

# PRODUCT SPECIFICATION

**Model No.: FYLQ-5641A/BX-XX**

## Descriptions & Features:

- 0.56 Inch (14.22mm) digit height, Four Digits SMD Display
- RoHS compliant.
- Low current operation
- Low power consumption.
- Easy mounting on P.C. board.



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

**NINGBO FORYARD OPTOELECTRONICS CO.,LTD**

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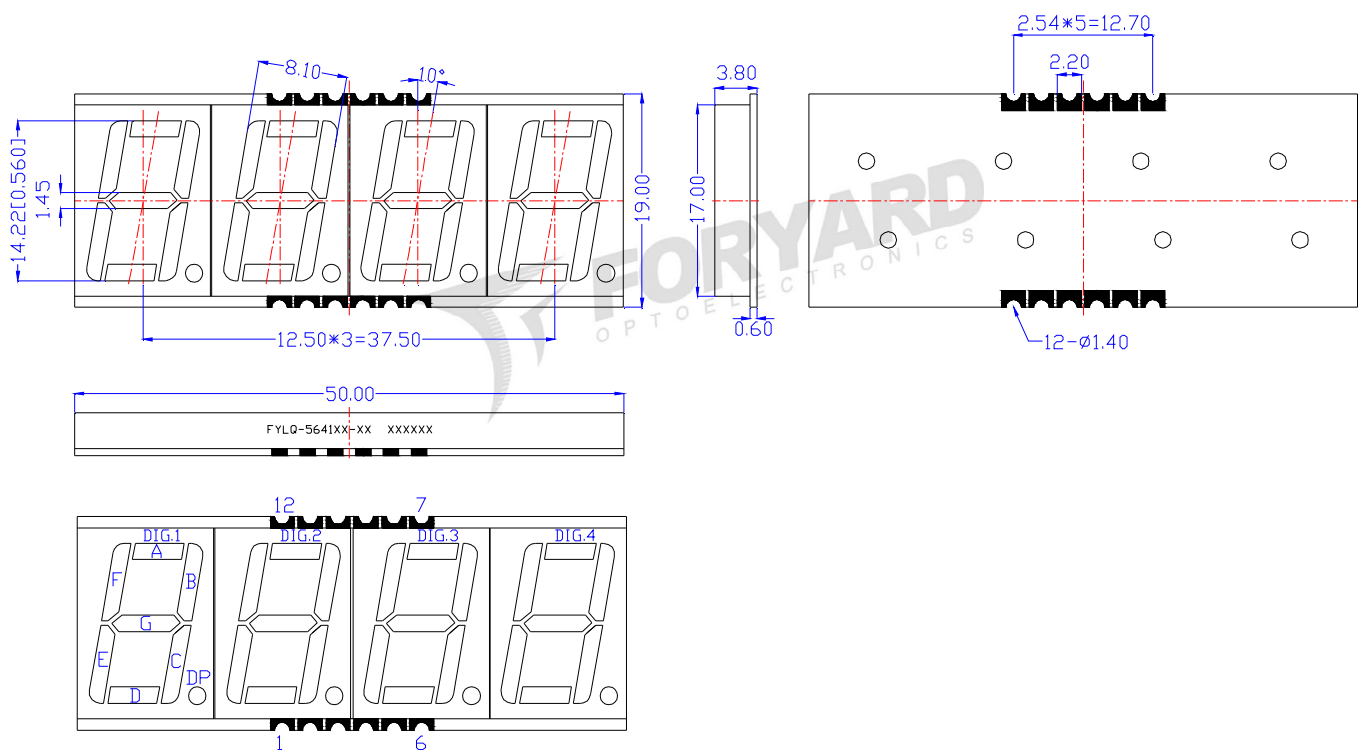
[Http://www.foryard.com](http://www.foryard.com)

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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

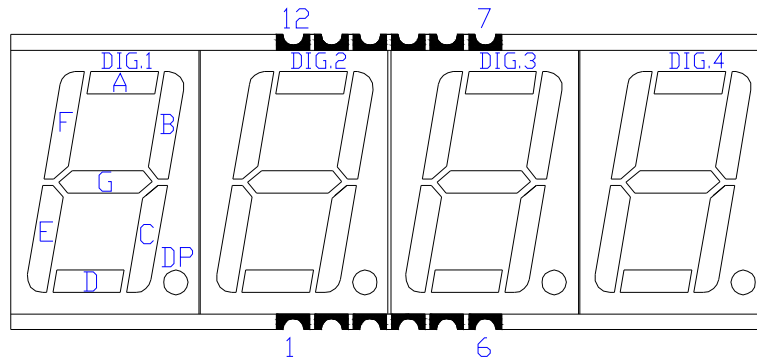


Notes:

1. All dimensions are in millimeters (inches)
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.

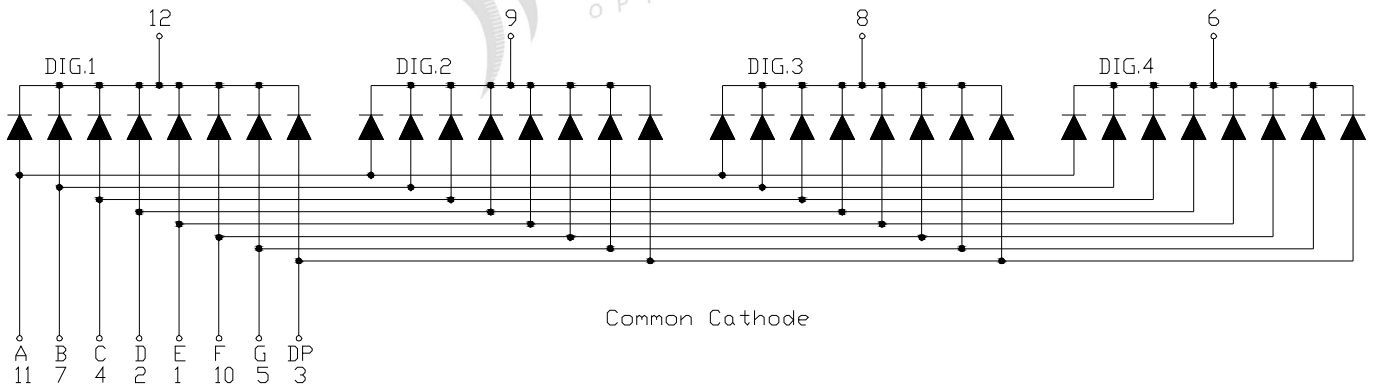
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**■ All Light On Segments Feature & Pad Position**

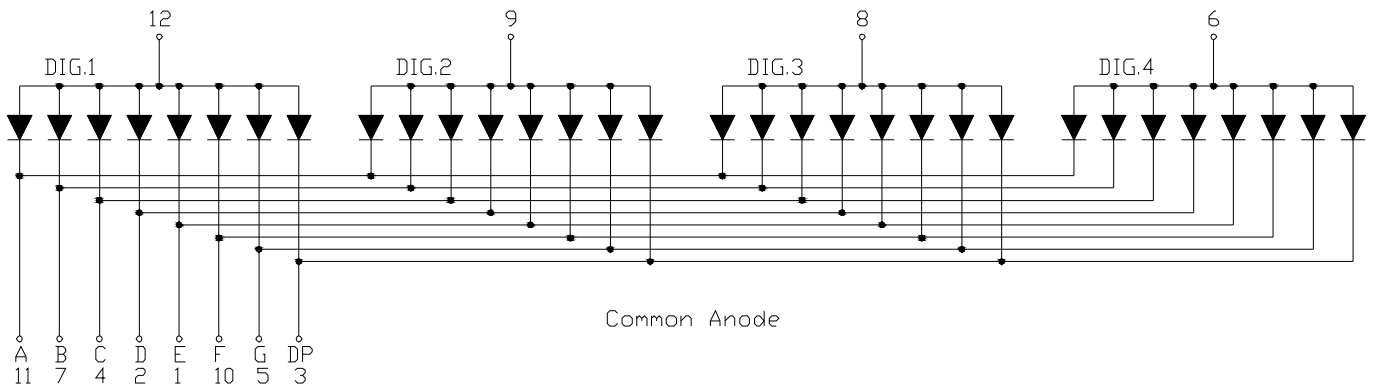


**■ Internal Circuit Diagrams**

FYLQ-5641AX



FYLQ-5641BX



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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( $\lambda_p$ )	Spectral Line halfwidth( $\Delta\lambda_{1/2}$ )	Forward Voltage(VF) Unit:V		Luminous Intensity (Iv) Unit:mcd	
				Typ	Max		
<b>Standard brightness</b>							
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
<b>Ultra brightness</b>							
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			

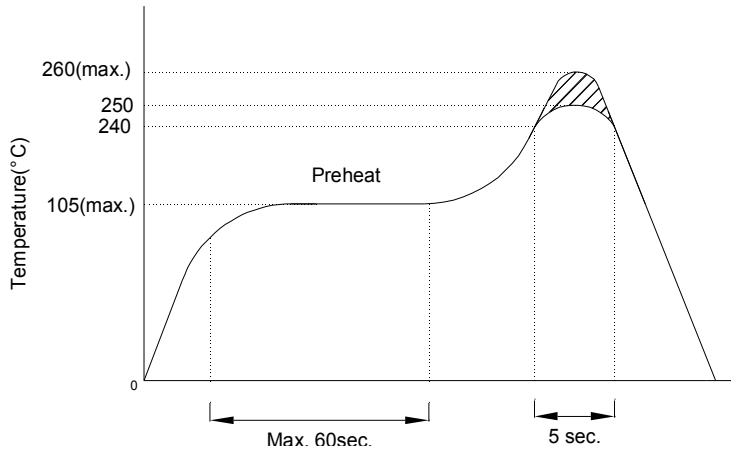
Note:

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

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**Precautions For Use -**

**1. Recommended Soldering conditions Wave Soldering**



**2. Soldering Iron**

Basic SPEC. is  $\leq 5$ sec. When  $260^{\circ}\text{C}$ . If temperature is higher, time should be shorter ( $+10^{\circ}\text{C} \rightarrow -1$ sec.).

