

# PRODUCT SPECIFICATION

**Model No.: FYA-R102510ZG-21**

| Descriptions:   |
|---|
| <ul style="list-style-type: none"> <li>■ Bargraph Digit Display</li> <li>■ Shape: Rectangular</li> <li>■ Diameter:25.40*10.10mm</li> <li>■ Emitting Color : Green</li> <li>■ Chip Material:GaP</li> <li>■ Gray Face</li> <li>■ White Segment</li> </ul> |



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

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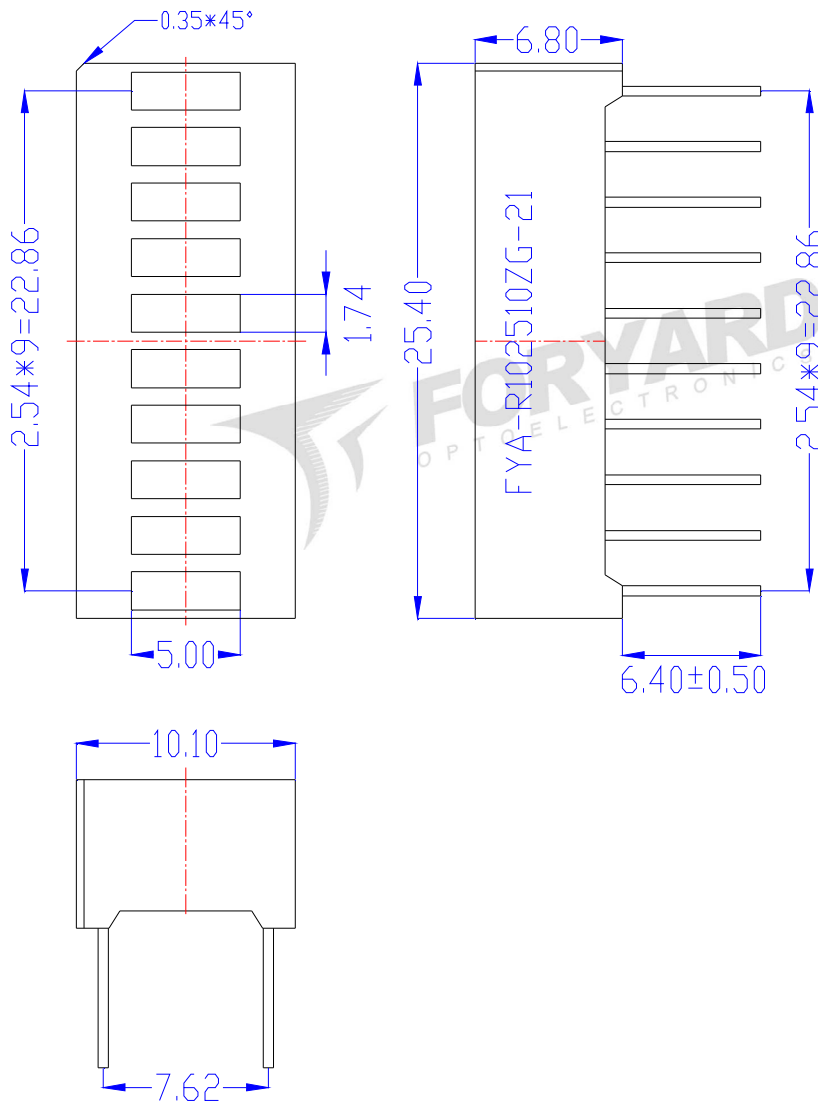
**Http://www.foryard.com**

**Model No.: FYA-R102510ZG-21**

**■ Features -**

1. 0.97 inch (24.60mm) height.
2. Case mold type.
3. RoHS compliant.
4. Low current operation
5. Low power consumption.
6. Easy mounting on P.C. board or socket.

