

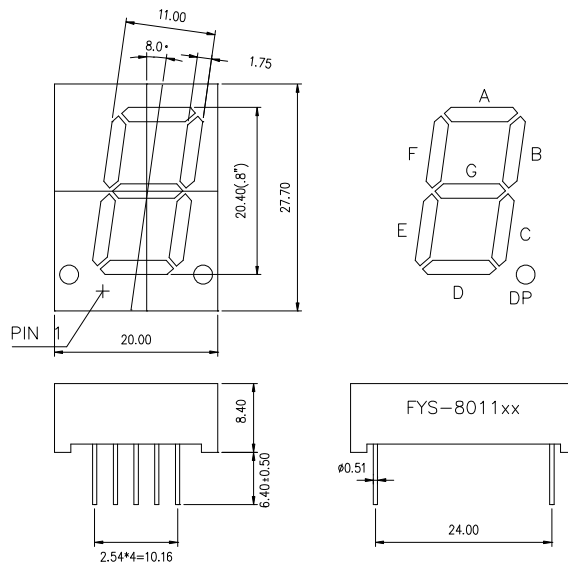


## DESCRIPTION

- 20.4mm (0.8") Single digit numeric display series.
- Standard brightness.
- Low current operation.
- Excellent character appearance.
- Easy mounting on P.C.boards or sockets

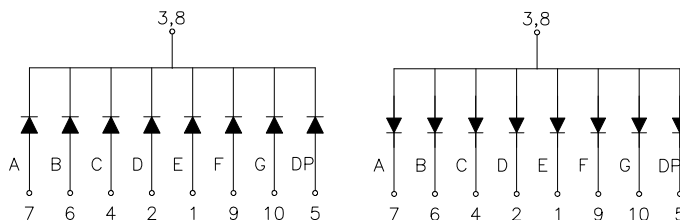
## Package Dimensions & Internal Circuit Diagram

FYS-8011 Series



FYS-8011Cx

FYS-8011Dx



### 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.: FYS-8011CW/DW-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, 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(λ <sub>P</sub> )	Spectral Line halfwidth(Δλ1/2)	Forward Voltage(VF) Unit:V		Luminous Intensity (lv) Unit:mcd
				Typ	Max	
W	White	InGaN	X=0.29,y=0.30	2.80	3.80	180-200
U W	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
<b>Endurance Test</b>	Operation Life	Connect with a power $I_f=30\text{mA}$ $T_a$ =Under room temperature Test time=1,000hrs	0/100
	High Temperature High Humidity Storage	$T_a=85^\circ\text{C} \pm 5^\circ\text{C}$ RH=90% -95% Test time=1,000hrs	0/100
	High Temperature Storage	High $T_a=105^\circ\text{C} \pm 5^\circ\text{C}$ Test time=1,000hrs	0/100
	Low Temperature Storage	Low $T_a=35^\circ\text{C} \pm 5^\circ\text{C}$ Test time=1,000hrs	0/100
<b>Environmental Test</b>	Temperature Cycling	$-35^\circ\text{C} \sim 25^\circ\text{C} \sim 105^\circ\text{C} \sim 25^\circ\text{C}$ 30min 5min 30min 5min Test Time=10cycle	0/100
	Thermal Shock	$105^\circ\text{C} \pm 5^\circ\text{C} \sim -35^\circ\text{C} \pm 5^\circ\text{C}$ 10min 10min Test Time=10cycle	0/100
	Solder Resistance	$T_{\text{sol}}=260^\circ\text{C} \pm 5^\circ\text{C}$ Dwell Time= $10 \pm 1$ sec.	0/50
	Solderability	$T_{\text{sol}}=230^\circ\text{C} \pm 5^\circ\text{C}$ Dwell Time= $5 \pm 1$ sec.	0/50
	Lead Stress Bending	$0^\circ \sim 90^\circ \sim 0^\circ$ bend, 3cycles Weight 250g	0/50



**PartNO.: FYS-8011CW/DW-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

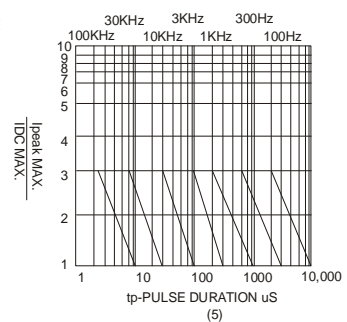


AMBIENT TEMPERATURE Ta(°C)



