

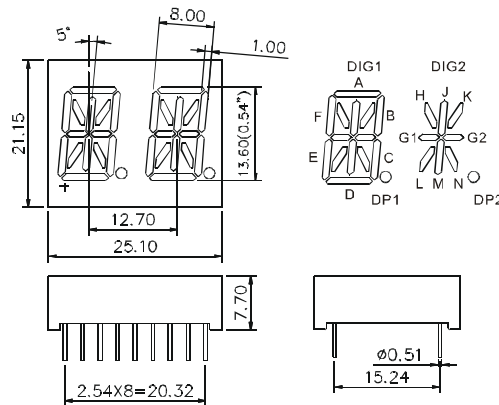


## DESCRIPTION

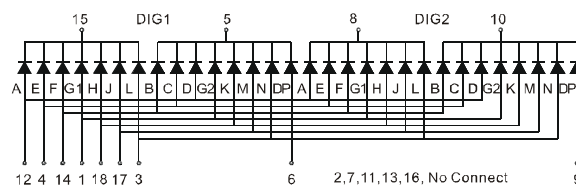
- 13.60mm (0.54") Dual digit numeric display series.
- Standard brightness.
- Low current operation.
- Excellent character appearance.
- Easy mounting on P.C.boards or sockets

## Package Dimensions & Internal Circuit Diagram

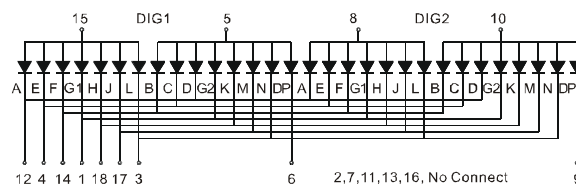
### FYD-5421Series



### FYD-5421Cx



### FYD-5421Dx



### Notes:

- All dimensions are in millimeters (inches)
- Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
- Specifications are subject to change without notice.



**PartNO.: FYD-5421CX/DX-XX**

: Absolute maximum ratings (Ta=25°C)

| 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,<br>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 |   |



