



# YETDA INDUSTRY LTD.

## 5mm Full Color Led 500RGB4E-CA

- \* 5mm Tri color with Super Bright Red and Pure Green and Blue Dice.
- \* Encapsulated with Water Clear Package.
- \* Common Anode.

### Absolute Maximum Ratings : ( Ta=25 )

Parameter	Symbol	R	G	B	Unit
Power Dissipation	PD	75	120	120	mw
Reverse Voltage	VR	5	5	5	V
Peak Forward Current (Duty=0.1,10KHZ)	I <sub>fp</sub>	120	120	120	mA
Operating Temperature Range	T <sub>op</sub>	-40		to +85	
Storage Temperature Range	T <sub>stg</sub>	-50		to +100	
Lead Soldering Temperature {1.6mm(0.063inch) From Body} 260 For 3 Seconds					

### Electro-Optical Characteristics ( Ta = 25 )

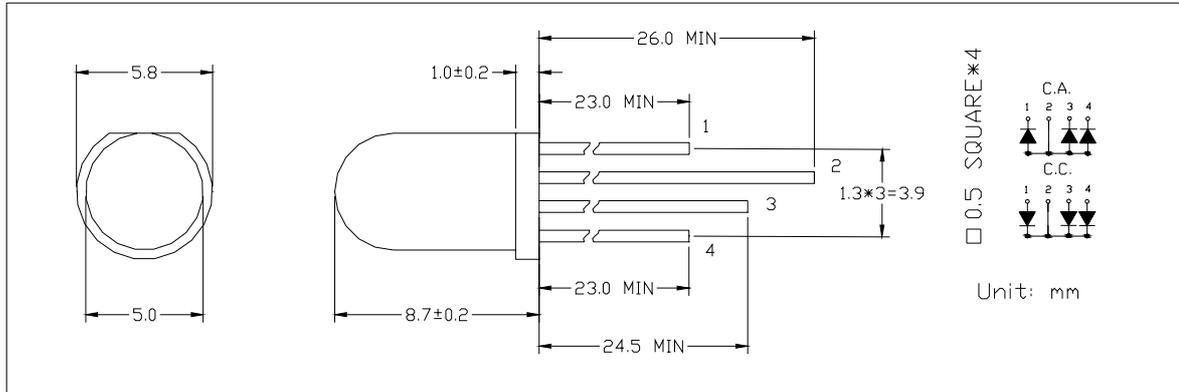
Parameter Radiant	Test Condition	Symbol	Min.	Typ.	Max.	Unit	
Forward Voltage	I <sub>f</sub> = 20mA	V <sub>f</sub>	R	1.9	2.0	2.4	V
			G	2.8	3.2	3.8	
			B	2.8	3.2	3.8	
Reverse Current	V <sub>r</sub> = 5V	I <sub>r</sub>			10	uA	
Luminous Intensity	I <sub>f</sub> = 20mA	I <sub>v</sub>	R	1400	2000		mcd
			G	1800	2500		
			B	1400	2000		
Spectral Bandwidth	I <sub>f</sub> = 20mA	Δλ	R		20		nm
			G		30		
			B		30		
Dominant wavelength	I <sub>f</sub> = 20mA	λ <sub>d</sub>	R	620	625	635	nm
			G	520	525	530	
			B	465	470	475	
Wavelength	I <sub>f</sub> = 20mA	λ <sub>p</sub>	R		630		nm
			G		525		
			B		470		
Half View Angle	I <sub>f</sub> = 20mA	θ 1/2		30		deg	



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## Package

Item: 500RGB





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## (RED) Typical Electro-Optical Characteristics Curve:

Fig 1. Forward Current vs. Forward Voltage

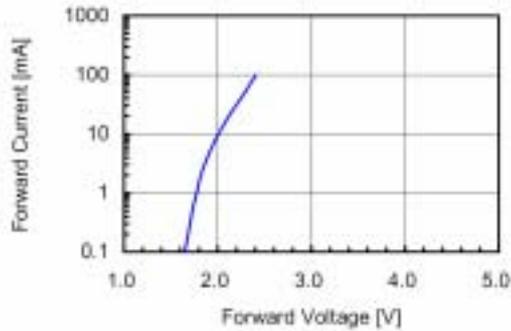


Fig 2. Relative Intensity vs. Forward Current

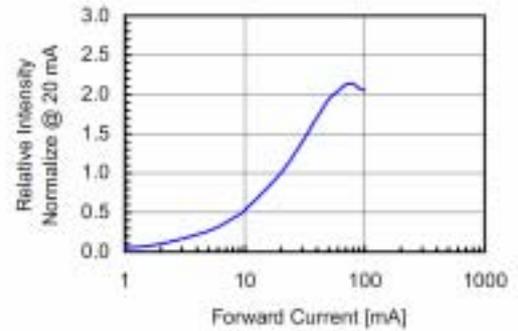


Fig 3. Forward Voltage vs. Temperature

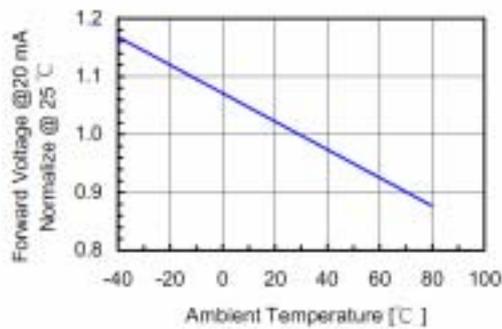


Fig 4. Relative Intensity vs. Temperature

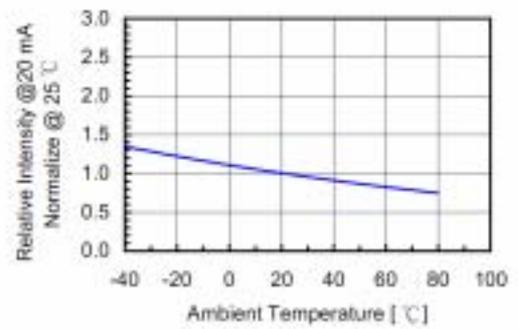
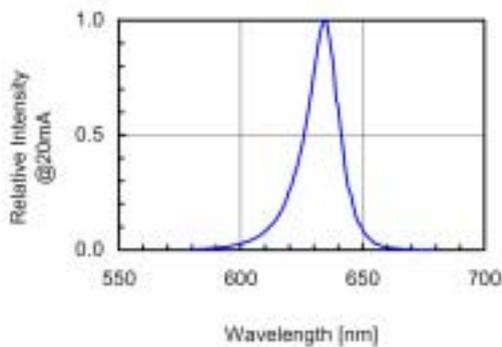


Fig 5. Relative Intensity vs. Wavelength





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## (GREEN) Typical Electro-Optical Characteristics Curve:

