VISIBLE LIGHT PRODUCTS SPECIFICATION

HC5-405AORAGCC

Drawn by	Checked by	Approved by

RoHS Conformity

DATE:2012/9/19 REV:C

HUEY JANN ELECTRONICS INDUSTRY CO., LTD.
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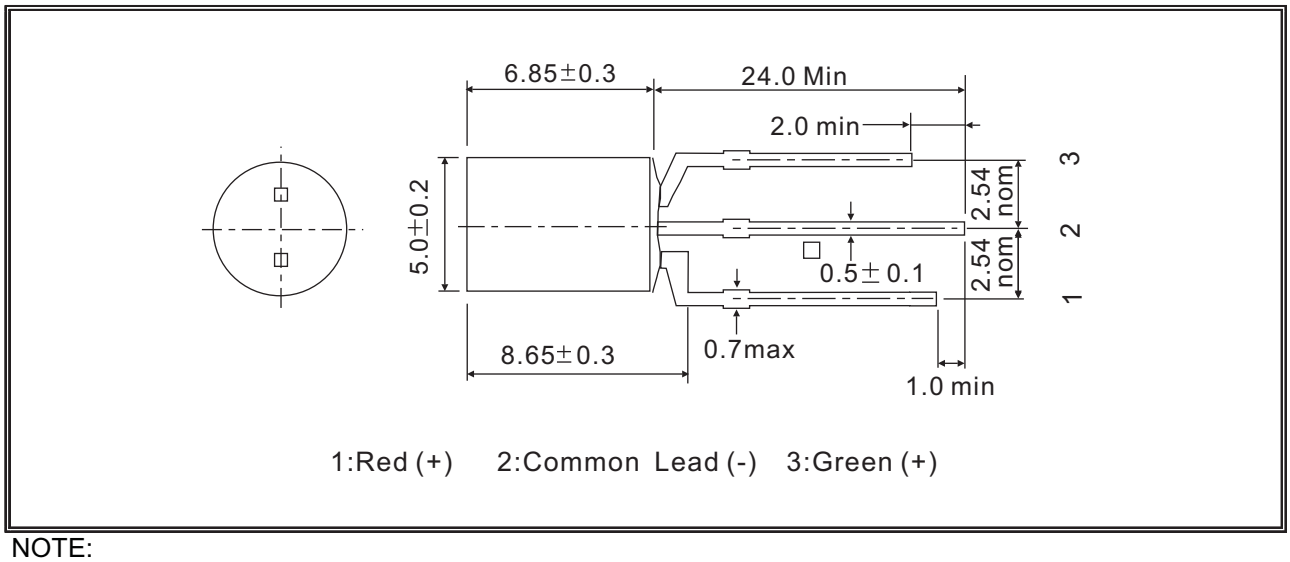
DEVICES

Part Number	Lens		Source	
	Color	Diffusion	Dice Source	Color
HC5-405AOR3AGCC	Wate Clear	Non-Diffusion	AlInGaP/GaAs & GaInN/GaN	Super Fresh Red & Pure Green

PACKAGE DIMENSIONS:



NOTE:
1.All dimensions are in millimeter.
2.Lead spacing in measured where the lead emerge from the package.
3.prodruded resin under flange is 1.5mm max.
4.specifications are subject to change without notice.
5.Tolerance is +/-0.3mm unless otherwise noted.

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ABSOLUTE MAXIMUM RATINGS

TA=25°C

PARAMETER	SYMBOL	MAX. RATING		UNIT
		Super Fresh Red	Pure Green	
Power Dissipation	Pd	100	120	mW
Continuous Forward Current	IF	25	25	mA
Peak Forward Current *1	IFM	50	100	mA
Reverse Voltage	VR	5	4	V
Operating Temperature	Topr	-40 ~ +85		°C
Storage Temperature	Tstg	-40 ~ +100		°C
Dip Soldering Temperature (3mm from case Bottom 260 °C for 5 seconds)				

*1.Duty Ratio=0.1%,Pulse Width=10us.

