

PRODUCT SPECIFICATION

Model No.: FYS-23011I/JX-XX

| Descriptions & Features: |
|--|
| <ul style="list-style-type: none"> ■ 2.30 Inch (56.80mm) digit height Single Digit Display ■ Case mold type. ■ RoHS compliant. ■ Low current operation ■ Low power consumption. ■ Easy mounting on P.C. board or socket. |



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

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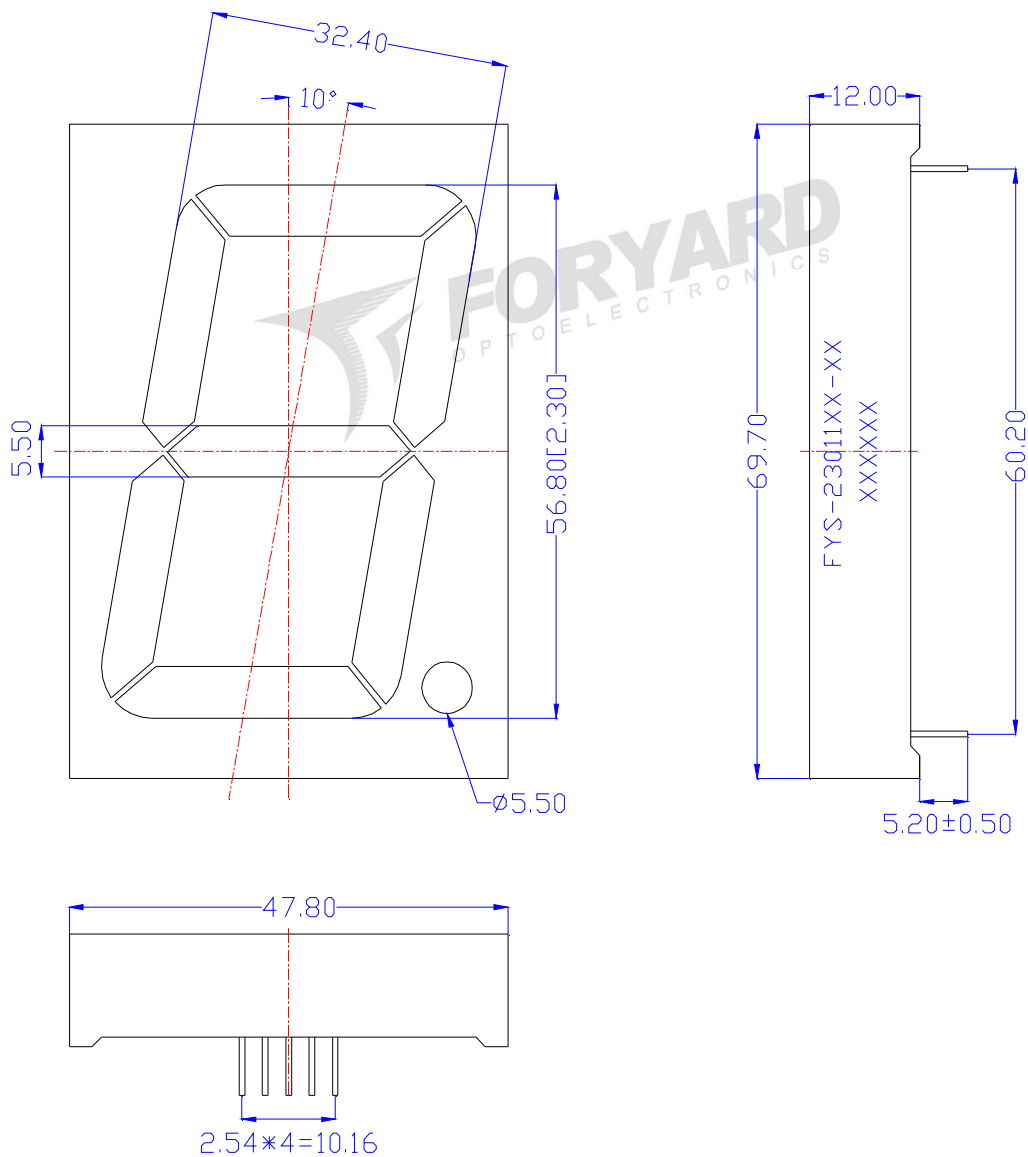
[Http://www.foryard.com](http://www.foryard.com)

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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