**■ Mechanical Dimensions -**

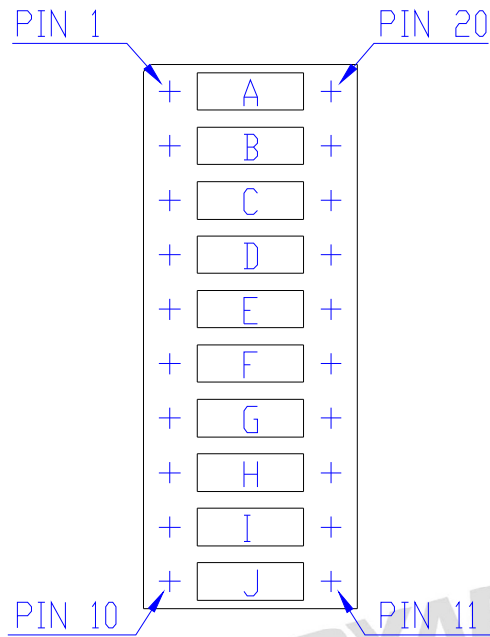


Notes:

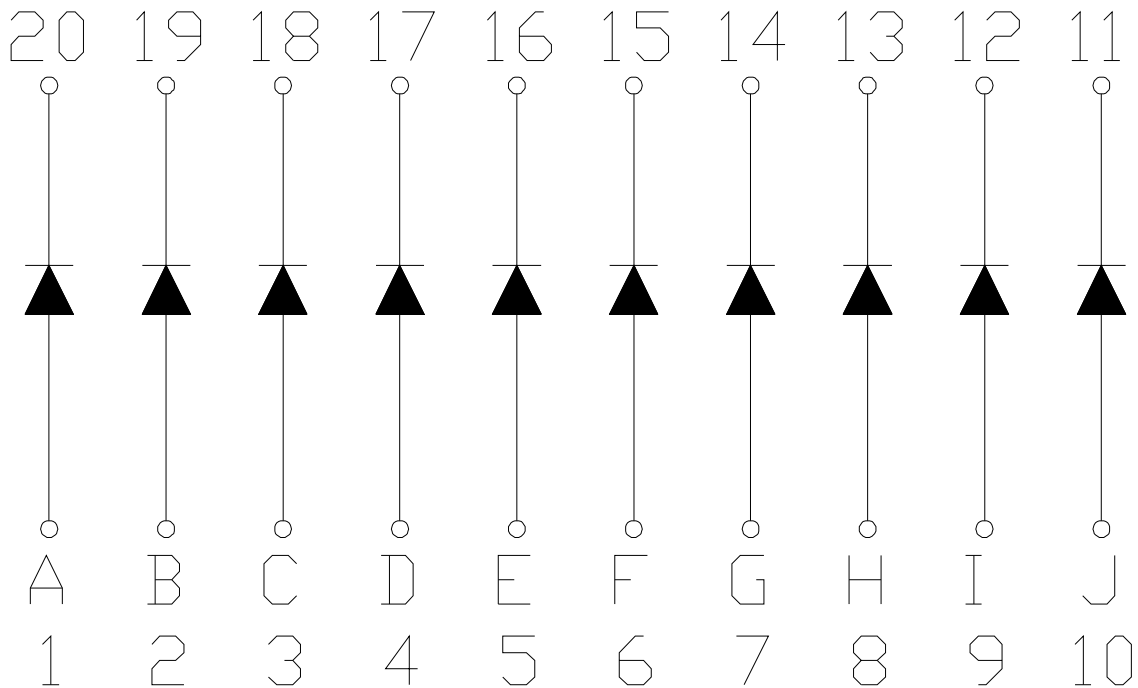
1. All pins are  $\Phi 0.45 [0.018]$  mm
2. Dimension in millimeter [inch], tolerance is  $\pm 0.25 [0.010]$  and angle is  $\pm 1^\circ$  unless otherwise noted.
3. Bending  $\leq$  Length \* 1%.
4. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

