東莞洲磊電子有限公司
Uni Light Technology Inc.

AlGaInP Yellow Chip TC709UY

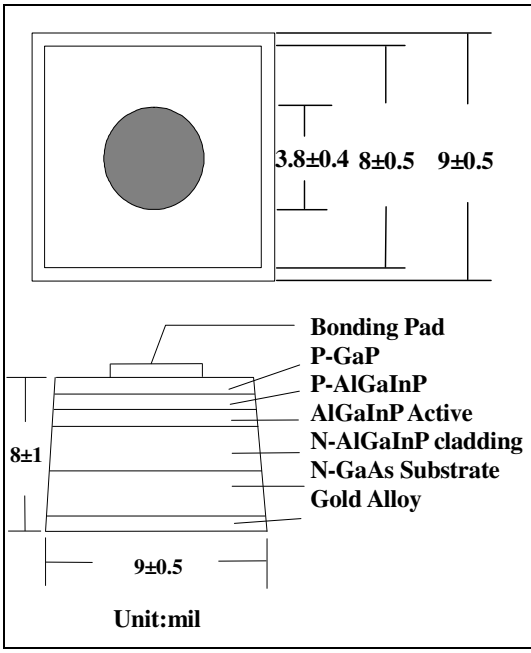
1.Product Description:

TC709UY is a yellow LED chip fabricated from aluminum gallium indium phosphide (AlGaInP). The chip has optimized current-spreading and good thermal resistance capable of producing high light output provides excellent readability under sunlight and dependable performance. TC709UY AlGaInP LED chip is ideal for use in indoor / outdoor LED application with value adding and energy saving features.

2.Features:

- ◆Ultra Yellow
- ◆AlGaInP/GaAs
- ◆Super High Brightness
- ◆Indoor/Outdoor Applications

3.Chip Dimensions and Structure:



1.Chip size: (9±0.5mil)×(9±0.5mil)
(225±12. 5μm)×(225±12. 5μm)

2.Emitting area: (8±0.5mil)×(8±0.5mil)
(200±12. 5μm)×(200±12. 5μm)

3. Thickness: 8±1mil

4. Bonding pad: 3.8±0.4mil
(95±10μm) in diameter

5. Electrode :
P side: Aluminum or gold
N side: Gold alloy

Uni Light Technogloy Inc.
■Tel：0769-87631888 ■Fax：0769-87631888-166

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4.Electro-optical Characteristics at 25℃:

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
Forward Voltage	V_F	-	2.0	2.3	V	I_F= 20mA
Reverse Voltage	V_R	5	-	-	V	I_R=10μA
Leakage current	Ir	-	-	1	μA	Vr=9V
Wavelength	λ_D	585	590	595	nm	I_F=20mA
Luminous Intensity	Iv	-	※	-	mcd	I_F=20mA

※

- **Rank 06 : 60≦Iv(min)<70mcd**
- **Rank 07 : 70≦Iv(min)<80mcd**
- **Rank 08 : 80≦Iv(min)<90mcd**
- **Rank 09 : 90≦Iv(min)<100mcd**
- **Rank 10 : 100≦Iv(min)<110mcd**
- **Rank 11 : 110≦Iv(min)<120mcd**
- **Rank 12 : 120≦Iv(min)<130mcd**
- **Rank 13 : 130≦Iv(min)<140mcd**
- **Rank 14 : 140≦Iv(min)<150mcd**
- **Rank 15 : 150≦Iv(min)<160mcd**

5.Absolute Maximum Ratings:

Parameter	Symbol	Condition	Rating
Forward DC current	If	Ta=25℃	≦30mA
Junction Temp	Tj	---	≦115℃
Reverse Voltage	Vr	Ta=25℃	≦10V
Storage Temp	Tstg	chip	-40~85℃
		chip on tape/storage	0~30℃ RH≦60%
		chip on tape/transportation	-20~50℃
Temp during packaging	---	---	Max 265℃ (≦15sec)

Note:

1) Using the maximum rated current or voltage, is used as a single chip, and is a limit on the PCB board and no glue, independent constant-current source driver.Higher than the rated conditions, P-N junction temperature higher than 115 ℃ can lead to damage of the LED chip.

2)Under the condition of maximum 265℃ high temperature used only for 15 seconds, high temperature or time is too long, can cause damage to the chip.

3) The best storage conditions of Blue tape is placed in the shade dry environment,

Indoor temperature is not higher than 30℃, Relative humidity below 60%, shelf life is 1 year.

