**NINGBO FORYARD OPTO**
ELECTRONICS CO.,LTD.

# LED DIGIT DISPLAY

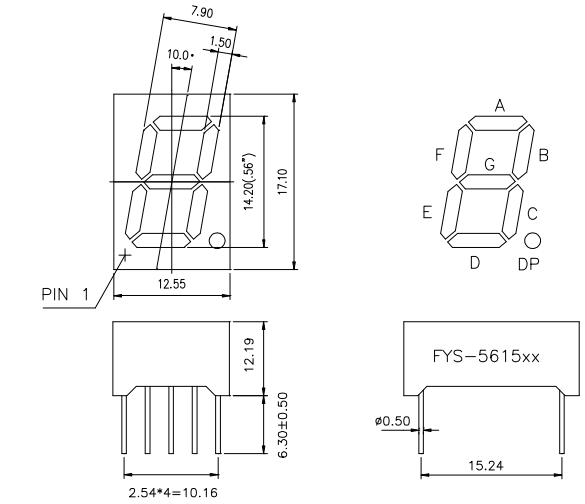
**PartNO.: FYS-5615AW/BW-XX**

## DESCRIPTION

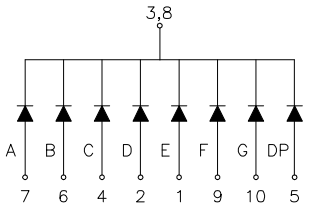
- **14.20mm (0.56")Single digit numeric display series.**
- **Standard brightness.**
- **Low current operation.**
- **Excellent character apperance.**
- **Easy mounting on P.C.boards or sockets**

## Package Dimensions &Internal Circuit Diagram

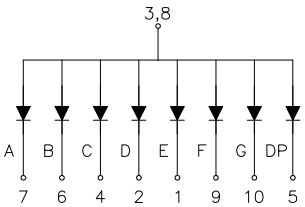
FYS-5615 Series




FYS-5615Ax




FYS-5615Bx




Notes:

- All dimensions are in millimeters (inches)
- Tolerance is ±0.25(0.01")unless otherwise noted.
- Specificaions are subject to change whitout notice.


ADD: NO.115 QiXin Road NingBo Zhejiang China ZIP.: 315051
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# LED DIGIT DISPLAY

## PartNO.: FYS-5615AW/BW-XX

: Absolute maximum ratings (Ta=25℃)

| Parameter | Symbol | Test Condition | Value | | Unit |
|---|---|---|---|---|---|
| | | | Min | Max | |
| Reverse Voltage | VR | IR=30μA | 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 |

• -XX: Surface / Lens color：

| Number | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **Ref Surface Color** | White | Black | Gray | Red | Green | |
| **Epoxy Color** | Water clear | White diffused | Red Diffused | Green Diffused | Yellow Diffused | |

■ **Description:**

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

| Emitting Color | | Dice Material | Peak Wave Length($\lambda_P$) | Spectral Line halfwidth($\triangle\lambda 1/2$) | Forward Voltage(VF) Unit:V | | Luminous Intensity (Iv) Unit:mcd |
|---|---|---|---|---|---|---|---|
| | | | | | Typ | Max | |
| W | White | InGaN | X=0.29,y=0.30 | | 2.80 | 3.80 | 180-200 |
| UW | Ultra White | InGaN | X=0.29,y=0.30 | | 2.80 | 3.80 | 180-200 |

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| | | | | |
|---|---|---|---|---|
| Color temperature | 4534K | | | |
| Chromaticity coordinate | X: 0.3628 Y: 0.3844 | | | |
| Luminous flux | 0.38991lm | | | |
| Luminous efficiency | 7.031lm/w | | | |
| Measure environmental temperature | 150 °C | | | |
| Double value working temperature | 20 °C | | | |
| Color rendering index | R1=75 | R2=90 | R3=95 | R4=66 |
| | R4=59 | R5=75 | R6=80 | R7=40 |
| | R9=-1 | R10=73 | | |

| Classification | Text Item | Test Conditions | Result |
|---|---|---|---|
| **Endurance Test** | Operation Life | Connect with a power if=30mA<br>Ta=Under room temperature<br>Test time=1,000hrs | 0/100 |
| | High Tempeature High Humidity Storage | Ta=85℃±5℃<br>RH=90% -95%<br>Test time=1,000hrs | 0/100 |
| | High Temperature Storage | High Ta=105℃±5℃<br>Test time=1,000hrs | 0/100 |
| | Low Tempeature Storage | Low Ta=35℃±5℃<br>Test time=1,000hrs | 0/100 |
| **Environmental Test** | Temperature Cyling | -35℃～25℃～105℃～25℃<br>30min 5min 30min 5min<br>Test Time=10cycle | 0/100 |
| | Thermal Shock | 105℃±5℃～-35℃±5℃<br>10min 10min<br>Test Time=10cycle | 0/100 |
| | Solder Resistance | T.sol=260℃±5℃<br>Dwell Time=10±1sec. | 0/50 |
| | Solderability | T.sol=230℃±5℃<br>Dwell Time=5±1sec. | 0/50 |
| | Lead Bending Stress | 0° ～90° ～0° bend, 3cycles<br>Weight 250g | 0/50 |

