

**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

## 309S40YU77GC-C



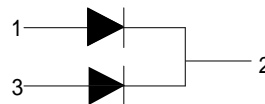
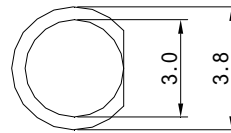
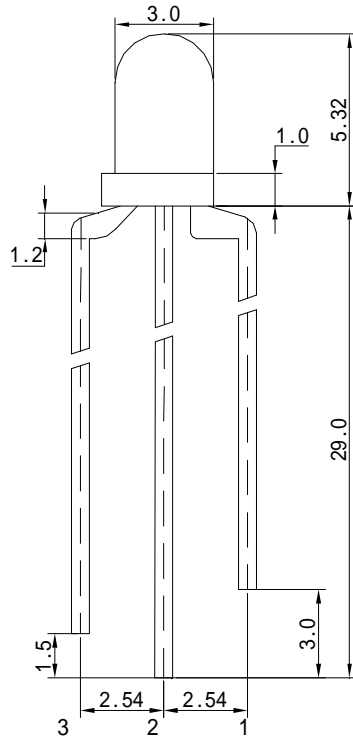
### Features

- $\phi 3$  DOUBLE COLOR LED
- LOW POWER CONSUMPTION.
- CABINED VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE: 1000PCS / BAG.

### Description

This devices are made with TS AlGaInP 、 GaN.

### Package Dimensions



1: YELLOW  
2: CHANODE  
3: GREEN

Tolerance Grade	Dimension Tolerance (UNIT:mm)			
	0.5~3	3~6	6~30	30~120
	$\pm 0.1$	$\pm 0.2$	$\pm 0.3$	$\pm 0.5$
Chip		Lens Color		
Material	Emitting Color	Water Clear		
AlGaInP.	Yellow			
GaN	Green			

### Selection Guide

Part No	Iv (mcd) @20mA						Viewing Angle
	Yellow(AIGaInP.)		Green(GaN)				
	Min	Typ	Min	Typ			2θ1/2 (供参考)
HL-309S40YU77GC-C	--	600		4400			30

Note:

1. 2θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Tolerance of measurement of luminous intensity ±15%.

### Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Yellow		Green				Units	Test Conditions
		Min	Typ	Min	Typ				
$\lambda_D$	Dominate Wavelength	585	590	515	520			nm	$I_F=20mA$
$V_F$	Forward Voltage	1.8	2.2	2.8	3.2			V	
$I_R$	Reverse Current	-	10	-	5			uA	$V_R=5V$
ESD	Electrostatic Discharge	-	2000	-	1000			V	

Note:

1. Tolerance of measurement of forward voltage ±0.1V.
2. Tolerance of measurement of peak Wavelength ±2.0nm.

### Absolute Maximum ratings at Ta=25°C

Parameter	Yellow	Green			Units
Power dissipation	50	80			mW
DC Forward Current	25	20			mA
Peak Forward Current[1]	100	100			mA
Operating Temperature	-30°C ~80°C				
Storage Temperature	-30°C ~80°C				

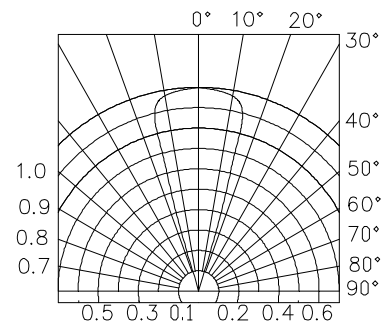
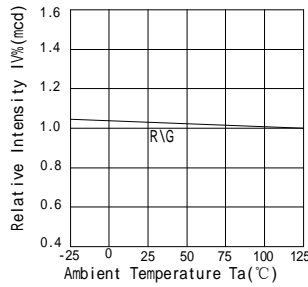
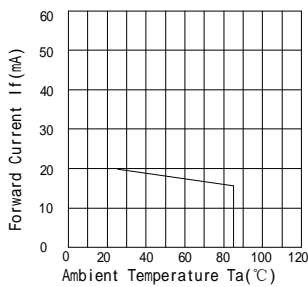
Note:

1. IFP Conditions: Pulse Width ≤10msec
2. Tsol Conditions: 3mm from the base of the epoxy bulb

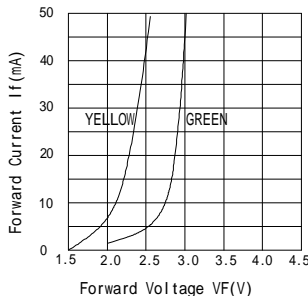
### ■ Reliability Performance Test Items And Result

Test Classification	Test Item	Test Conditions	Test Duration	Sample Size	AC/RE
Life Test	Room Temperature DC Operating Life Test	Ta=25°C±5°C, I <sub>F</sub> =20mA	1000hrs	22 pcs	0/1
Environment Test	Thermal Shock Test	100°C±5°C 5min ↑ ↓ -40°C±5°C 5min.	100cycles	22 pcs	0/1
	Temperature Cycle Test	100°C±5°C 30min ↑ ↓5min -40°C±5°C 30min.	100cycles	22 pcs	0/1
	High Temperature & High Humidity Test	85°C ±5°C/85% RH I <sub>F</sub> =5mA	1000hrs	22 pcs	0/1
	High Temperature Storage	Ta=100°C ±5°C	1000hrs	22 pcs	0/1
	Low Temperature Storage	Ta=-40°C ±5°C	1000hrs	22 pcs	0/1
Mechanical Test	Resistance to Soldering Heat	Temp=260°C max T=5sec max	1times	22 pcs	0/1
	Lead Integrity	Load 2.5N(0.25kgf) 0° ~ 90° ~0°	3times	22 pcs	0/1

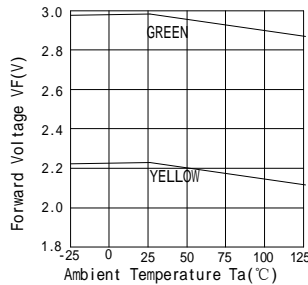
Forward Current vs. Ambient Temperature      Relative Intensity vs. Ambient Temperature



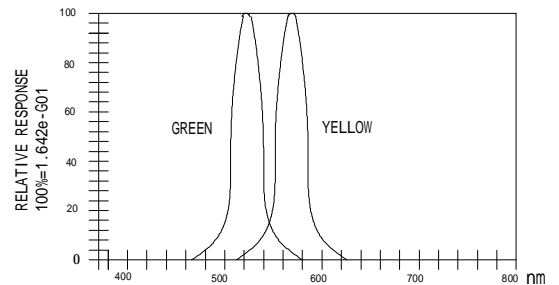
Forward Current vs. Forward Voltage



Forward Voltage vs. Ambient Temperature



Luminous Spetrum (Ta=25°C)      SPECTRAL RADIANCE



**Soldering:**

## 1. Manual Of Soldering

The temperature of the iron tip should not be higher than 300°C and Soldering within 3 seconds per solder-land is to be observed.

## 2. DIP soldering (Wave Soldering):

Preheating: 120°C~150°C, within 120~180 sec.

Operation heating: 245°C ±5°C within 5 sec. 260°C (Max)

Gradual Cooling (Avoid quenching).