Fig 1. Forward Current vs. Forward Voltage

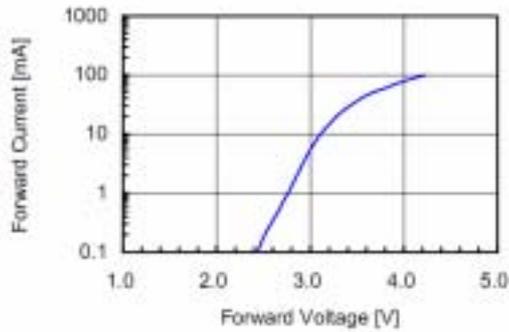


Fig 2. Relative Intensity vs. Forward Current

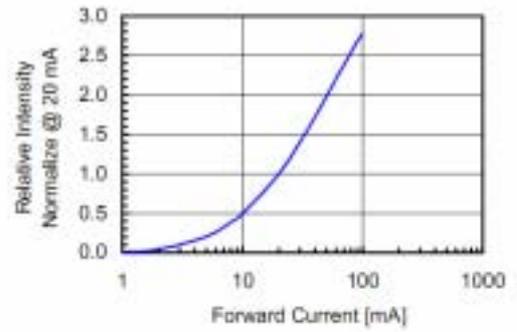


Fig 3. Forward Voltage vs. Temperature

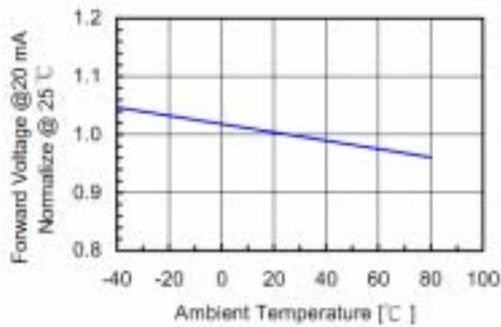


Fig 4. Relative Intensity vs. Temperature

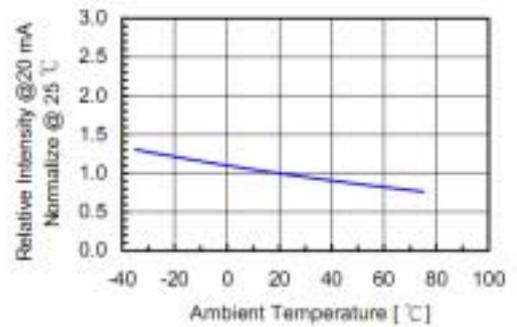
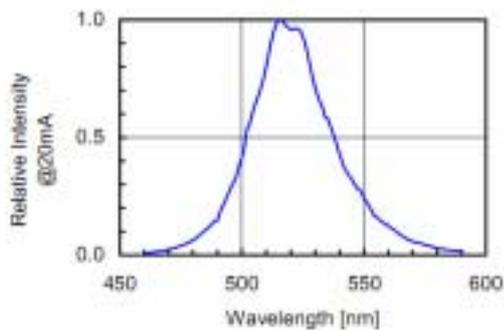


Fig 5. Relative Intensity vs. Wavelength





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## (BLUE) Typical Electro-Optical Characteristics Curve:

Fig 1. Forward Current vs. Forward Voltage

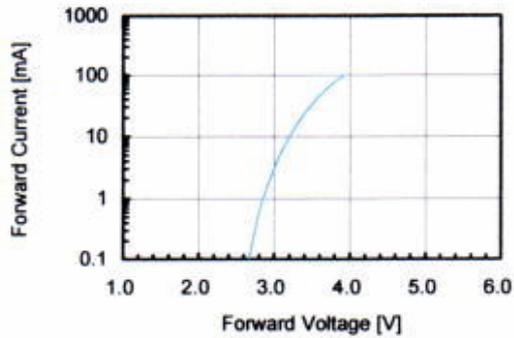


Fig 2. Relative Intensity vs. Forward Current

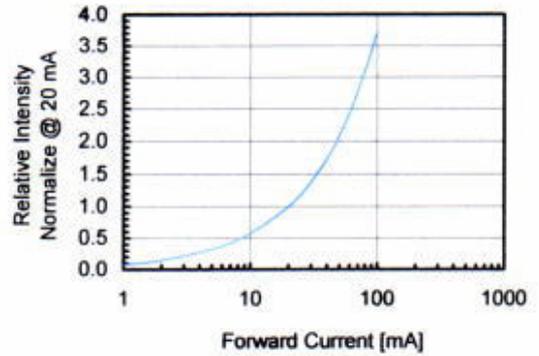


Fig 3. Forward Voltage vs. Temperature

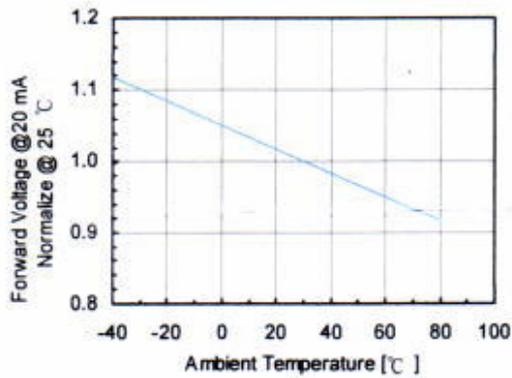


Fig 4. Relative Intensity vs. Temperature

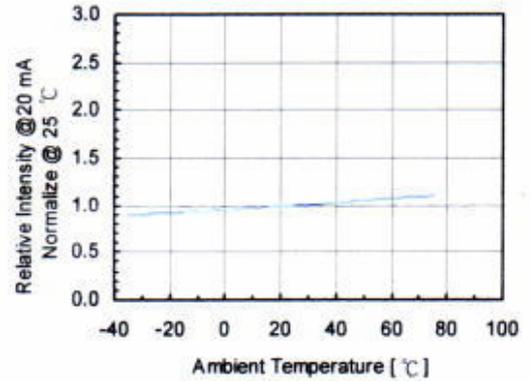
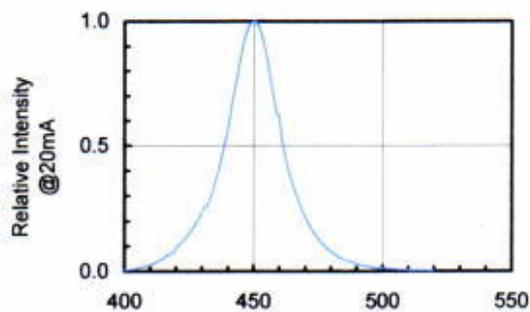


Fig 5. Relative Intensity vs. Wavelength





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## Soldering:

### 1. Manual of soldering

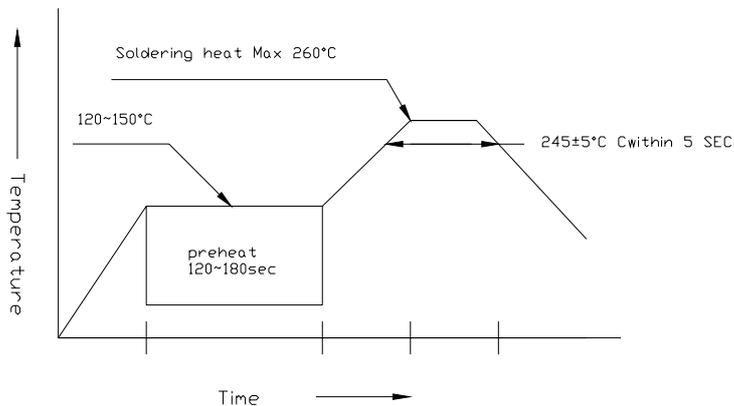
The temperature of the iron tip should not be higher than 260 and

Soldering within 3 seconds per solder-land is to be observed

### 2. DIP soldering (Wave Soldering):

Preheating: 120 ~150 within 5 sec. 260 (Max)

Gradual Cooling (Avoid quenching)

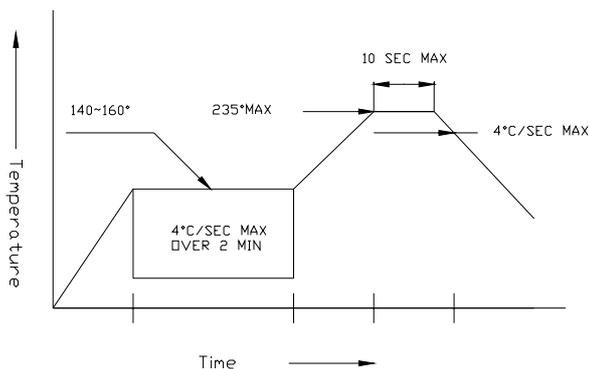


### 3. Reflow Soldering

Preheating: 140 ~160 ±5 , within 2 minutes.

Operation heating: 235 (Max) within 10 seconds (Max)

Gradual Cooling (Avoid quenching)



## Handling:

Care must be taken not to cause to the epoxy resin portion of Yetda LEDS while it is exposed to high temperature.

Care must be taken not rub the epoxy resin portion of Yetda LEDS with hard or sharp article such as the sand blast and the metal hook