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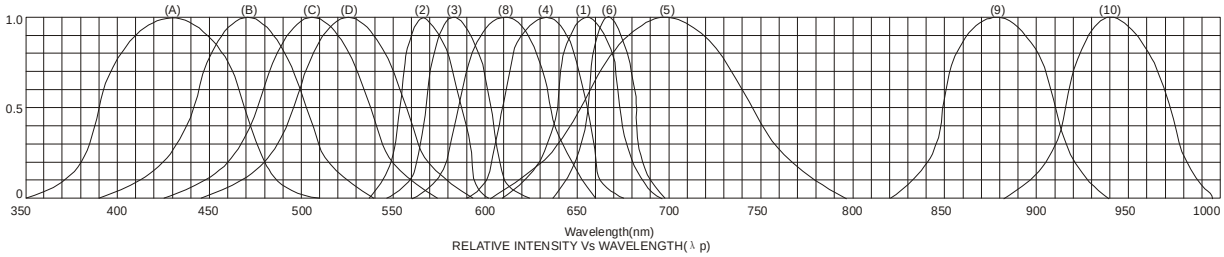
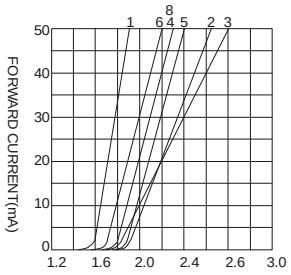
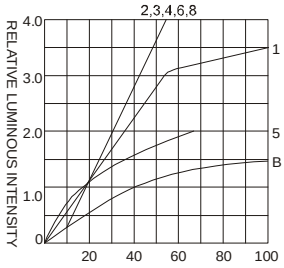


RELATIVE INTENSITY Vs WAVELENGTH(λ p)

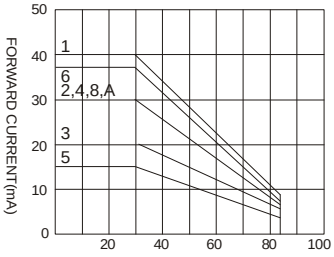
(1) - GaAsP/GaAs 655nm/Red
(2) - GaP 570nm/Yellow Green
(3) - GaAsP/GaP 585nm/Yellow
(4) - GaAsp/GaP 635nm/Orange & Hi-Eff Red
(5) - GaP 700nm/Bright Red
(6) - GaAlAs/GaAs 660nm/Super Red
(8) - GaAsP/GaP 610nm/Super Red
(9) - GaAlAs 880nm
(10) - GaAs/GaAs & GaAlAs/GaAs 940nm
(A) - GaN/SiC 430nm/Blue
(B) - InGaN/SiC 470nm/Blue
(C) - InGaN/SiC 505nm/Ultra Green
(D) - InGaAl/SiC 525nm/Ultra Green



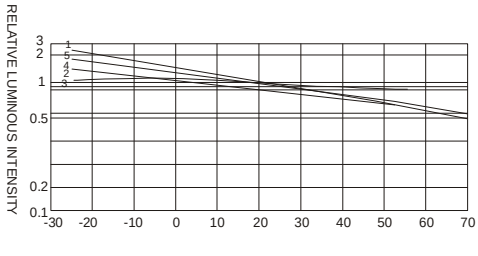
FORWARD VOLTAGE (Vf)
FORWARD CURRENT VS.
FORWARD VOLTAGE



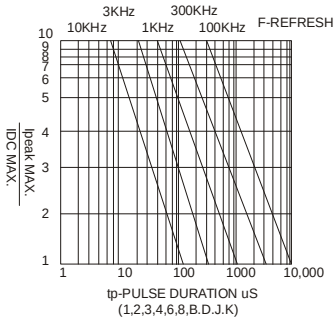
FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



