

# TX-RGB3A140-003K

## PRODUCT SPECIFICATION

Approved by:

Checked by:

Prepared by:

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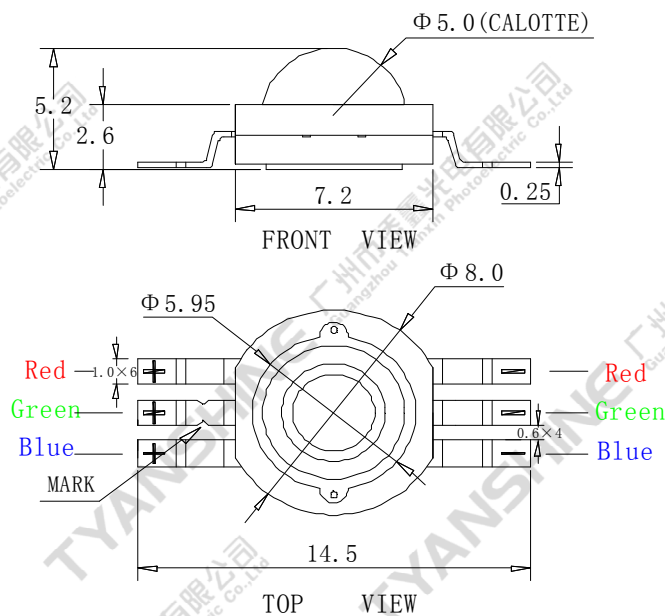
**Features:**

- ◆ Excellent Transiting Heat from LED Chip Operating under 700mA
- ◆ High Luminous Output
- ◆ No UV

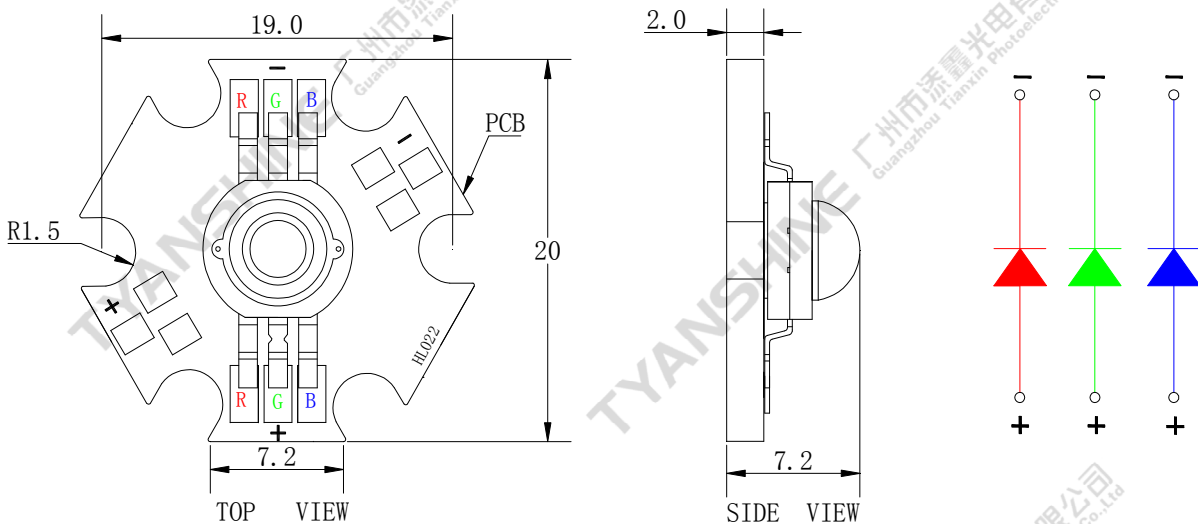
**Typical purpose:**

- ◆ Portable Flashlight
- ◆ Garden lighting
- ◆ General Lighting

**Package Dimensions:**



**Installs on the aluminum sheet:**



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**Notes:**

1. Thermoelectric integrated Red chip packaged in this product.
2. All dimensions are in millimeters (inches).
3. Tolerance is  $\pm 0.25$  mm (0.01") unless otherwise noted.