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



**■ Internal Circuit Diagrams -**



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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)<br>Unit:V |       | Luminous Intensity (Iv)<br>Unit:mcd |
|---|-------|---------------|---------------------------------|--|-------------------------------|-------|-------------------------------------|
|   |       |               |                                 |  | Typ                           | Max   |                                     |
| G   | Green | GaP           | 570nm                           | 10nm   | 1.90                          | 2.50  | 14-18                               |
| Segment-to-Segment Luminous Intensity ratio(Iv-M) |       |               |                                 |  |                               | 1.5:1 |                                     |

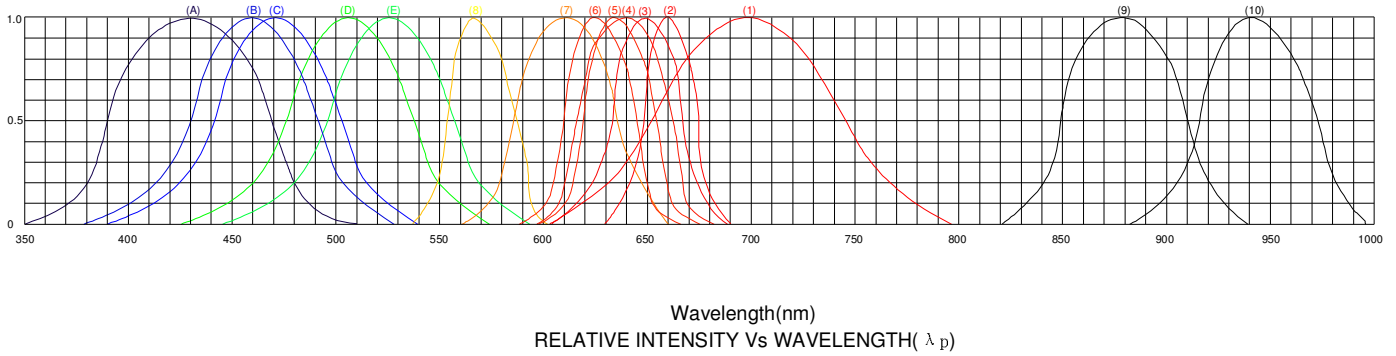
Note:

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

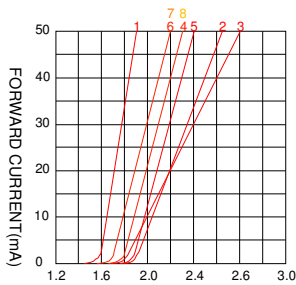
**Model No.: FYA-R102510ZG-21**

**Typical Electrical / Optical Characteristics Curves**

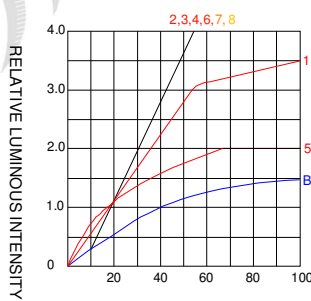
(Ta = 25°C Unless Otherwise Noted)



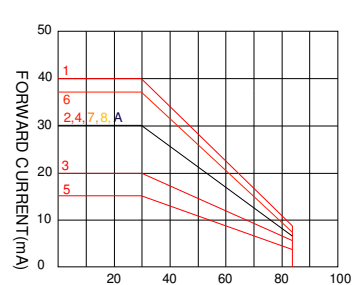
- (1)-GaP 700nm/Red
- (2)-AlGaAs/SH 660nm/Hi Red
- (3)-AlGaAs/DH 650nm/Super Red
- (4)-AlGaInP/640nm/Ultra Hi Red
- (5)-AlGaInP/635nm/Ultra Red
- (6)-GaAlP/AlGaInP/625nm/Orange
- (7)-GaAsP/AlGaInP 610nm/Amber
- (8)-GaP 570nm/Yellow Green
- (9)-GaAlAs 880nm
- (10)-GaAs/GaAs & GaAlAs/GaAs 940nm
- (A)-GaN/SiC 430nm/Blue
- (B)-InGaN/SiC 460nm/Blue
- (C)-InGaN/SiC 470nm/Blue
- (D)-InGaN/SiC 505nm/Ultra Green
- (E)-InGaN/SiC 525nm/Ultra Green



