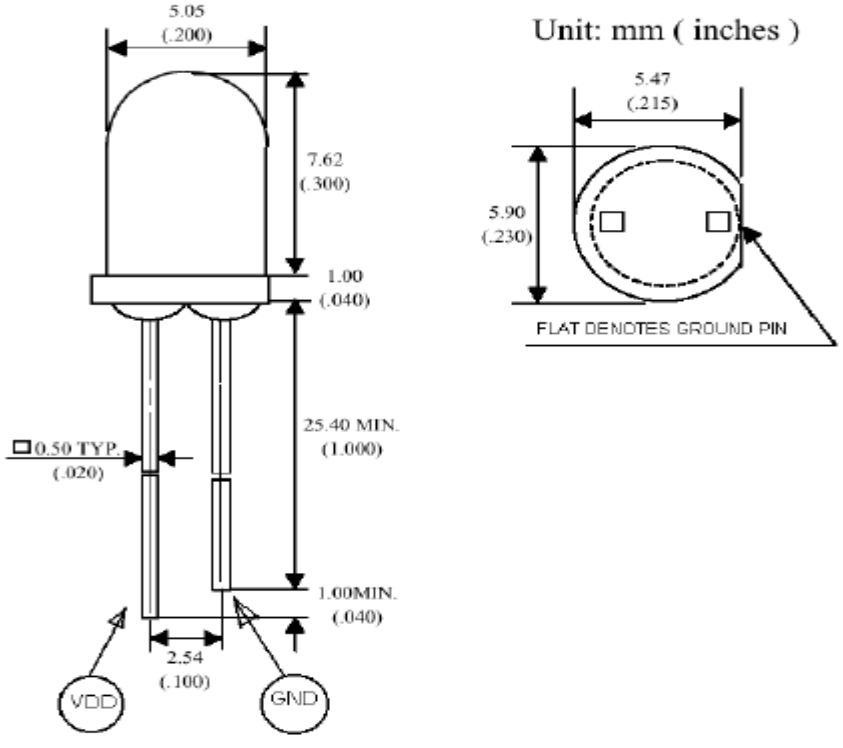
Features:

- AlInGaP and InGaN materials.
- SMD LED and controller in a standard T1-3/4 package.
- High reliability and compact size.
- Multi-color combination and optional working mode.

Package Dimensions:



Part NO.	Chip Material	Lens Color	Source Color
ETG-5AX-RGB-IC	AlInGaP (RED) InGaN (Blue) InGaN (Green)	Water Clear	RGB color display

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25 mm (.010") unless otherwise noted.
3. Protruded resin under flange is 1.0mm(.04") max
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.
6. This data-sheet only valid for six months.

Absolute Maximum Ratings at Ta=25℃

@Ta=25°C

Parameter	Maximum Rating	Unit
Forward Voltage	6.0	V
Reverse Voltage	-3.0	V
Power Dissipation	75	mW
Operating Temperature Range	-15 ~ +70	°C
Storage Temperature Range	-25 ~ +100	°C
Soldering Temperature	+235°C, less than 5 seconds	

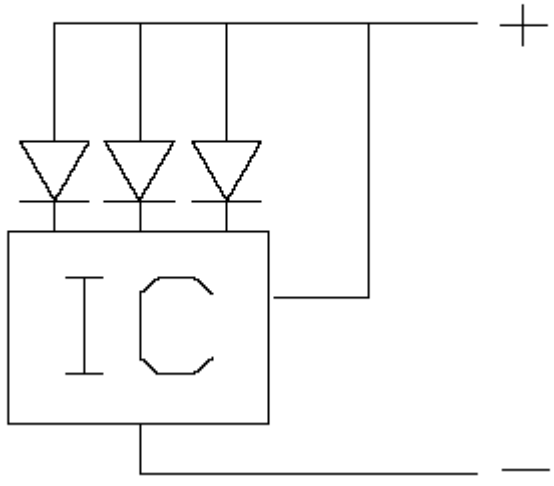
Recommended Working Condition

Parameter	Minimum	Typical	Maximum	Unit
Power Supply Voltage (VDD)	3.0	4.5	5.0	V
Power Dissipation (Pd)	-	50	70	mW
Operating Current (Id)	20	40	55	mA
Operating Temperature Range	-5	40	65	°C

Electrical Optical Characteristics at Ta=25℃

Color	Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Red	AlInGaP Technology						
	Luminous Intensity	20mA DC	Iv	45	80	-	mcd
	Forward Voltage	20mA DC	Vf	-	2.1	2.6	V
	Reverse Current	Vr=5V DC	Ir	-	-	10	uA
	Dominant Wave Length	20mA DC	λd	-	625	-	nm
	Spectral Radiation Bandwidth	20 mA DC	Δλ	-	20	-	nm
Green	InGaN Technology						
	Luminous Intensity	20mA DC	Iv	65	130	-	mcd
	Forward Voltage	20mA DC	Vf	-	3.5	4.2	V
	Reverse Current	Vr=5V DC	Ir	-	-	10	uA
	Dominant Wave Length	20mA DC	λd	-	523	-	nm
	Spectral Radiation Bandwidth	20 mA DC	Δλ	-	35	-	nm
Blue	InGaN Technology						
	Luminous Intensity	20mA DC	Iv	20	55	-	mcd
	Forward Voltage	20mA DC	Vf	-	3.5	4.2	V
	Reverse Current	Vr=5V DC	Ir	-	-	10	uA
	Dominant Wave Length	20mA DC	λd	-	470	-	nm
	Spectral Radiation Bandwidth	20 mA DC	Δλ	-	25	-	nm
Viewing Angle		VDD= 4.5V	2θ1/2	-	35	-	nm
Controller's Timing Interval		VDD= 4.5V	T				sec
Controller's Timing Accuracy		VDD = 4.5V	F0				KHz

