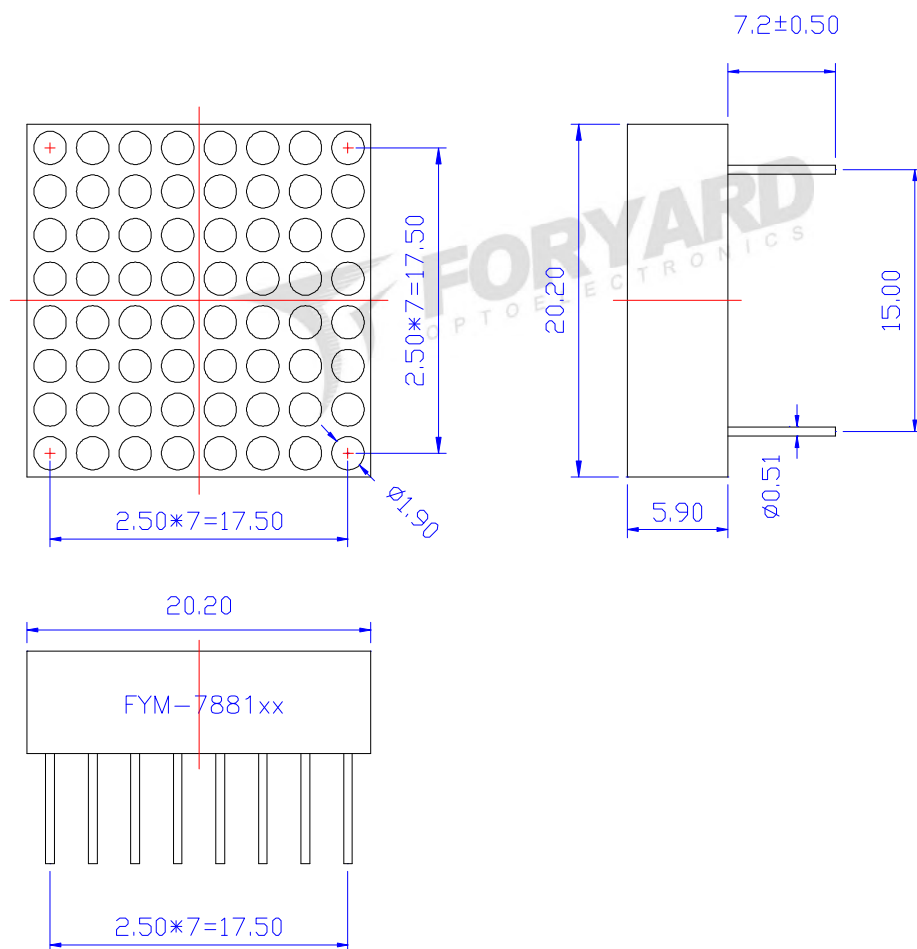
**E-mail:**Sales@foryard.com ( General)

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■ -XX: REF Surface / Epoxy color

| Color \ Number    | 0             | 1       | 2      | 3       | 4        |
|-------------------|---------------|---------|--------|---------|----------|
| REF Surface Color | ○ White       | ○ Black | ○ Gray | ○ Red   | ○ Green  |
| Epoxy Color       | ○ Water Clear | ○ White | ○ Red  | ○ Green | ○ Yellow |

■ Mechanical Dimensions

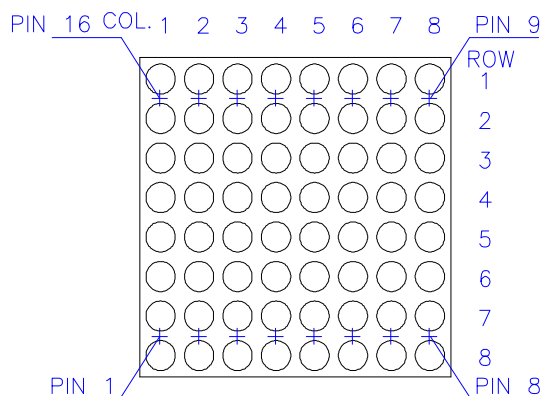


Notes:

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.