Ipeak/IDC  
MAX

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



Ipeak/IDC  
MAX

tp-PULSE DURATION μS  
(5)

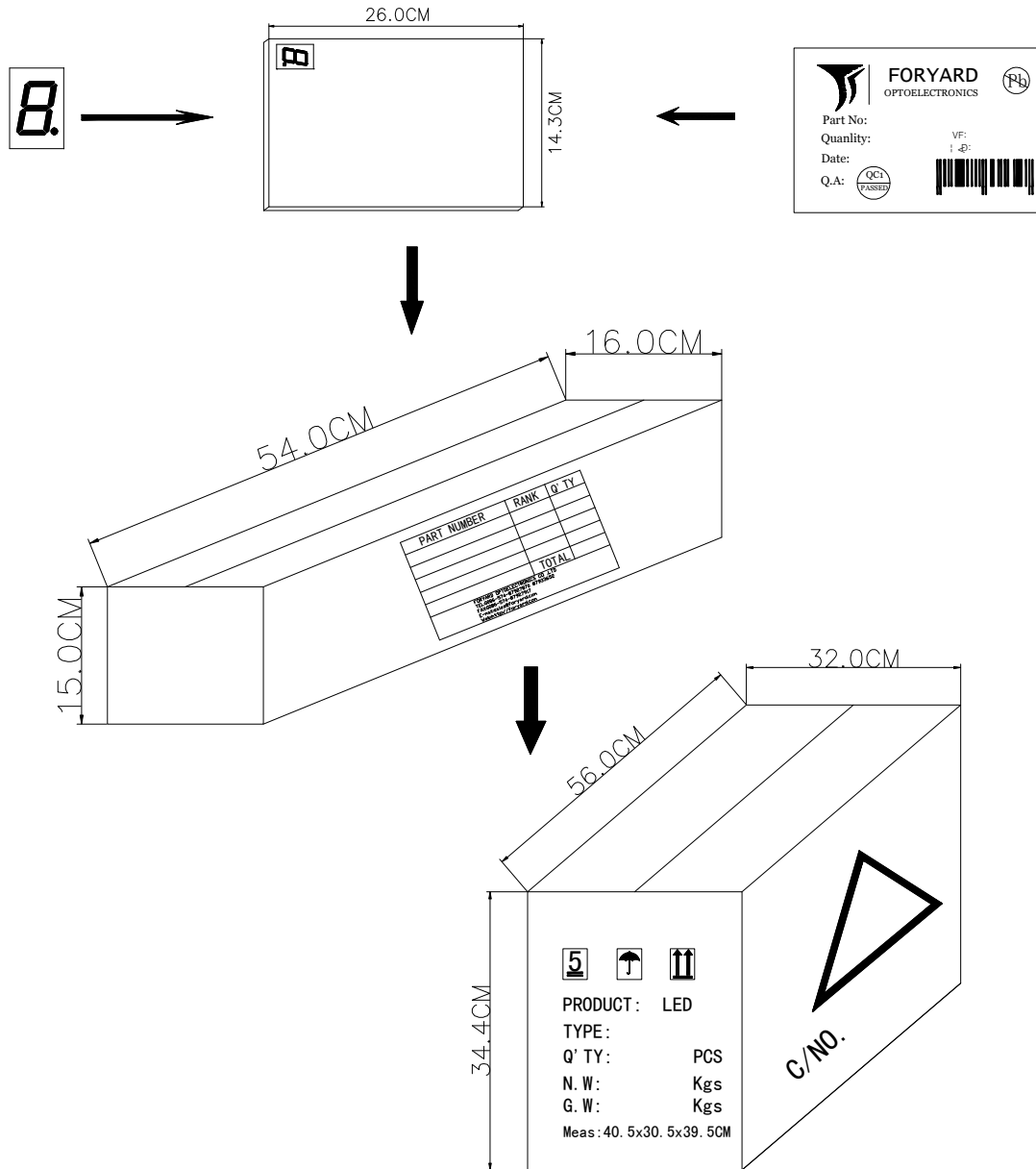
NOTE: 25°C free air temperature unless otherwise specified



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

# LED DIGIT DISPLAY

**PartNO.: FYS-8011CW/DW-XX**



type	QTY/foam(pcs)	QTY /Bundle (pcs)	QTY /CARTONDimension
FYS-8011C/Dx-xx	7*9=63	63*16=1008	1008*4=4032

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