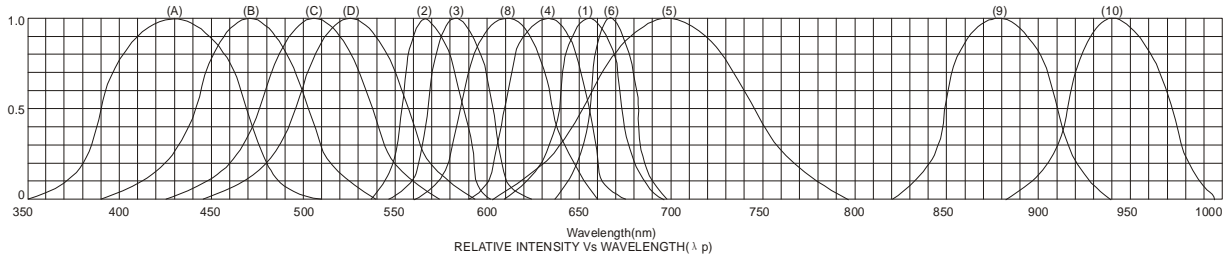
■ **Description:**

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

| Emitting Color                                    |                  | Dice Material | Peak Wave Length( $\lambda_P$ ) | Spectral Line halfwidth( $\Delta\lambda/2$ ) | Forward Voltage(VF)<br>Unit:V |      | Luminous Intensity (Iv)<br>Unit:mcd |
|---|------------------|---------------|---------------------------------|--|-------------------------------|------|-------------------------------------|
|   |                  |               |                                 |  | Typ                           | Max  |                                     |
| H   | Red              | GaP           | 700nm                           | 90nm   | 2.20                          | 2.50 | 5.0                                 |
| S,<br>SR  | Hi Red           | AlGaAs,SH     | 660nm                           | 20nm   | 1.80                          | 2.20 | 15-20                               |
| D   | Super Red        | AlGaAs,DH     | 660nm                           | 20nm   | 1.80                          | 2.20 | 20-30                               |
| LR  | Ultra Red        | AlGaAs,DDH    | 660nm                           | 20nm   | 1.90                          | 2.40 | 26-38                               |
| HR  | HE Red           | GaAsP         | 640nm                           | 45nm   | 1.90                          | 2.40 | 50-80                               |
| E   | Orange           | GaAsP         | 630nm                           | 35nm   | 2.10                          | 2.50 | 10-20                               |
| A   | Amber            | GaAsP         | 610nm                           | 35nm   | 2.10                          | 2.50 | 15-20                               |
| Y   | Yellow           | GaAsP         | 590nm                           | 35nm   | 2.10                          | 2.50 | 15-20                               |
| G   | Green            | GaP           | 570nm                           | 30nm   | 2.20                          | 2.50 | 14-18                               |
| Ultra brightness                                  |                  |               |                                 |  |                               |      |                                     |
| UH<br>R   | Ultra Hi Red     | AlGaInP       | 645nm                           | 20nm   | 2.10                          | 2.50 | 80-150                              |
| UE  | Ultra Orange     | AlGaInP       | 630nm                           | 20nm   | 2.10                          | 2.50 | 180-210                             |
| UA  | Ultra Amber      | AlGaInP       | 610nm                           | 20nm   | 2.10                          | 2.50 | 90-120                              |
| UY  | Ultra Yellow     | AlGaInP       | 590nm                           | 20nm   | 2.10                          | 2.50 | 150-200                             |
| UG  | Ultra Green      | AlGaInP       | 570nm                           | 30nm   | 2.20                          | 2.50 | 60-100                              |
| PG  | Ultra Pure Green | InGaN         | 520nm                           | 36nm   | 2.80                          | 3.80 | 260-310                             |
| BG  | Ultra Blue Green | InGaN         | 505nm                           | 36nm   | 2.80                          | 3.80 | 260-310                             |
| B   | Blue             | InGaN         | 430nm                           | 30nm   | 2.80                          | 3.80 | 10-20                               |
| UB  | Ultra Blue       | InGaN         | 470nm                           | 30nm   | 2.80                          | 3.80 | 80-90                               |
|   |                  |               | 460nm                           | 30nm   | 2.80                          | 3.80 | 80-90                               |
| V   | UV               | InGaN         | 405nm                           |  | 2.80                          | 3.80 | 5-8                                 |
| W   | White            | InGaN         | X=0.29,y=0.30                   |  | 2.80                          | 3.80 | 180-200                             |
| U<br>W  | Ultra White      | InGaN         | X=0.29,y=0.30                   |  | 2.80                          | 3.80 | 180-200                             |
| Segment-to-Segment Luminous Intensity ratio(Iv-M) |                  |               |                                 |  | 1.5:1                         |      |                                     |



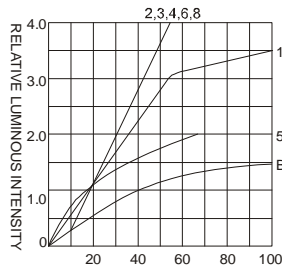
**PartNO.: FYD-5421CX/DX-XX**



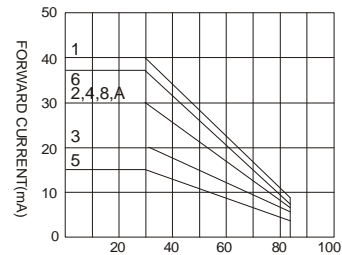
- |   |                                      |
|---|--------------------------------------|
| (1) - GaAsP/GaAs 655nm/Red                | (9) - GaAlAs 880nm                   |
| (2) - GaP 570nm/Yellow Green              | (10) - GaAs/GaAs & GaAlAs/GaAs 940nm |
| (3) - GaAsP/GaP 585nm/Yellow        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



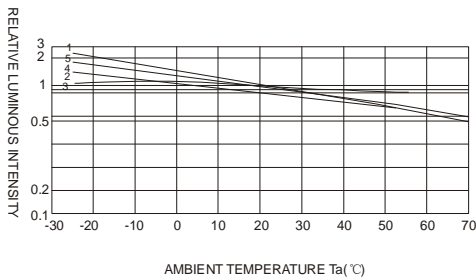
FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



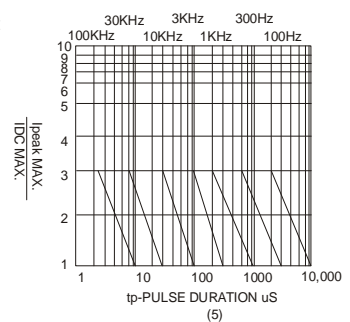
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



AMBIENT TEMPERATURE Ta(°C)  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta(°C)