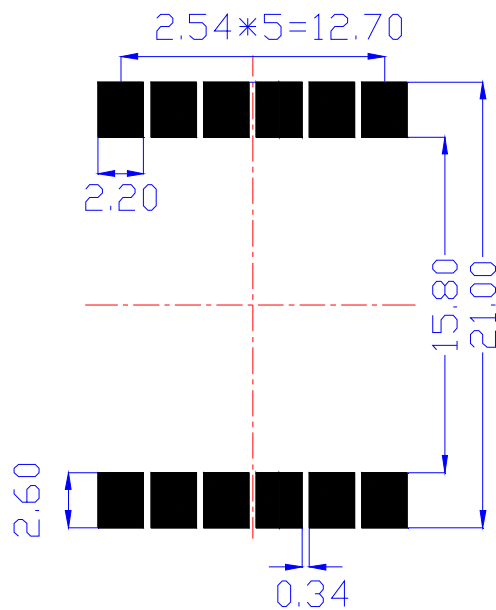
Power dissipation of iron should be smaller than 15W, and temperature should be controllable.

Surface temperature of the device should be under  $230^{\circ}\text{C}$ .

**3. Rework :**

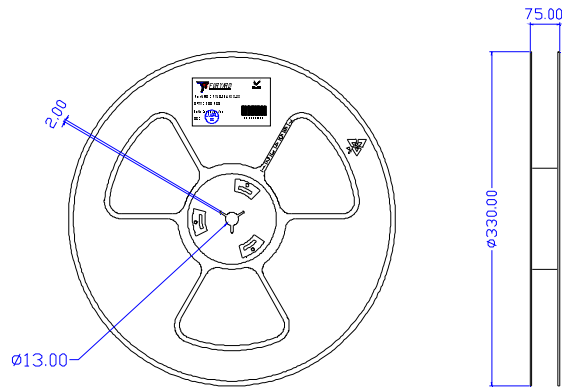
1. Customer must finish rework within 5 sec under  $260^{\circ}\text{C}$ .
2. The head of iron can not touch copper foil.

**Soldering Pad Size**

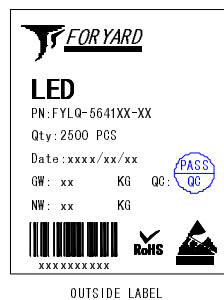
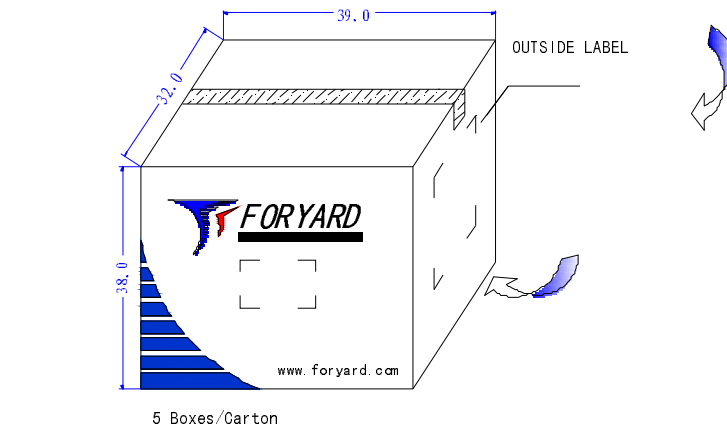
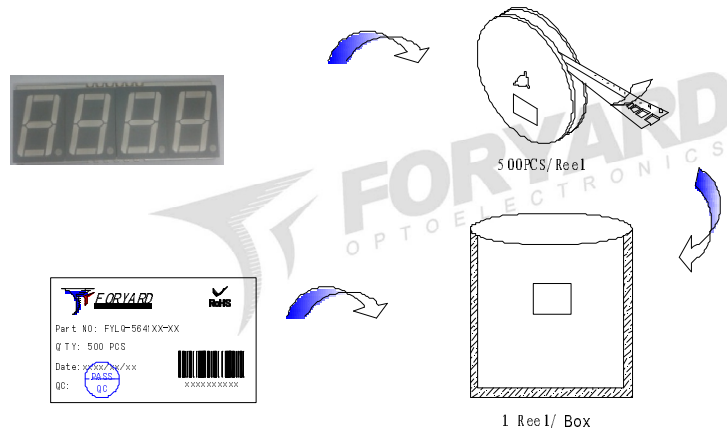


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**■ Reel Dimensions**



**■ Packing & Labe Specifications**



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