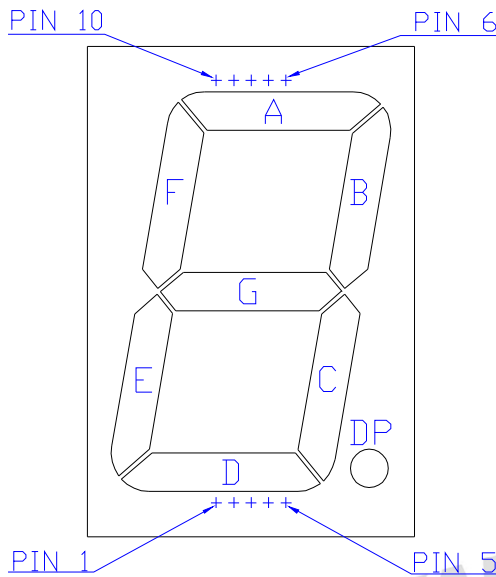


Notes:

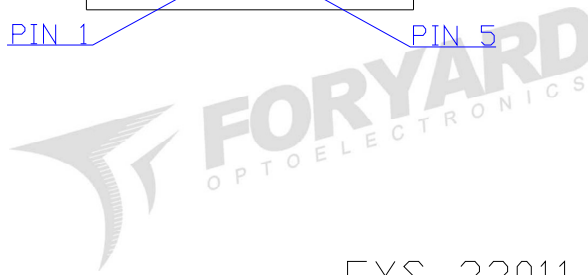
1. All pins are $\Phi 0.60 [.023]$ mm
2. Dimension in millimeter [inch], tolerance is $\pm 0.25 [.010]$ and angle is $\pm 1^\circ$ unless otherwise noted.
3. Bending \leq Length * 1%.
4. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

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■ All Light On Segments Feature & Pin Position

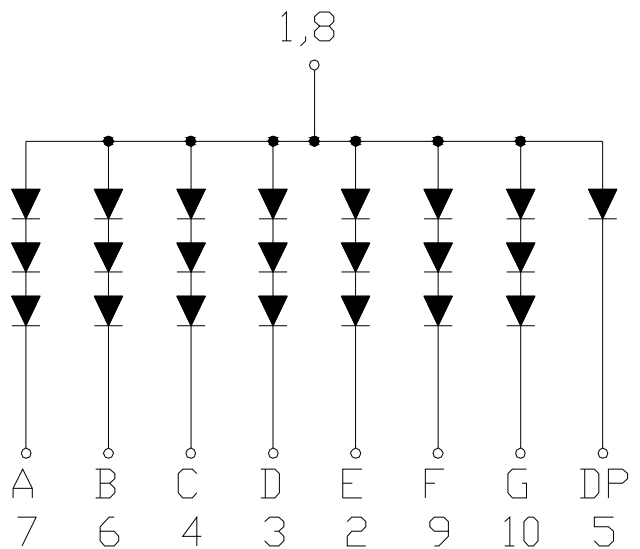
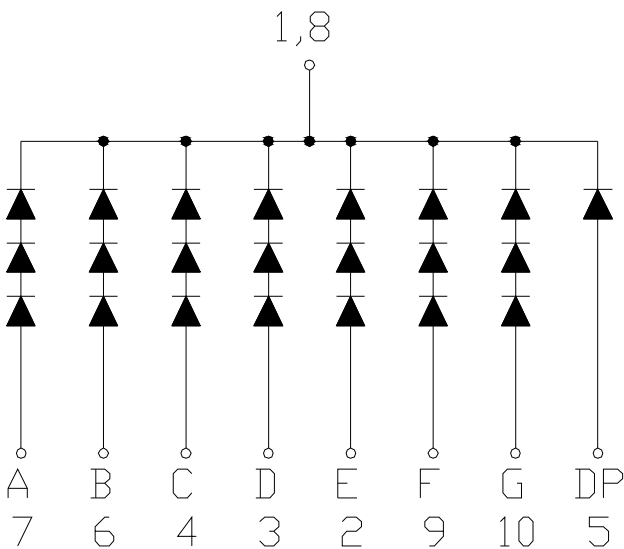


■ Internal Circuit Diagrams



FYS-23011IX

FYS-23011JX



Common Cathode

Common Anode

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■ 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=20mA)

(Ta=25°C)

| Emitting Color | Dice Material | Peak Wave Length(λ_p) | Spectral Line halfwidth($\Delta\lambda/2$) | 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 |
| 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