Part NO.	Chip Material			Lens Color	Emitting Color
TX-RGB3A140-003K	Red	Green	Blue	Water Clear	Red & True Green & Blue
	AlGaInP	GaInN	GaInN		

**Absolute Maximum Ratings at Ta=25°C**

Parameter	Symbol	MAX.	Unit
LED Junction Temperature	T <sub>j</sub>	115	°C
Power Dissipation	P <sub>D</sub>	R	1890
		G	2800
		B	2660
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	I <sub>FP</sub>	1000	mA
Continuous Forward Current	I <sub>F</sub>	700	mA
Reverse Voltage	V <sub>R</sub>	5	V
Electrostatic Discharge Threshold (ESD)	ESD	2000	V
Operating Temperature Range	T <sub>opr</sub>	-40 to +70	°C
Storage Temperature Range	T <sub>spr</sub>	-40 to +100	
Lead Soldering Temperature	T <sub>sol</sub>	Hand Soldering: 350°C for 8 sec.	

**Notes:**

1. Specifications are subject to change without notice.
2. Under the stipulated Characteristics parameters above, the life span of the LED is more than 50,000hours.
3. The data on this specification is for reference only and the actual data is in accordance with the acknowledgment.
4. Precautions for ESD:  
 STATIC SHIELD Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

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**Characteristics at  $I_f=700mA$  ,  $V_r=5V$  ( $T_a=25^\circ C$ ):**

Parameter	Symbol	Emitting Color	Values			Units
			Min.	Typ.	Max.	
Luminous Flux	$\phi_v$	R	115	130	—	lm
		G	195	210	—	
		B	30	40	—	
Viewing Angle at 50% IV	$2\theta_{1/2}$	R	—	140	—	Deg
		G	—	140	—	
		B	—	140	—	
Peak Emission Wavelength	$\lambda_p$	R	625	630	635	nm
		G	510	515	520	
		B	445	448	450	
Dominant Wavelength	$\lambda_d$	R	620	622	625	nm
		G	520	523	525	
		B	452	455	463	
Spectral Line Half-Width	$\Delta\lambda$	R	15	20	25	nm
		G	25	30	35	
		B	15	20	25	
Forward Voltage	$V_f$	R	2.0	2.3	2.6	V
		G	3.0	3.3	3.6	
		B	3.0	3.3	3.6	
Reverse Current	$I_R$	—	—	—	10	$\mu A$
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	—	3.5	—	K/W
Temperature Coefficient of Forward Voltage	$V\Delta F/T$	—	—	-2	—	mV/°C