6.Characteristic Curves:

Remark: These are the typical TC709UY measured values, along with different brightness and wavelength, the actual value is slightly different.

Fig1. Forward Current vs. Forward Voltage:

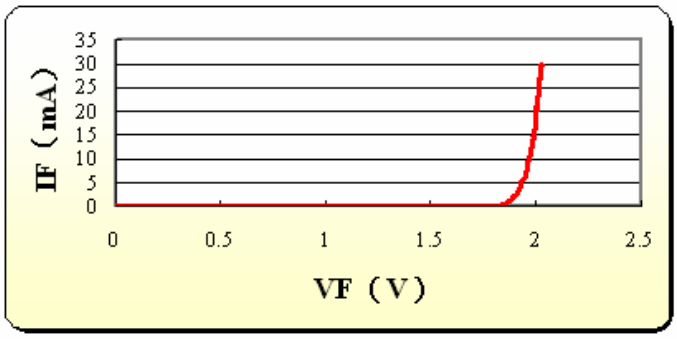

Fig2. Forward Current vs. Relative Intensity:

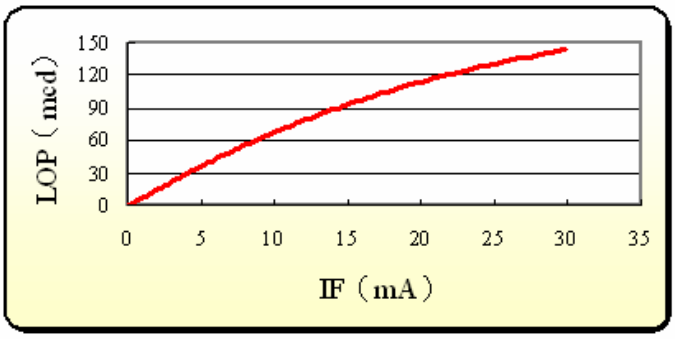

Fig3. Forward Current vs. Relative Wavelength:

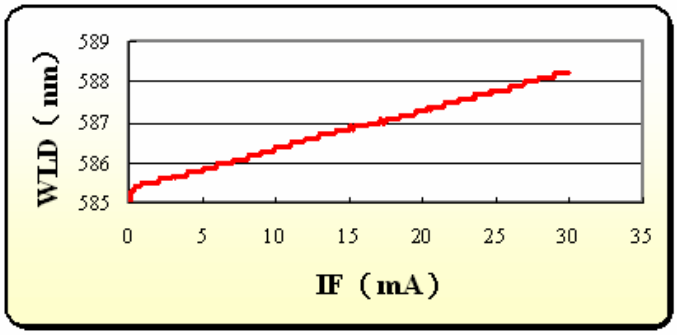

Fig4. Life Test at 20mA R.T. 1000hrs:

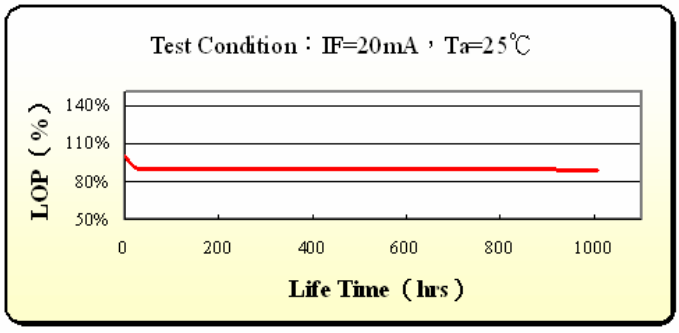

Fig5. Temperature vs. Relative Wavelength:

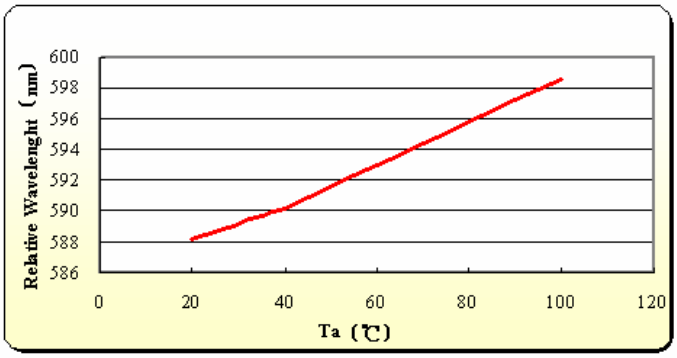

Fig6. Temperature vs. Relative Intensity: