

| Model No. | FYS-5613A/BX-XX |
|-----------|-----------------|
| Rev.      | А               |

# PRODUCT SPECIFICATION

Model No.: FYS-5613A/BX-XX

# **Descriptions & Features:**

- ■0.56 Inch (14.20mm) digit height Single Digit Display
- Case mold type.
- ■RoHS compliant.
- Low current operation
- Low power consumption.
- ■Easy mounting on P.C. board or socket.









**Zip:**315051

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

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Page: 1/5

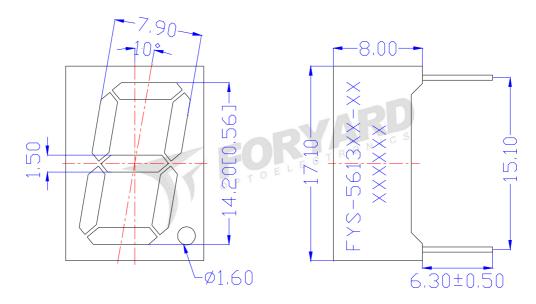


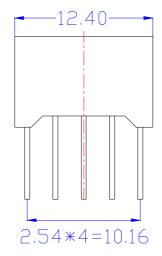
| Model No. | FYS-5613A/BX-XX |
|-----------|-----------------|
| Rev.      | А               |

## ■ -XX: REF Surface / Epoxy color

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

#### Mechanical Dimensions





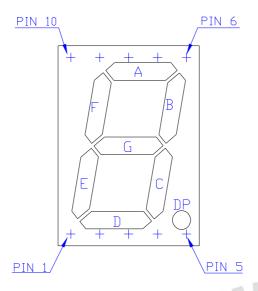
#### Notes:

- 1. All pins are Φ0.45[.018]mm
- 2. Dimension in millimeter [inch], tolerance is  $\pm 0.25$  [.010] and angle is  $\pm 1^{\circ}$  unless otherwise noted.
- 3. Bending≤Length\*1%.
- 4. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.



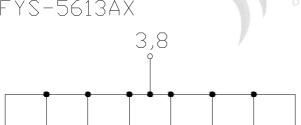
| Model No. | FYS-5613A/BX-XX |
|-----------|-----------------|
| Rev.      | Α               |

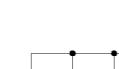
## ■ All Light On Segments Feature & Pin Position



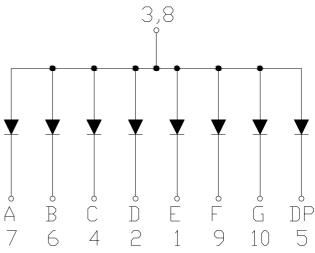
# ■ Internal Circuit Diagrams

FYS-5613AX





YS-5613BX



Common Cathode

Common Anode



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|-----------|-----------------|
| Rev.      | Α               |

# ■ Absolute maximum ratings

(Ta=25℃)

| Parameter             | Symbol | Test Condition  | Value |     | Unit          |
|-----------------------|--------|-----------------|-------|-----|---------------|
| Parameter Symbol      |        | rest condition  | Min   | Max | Offic         |
| 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 | $^{\circ}$ C  |
| Storage Temperature   | Tstr   | _               | -40   | +85 | ${\mathbb C}$ |

#### **■** Electrical-Optical Characteristics

• Color Code & Chip Characteristics:(Test Condition:IF=20mA)

(Ta=25℃)

| E     | Emitting Color  | Dice<br>Material | Peak Wave<br>Length(λ <sub>P</sub> ) | Spectral Line halfwidth(Δ | Voltage(\ | ward<br>/F) Unit:V | Luminous<br>Intensity<br>(Iv) |
|-------|---|------------------|--------------------------------------|---------------------------|-----------|--------------------|-------------------------------|
|       |   |                  |                                      | λ1/2)                     | Тур       | Max                | Unit:mcd                      |
| Stand | lard brightness   |                  |                                      |                           |           |                    |                               |
| Н     | 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                         |
| Е     | Orange  | GaAsP            | 625nm                                | 35nm                      | 1.90      | 2.50               | 14~20                         |
| Α     | Amber   | GaAsP            | 610nm                                | 35nm                      | 1.90      | 2.50               | 13~18                         |
| Υ     | Yellow  | GaAsP            | 590nm                                | 35nm                      | 1.90      | 2.50               | 13~18                         |
| G     | Green   | GaP              | 570nm                                | 10nm                      | 1.90      | 2.50               | 14~18                         |
|       |   |                  | 430nm                                |                           | 3.40      | 4.40               | 0.7~1(mw)                     |
| В     | Blue  | InGaN            | 460nm                                | 60nm                      | 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      |                    | 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                       |
| LID   | Liltro Diuc   | In CoN           | 460nm                                | 30nm                      | 2.80      | 3.80               | 80~90~120                     |
| UB    | Ultra Blue  | InGaN            | 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                       |
| Segm  | Segment-to-Segment Luminous Intensity ratio(Iv-M) 1.5:1 |                  |                                      |                           |           |                    |                               |

#### Note:

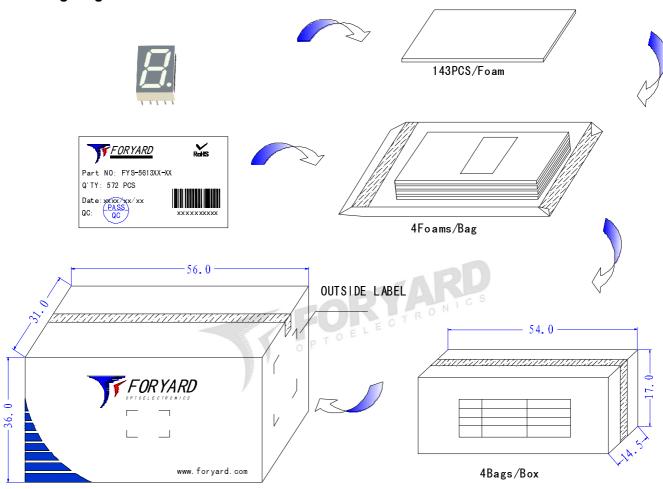
- 1.Luminous Intensity is based on the Foryard standards.
- 2.Pay attention about static for InGaN

Page: 4/5



| Model No. | FYS-5613A/BX-XX |
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#### ■ Packing Diagram



4Boxes/Carton



OUTSIDE LABEL

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

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