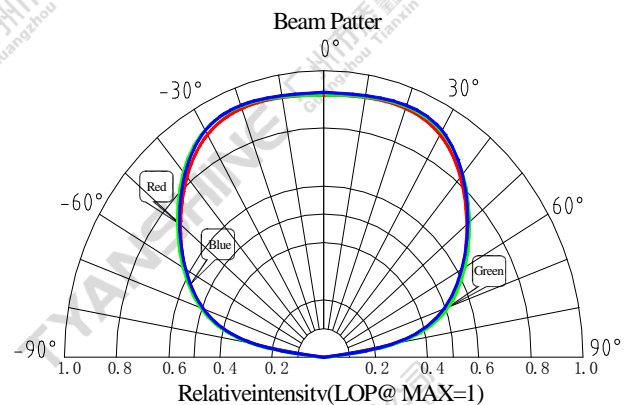
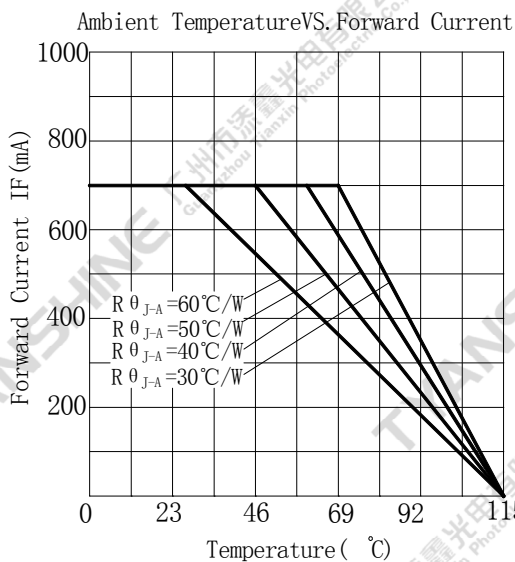
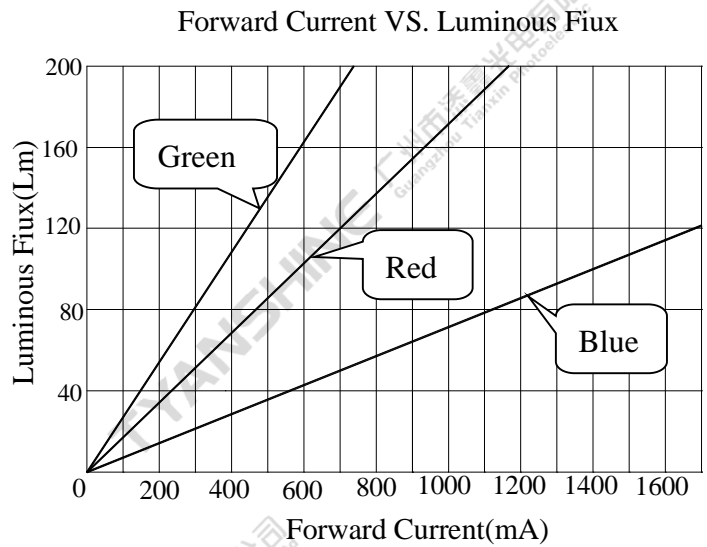
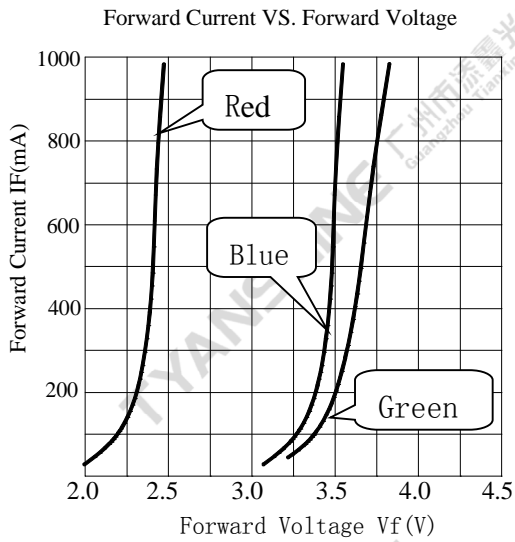
**Notes:**

- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity
- The dominant wavelength ( $\lambda_d$ ) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
- Flux is measured with an accuracy of  $\pm 15\%$ .
- Forward voltage is measured with an accuracy of  $\pm 0.15V$ .

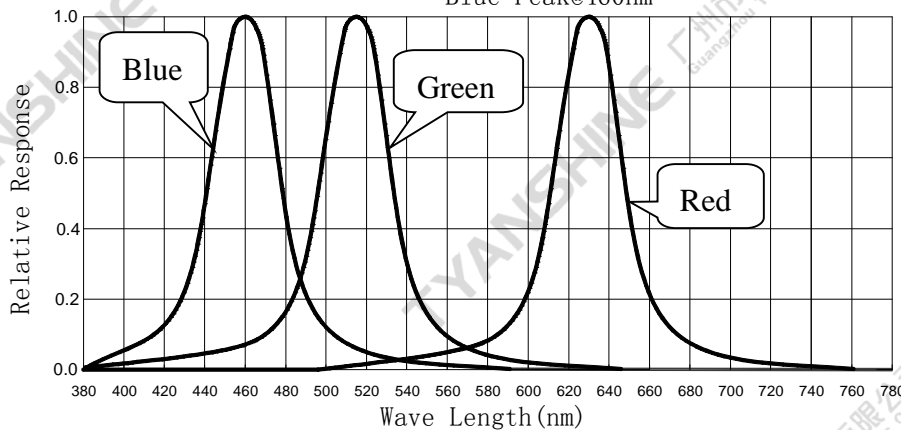
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# Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