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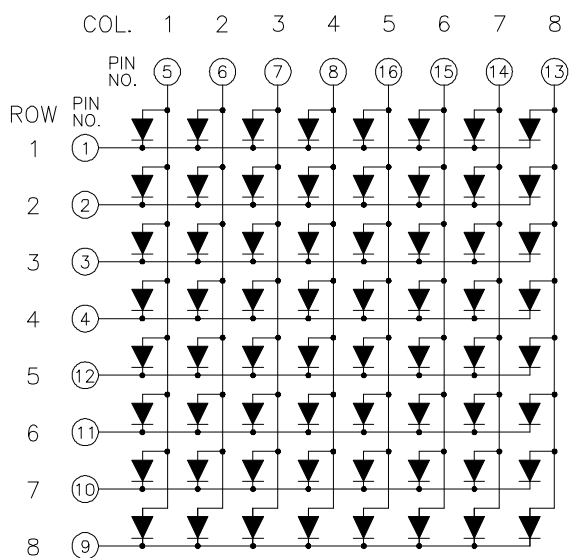
■ **All Light On Dot Feature & Pin Position**



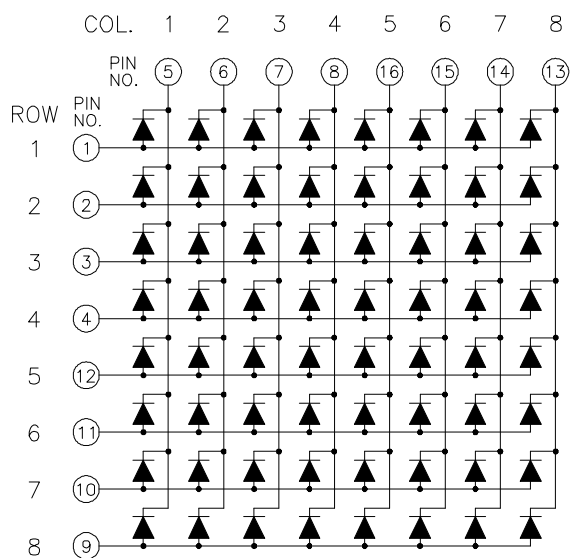
■ **Internal Circuit Diagrams**



**FYM-7881Cx**



**FYM-7881Dx**



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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=20mA)

(Ta=25℃)