*2.Iron soldering in 350°C within 5 seconds will not cause damage to the dice. But be aware of the high temperature will not only make the epoxy soften but also cause the lead moving and the gold wire broken and even open. So before returning to the normal temperature PLEASE AVOID any serious pressure on the top of epoxy and lead.

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ELECTRIC-OPTICAL CHARACTERISTICS

TA=25°C

PARAMETER	SYMBOL	TEST CONDITION		MIN	TYP	MAX	UNIT
View Angle of Half Power	2θ1/2	IF=20mA	Red		85		deg
			Green				
Forward Voltage	VF		Red		2.0	2.5	V
			Green		3.2	3.6	
Luminous Intensity *2	IV		Red	250	450		mcd
			Green	400	750		
Peak Emission Wavelength	λp		Red		635		nm
			Green		523		
Dominate Wave Length *3	λd(HUE)		Red		625		nm
			Green		525		

*2.Tolerance: 15% HUEY-JANN measuring equipment : EXELTRON 2001. 2.S370 made by U.D.T.

*3.The dominate wavelength , λd, is derived from the CIE Chromaticity Diagram and represents the color of the device.

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RELIABILITY TEST

Classification	Test Item	Reference Standard	Test Conditions	Result
Endurance Test	Operation Life	MIL-STD-750:1026 MIL-STD-883:1005 JIS-C-7021 :B-1	Connect with a power if=20mA Ta=Under room temperature Test Time=1,000hrs	0/22
	High Temperature High Humidity Storage	MIL-STD-202:103B JIS-C-7021 :B-11	Ta=+85℃ 5℃ RH=90% ~ 95% Test Time=1000hrs	0/22
	High Temperature Storage	MIL-STD-883:1008 JIS-C-7021 :B-10	High Ta=+100℃ 5℃ Test Time=1,000hrs	0/22
	Low Temperature Storage	JIS-C-7021 :B-12	Low Ta=-40℃ 5℃ Test Time=1,000hrs	0/22
Environmental Test	Temperature Cycling	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010 JIS-C-7021 :A-4	-40℃ ~ +25℃ ~ +85℃ ~ +25℃ 60min 20min 60min 20min Test Time=200cycle	0/22
	Thermal Shock	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010	-40℃ 5℃ ~ +85℃ 5℃ 20min 20min Test Time=200cycle	0/22

*Failure Criteria:

1. VF arise ≧10%
2. IV decline ≧30%
3. A failure is an LED that is open or shorted

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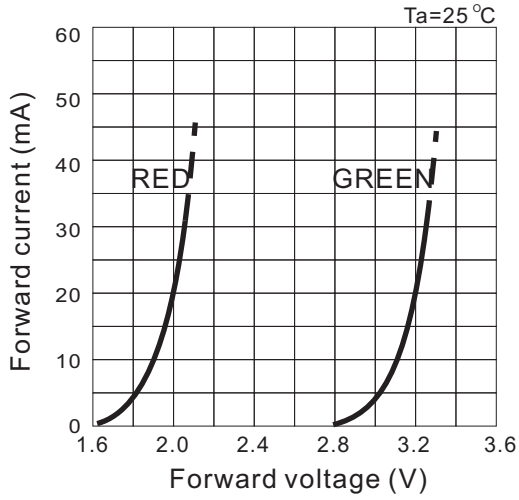
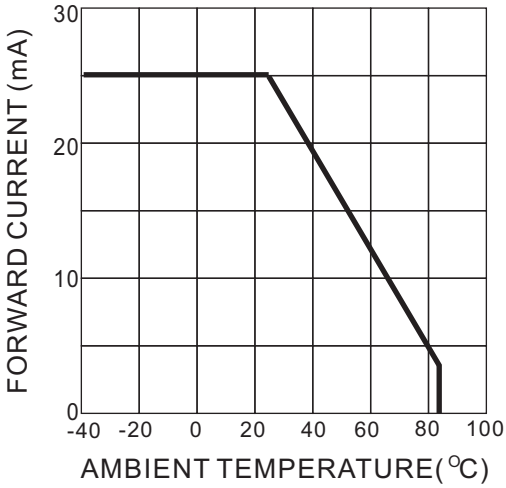
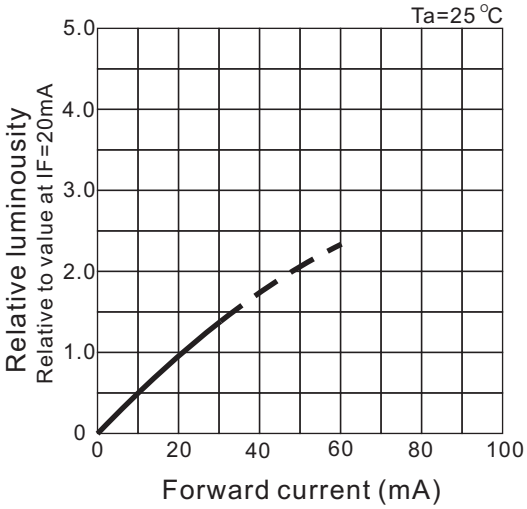
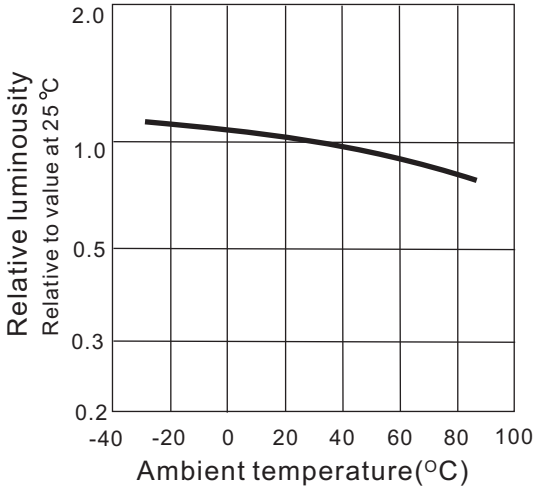
TYPICAL ELECTRICAL OPTICAL CHARACTERISTICS CURVES









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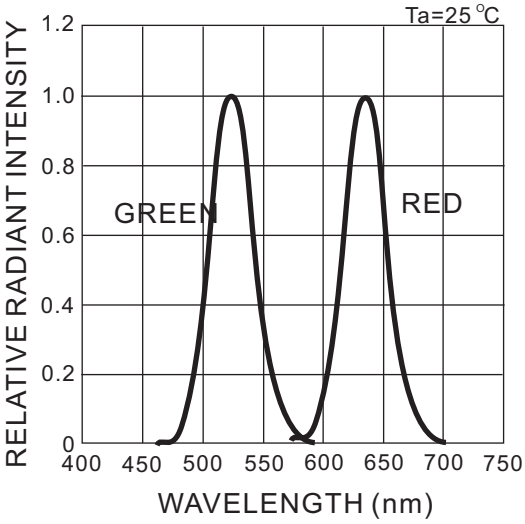

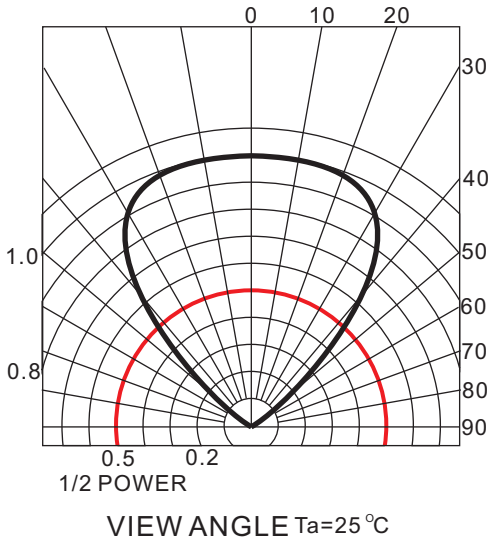

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