Basic Circuit Diagram for internal structure



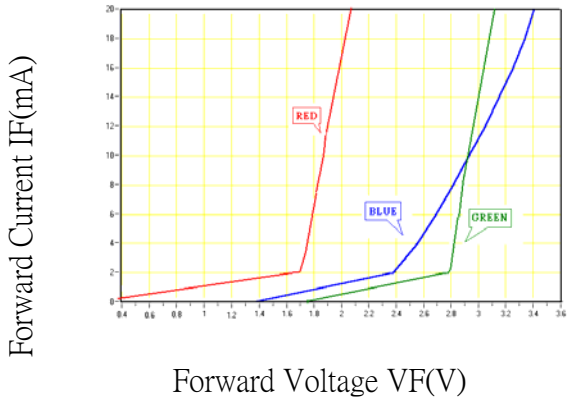
◆ Working mode R5

LEDs are lit by the sequence of R-G-B-RG-RB-GB-RGB, repeating continuously. Repeating frequency is 4Hz.

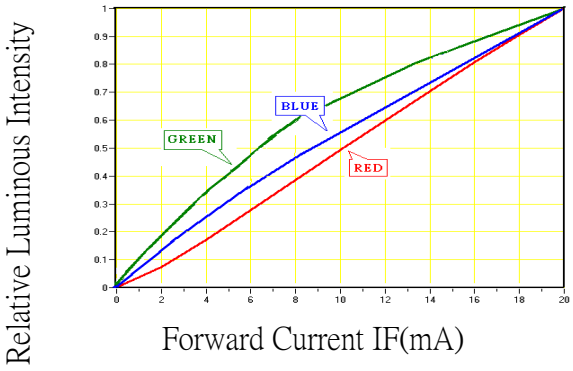
Typical Characteristics

The data typical , and the value is not guaranteed.

IF-VF(Ta=25℃)

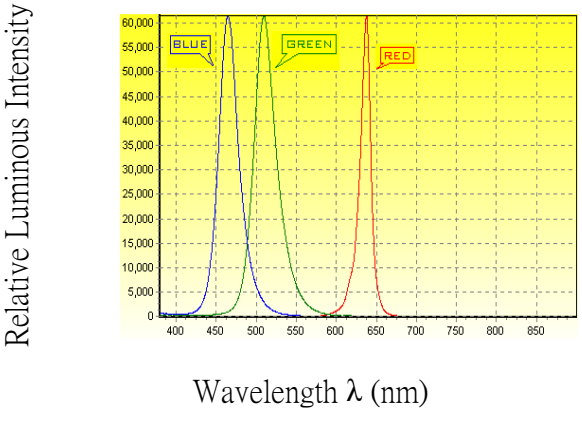


Relative Luminous Intensity-IF (Ta=25℃)

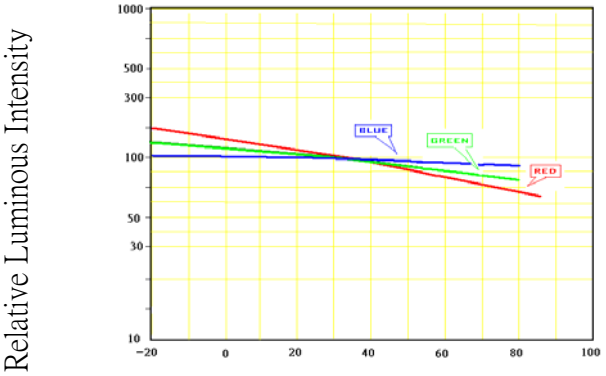


Wavelength Characteristics

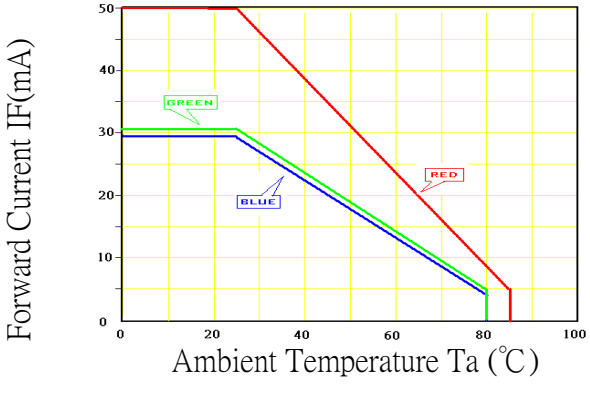
(Ta=25℃)



Relative Luminous Intensity-Ta



IF-Ta



Directive Characteristics (Ta=25℃)