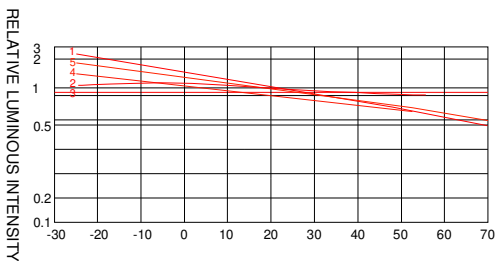
**FORWARD CURRENT (mA)**  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



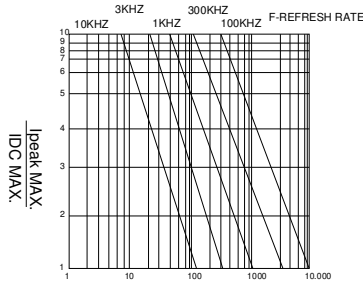
**FORWARD CURRENT (mA)**  
RELATIVE LUMINOUS  
INTENSITY VS FORWARD  
CURRENT



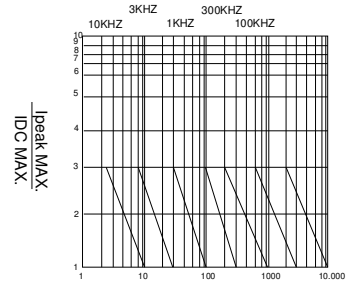
**AMBIENT TEMPERATURE Ta(°C)**  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



**RELATIVE LUMINOUS INTENSITY**  
AMBIENT TEMPERATURE  
Ta(°C)



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



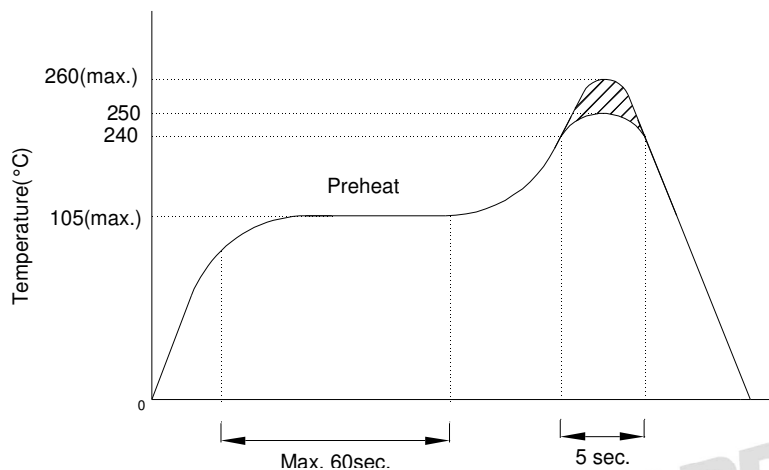
**Ipeak MAX.  
IDC MAX.**  
tp-PULSE DURATION uS  
(5)

NOTE:25°C free air temperature unless otherwise specified

**Model No.: FYA-R102510ZG-21**

**■ Precautions For Use -**

**1. Recommended Soldering conditions-Wave Soldering**



**2. Soldering Iron**

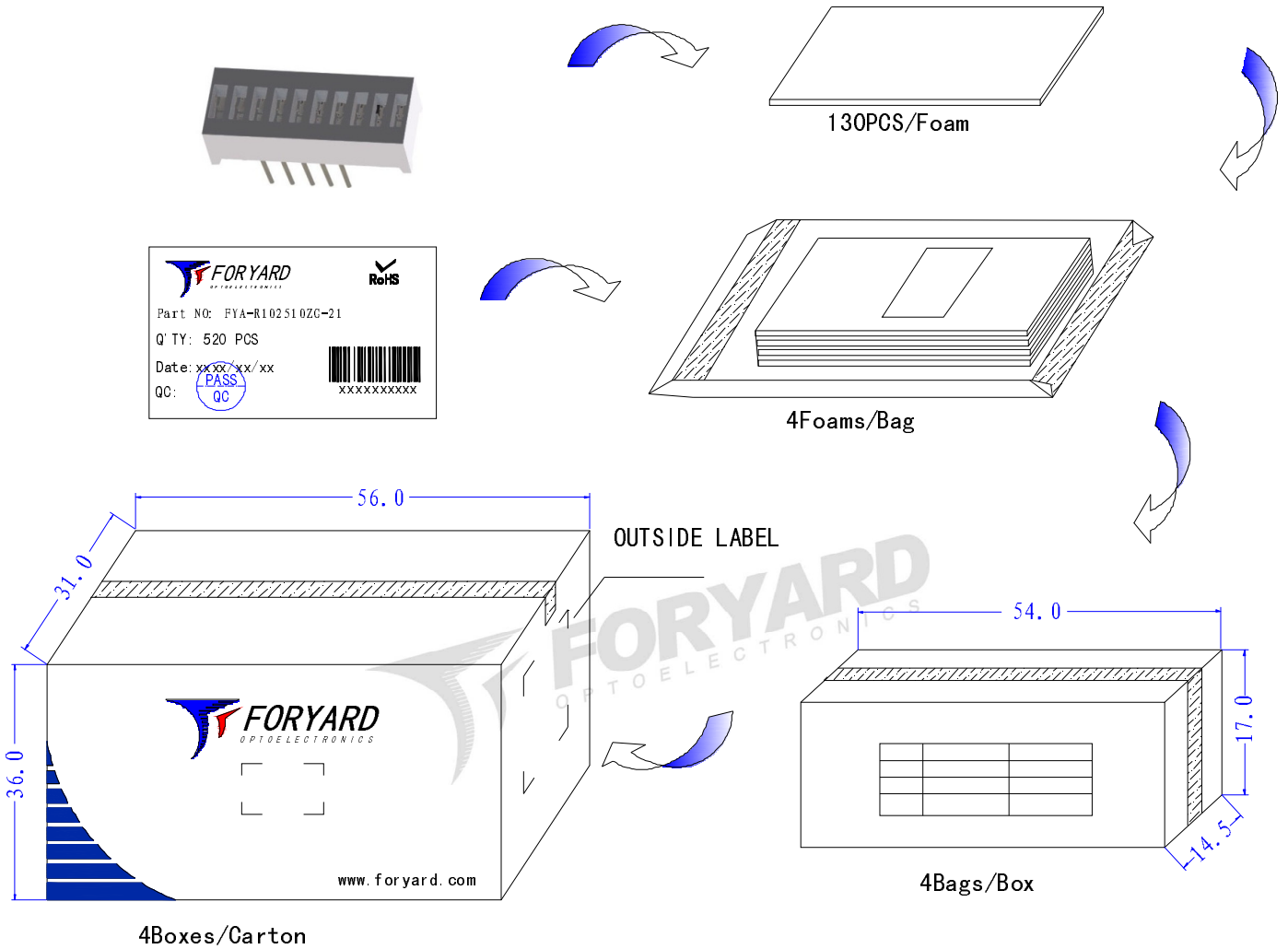
Basic SPEC. is  $\leq 5$ sec. When  $260^{\circ}\text{C}$ . If temperature is higher, time should be shorter ( $+10^{\circ}\text{C} \rightarrow -1$ sec.).

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

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

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**■ Packing Diagram**




**LED**

PN: FYA-R102510ZG-21

Qty: 8320 PCS

Date: xxxx/xx/xx

GW: 20.00KG      QC: **PASS QC**

NW: 18.00KG

RoHS      ATTENTI ON

OUTSIDE LABEL

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

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■ 修改记录

| 日期       | 修改内容 | 工程师 | 版本 |
|----------|------|-----|----|
| 2015-3-6 | 新增   | 王宏波 | A  |
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