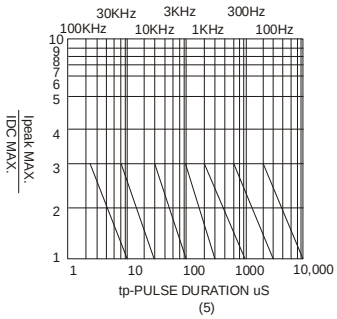
AMBIENT TEMPERATURE Ta(℃)
FORWARD CURRENT VS. AMBIENT
TEMPERATURE



AMBIENT TEMPERATURE Ta(℃)



tp-PULSE DURATION uS
(1,2,3,4,6,8,B.D.J.K)



tp-PULSE DURATION uS
(5)

NOTE:25℃ free air temperature unless otherwise specified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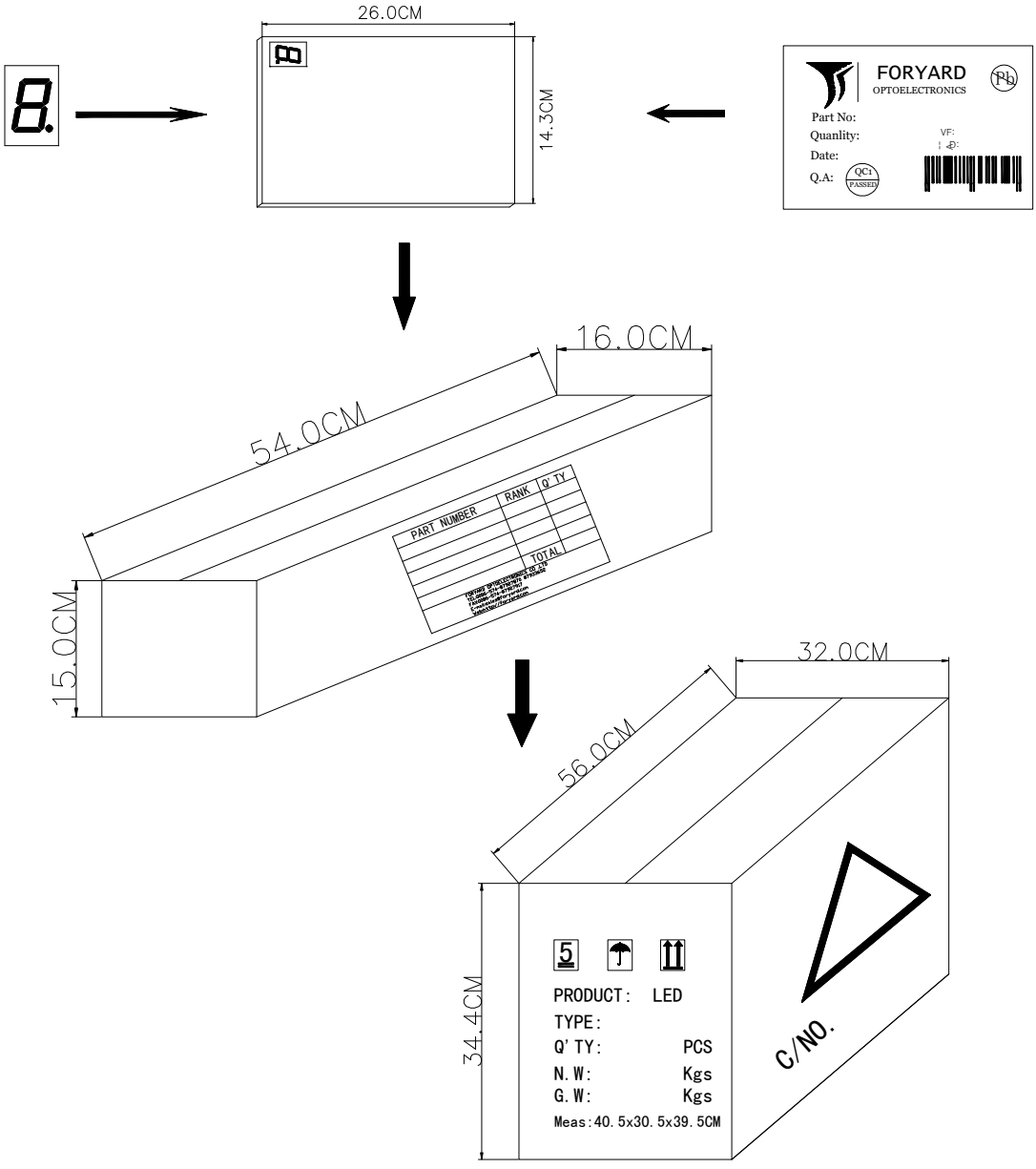


| type | QTY/foam(pcs) | QTY /Bundle (pcs) | QTY /CARTONDimension |
|---|---|---|---|
| FYS-5615A/BW-xx | 11*13=143 | 143*16=2288 | 2288*4=9152 |
| | | | |
| | | | |


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