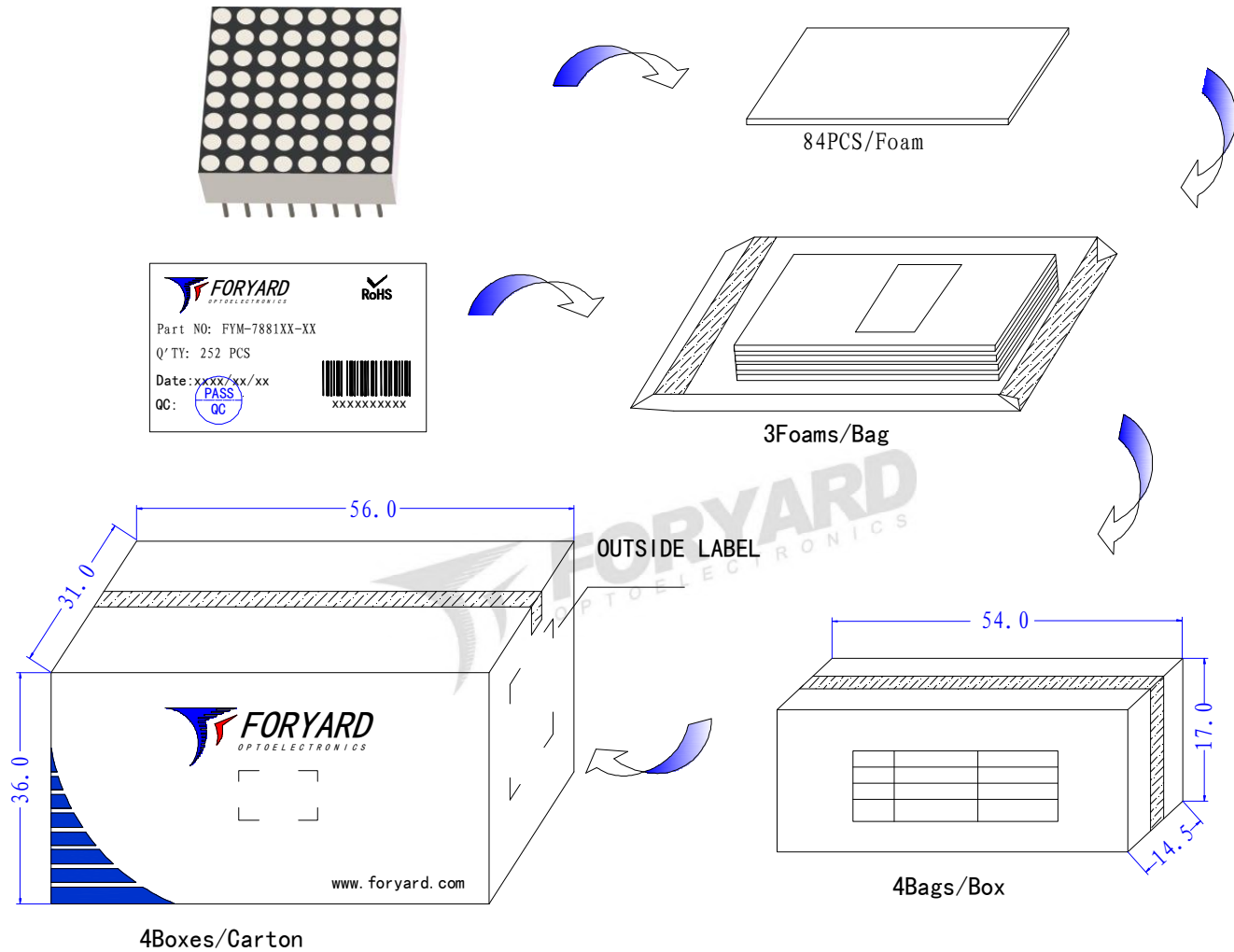
| Emitting Color                            |                    | Dice Material | Peak Wave Length( $\lambda_p$ ) | Spectral Line halfwidth( $\Delta \lambda_{1/2}$ ) | Forward Voltage(VF) Unit:V |      | Luminous Intensity (Iv) Unit:mcd |
|-------------------------------------------|--------------------|---------------|---------------------------------|---------------------------------------------------|----------------------------|------|----------------------------------|
|                                           |                    |               |                                 |                                                   | Typ                        | Max  |                                  |
| Standard brightness                       |                    |               |                                 |                                                   |                            |      |                                  |
| H                                         | Red                | GaP           | 700nm                           | 90nm                                              | 2.00                       | 2.50 | 1                                |
| S                                         | Hi Red             | AlGaAs/SH     | 660nm                           | 20nm                                              | 1.80                       | 2.50 | 15~20                            |
| D                                         | Super Red          | AlGaAs/DH     | 650nm                           | 20nm                                              | 1.90                       | 2.50 | 26~38                            |
| E                                         | Orange             | GaAsP         | 625nm                           | 35nm                                              | 1.90                       | 2.50 | 14~20                            |
| A                                         | Amber              | GaAsP         | 610nm                           | 35nm                                              | 1.90                       | 2.50 | 13~18                            |
| Y                                         | Yellow             | GaAsP         | 590nm                           | 35nm                                              | 1.90                       | 2.50 | 13~18                            |
| G                                         | Green              | GaP           | 570nm                           | 10nm                                              | 1.90                       | 2.50 | 14~18                            |
| B                                         | Blue               | InGaN         | 430nm                           | 60nm                                              | 3.40                       | 4.40 | 0.7~1(mw)                        |
|                                           |                    |               | 460nm                           |                                                   | 2.80                       | 3.80 | 6~12(mw)                         |
|                                           |                    |               | 470nm                           |                                                   | 2.80                       | 3.80 | 6~12(mw)                         |
| PG                                        | Pure Green         | InGaN         | 520nm                           | 36nm                                              | 2.80                       | 3.80 | 4~6(mw)                          |
| W                                         | White              | InGaN         | X=0.29,Y=0.30                   | CCT:9500K                                         | 2.80                       | 3.80 | 20~30                            |
| Ultra brightness                          |                    |               |                                 |                                                   |                            |      |                                  |
| UHR                                       | Ultra Hi Red       | AlGaInP       | 640nm                           | 20nm                                              | 1.90                       | 2.50 | 30~60                            |
| UR                                        | Ultra Red          | AlGaInP       | 635nm                           | 20nm                                              | 1.90                       | 2.50 | 60~100                           |
| UE                                        | Ultra Orange       | AlGaInP       | 625nm                           | 20nm                                              | 1.90                       | 2.50 | 60~120                           |
| UA                                        | Ultra Amber        | AlGaInP       | 610nm                           | 20nm                                              | 1.90                       | 2.50 | 40~100~150                       |
| UY                                        | Ultra Yellow       | AlGaInP       | 590nm                           | 20nm                                              | 1.90                       | 2.50 | 50~140~190                       |
| UG                                        | Ultra Green        | AlGaInP       | 570nm                           | 30nm                                              | 1.90                       | 2.50 | 30~60~80                         |
| PG                                        | Ultra Pure Green   | InGaN         | 520nm                           | 36nm                                              | 2.80                       | 3.80 | 260~310                          |
| BG                                        | Ultra Bluish Green | InGaN         | 505nm                           | 36nm                                              | 2.80                       | 3.80 | 260~310                          |
| UB                                        | Ultra Blue         | InGaN         | 460nm                           | 30nm                                              | 2.80                       | 3.80 | 80~90~120                        |
|                                           |                    |               | 470nm                           | 30nm                                              | 2.80                       | 3.80 | 80~90~120                        |
| UW                                        | Ultra White        | InGaN         | X=0.29,Y=0.30                   | CCT:9500K                                         | 2.80                       | 3.80 | 180~200                          |
| Dot-to-Dot 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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## ■ Packing Diagram



**OUTSIDE LABEL**