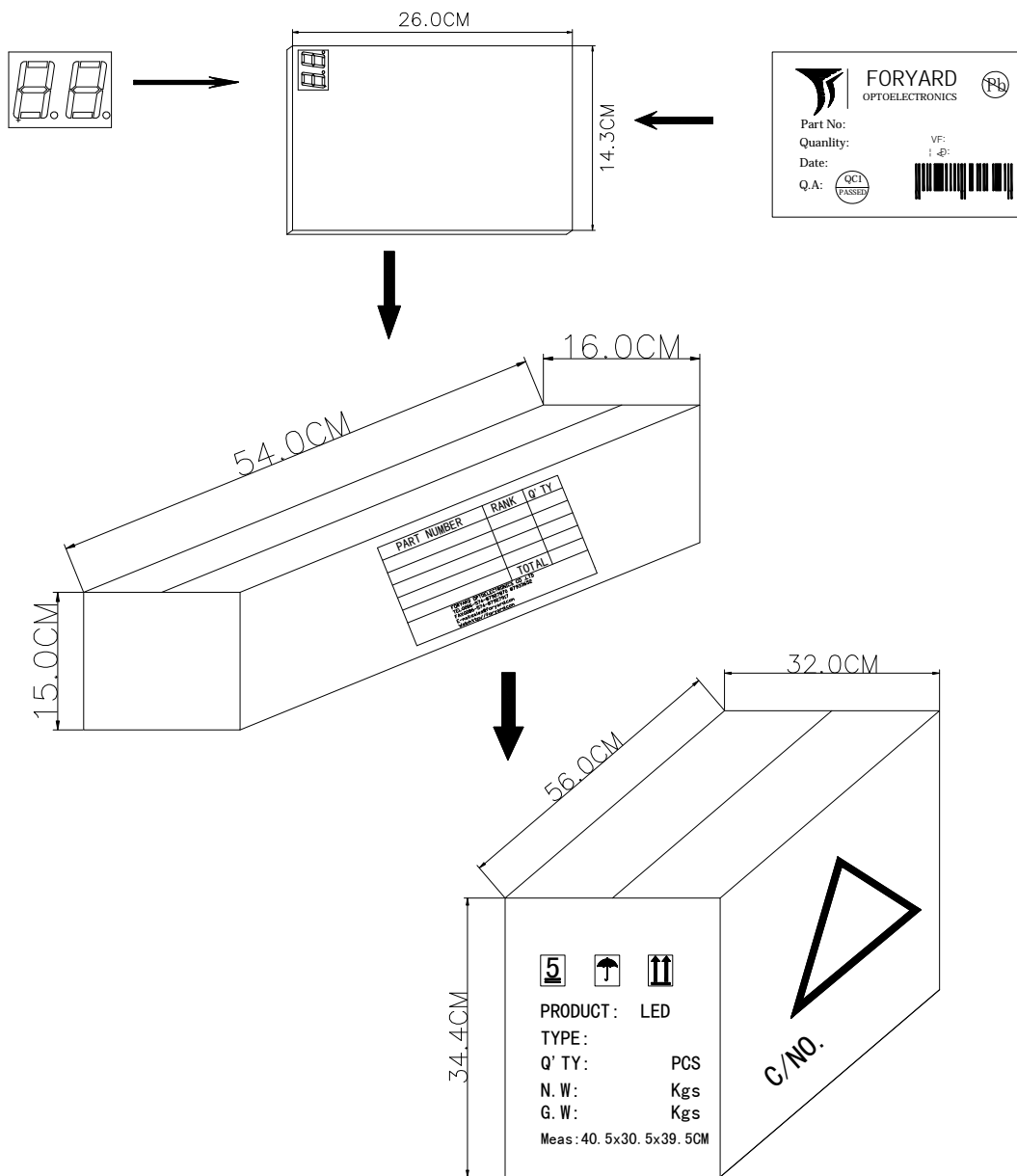
NOTE: 25°C free air temperature unless otherwise specified



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

**LED DIGIT DISPLAY**

**PartNO.: FYD-5421CX/DX-XX**



| type           | QTY/foam(pcs) | QTY /Bundle (pcs) | QTY /CARTONDimension |
|----------------|---------------|-------------------|----------------------|
| FYD-5421CDx-xx | 5*12=60       | 60*16=960         | 960*4=3840           |
|                |               |                   |                      |
|                |               |                   |                      |