Spectral Radiance: Red Peak@630nm  
Green Peak@515nm  
Blue Peak@460nm



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**PRECAUTION IN USE**

**Storage**

Recommended storage environment

Temperature: 5°C ~ 30°C (41oF ~ 86oF)

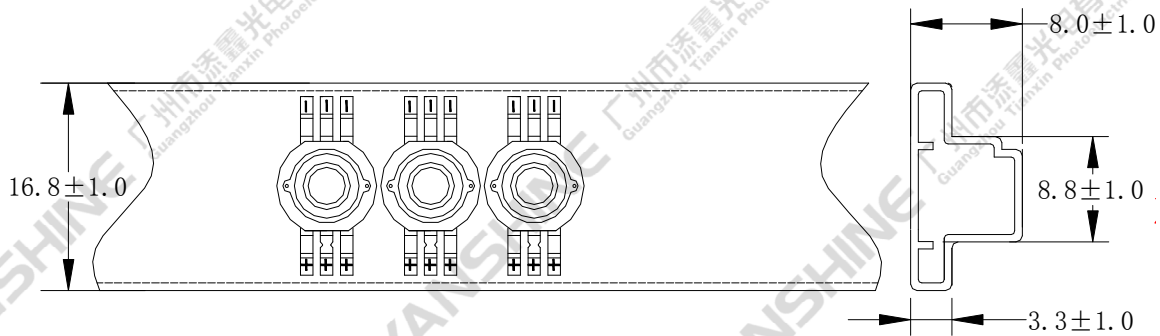
Humidity: 60% RH Max.

**Soldering**

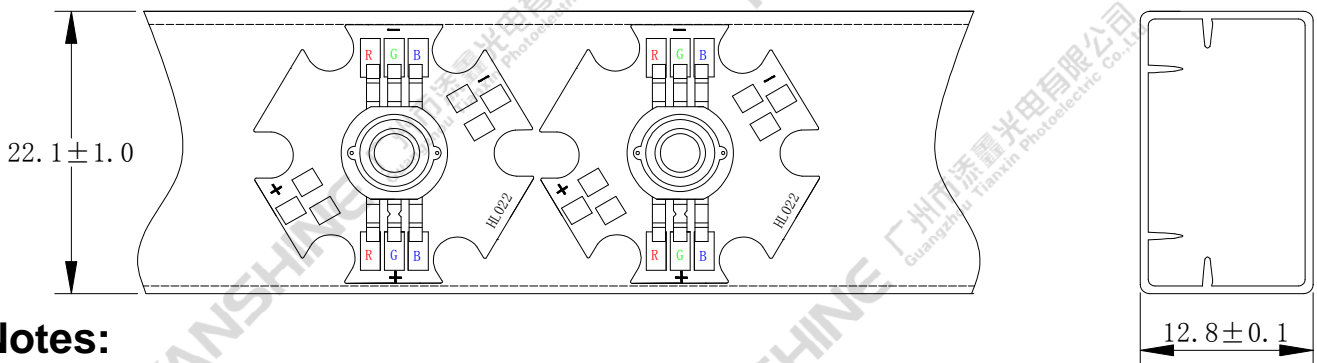
Hand Soldering	
Temperature	350°C Max.
Soldering time	8sec. Max.

**Dimensions for Cannulation and Packaging**

**Quantity: 50PCS**



**Quantity: 24PCS**



**Notes:**

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 2.0$  mm (0.08") unless otherwise noted.
3. Product is packaged with silica gel to protect the light-emitting zone. Please avoid the light-emitting area from being pressed, stressed, rubbed, come into contact with sharp metal part which would damage the product.

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