



## GaAsP Orange Chip TC610HOUK

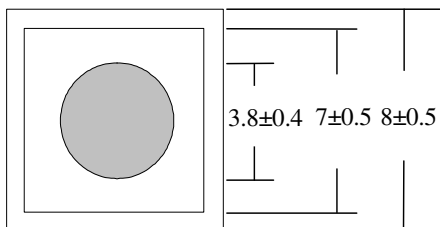
### 1. Product Description:

TC610HOUK is a orange LED chip. The chips have optimized VPE technology process to perform high brightness in this field. The production process is very matured and stabilized in mass Production. The uniformity of the chips is highly centralized in a Limited range, which makes the product quality and production Efficiency outstanding. The chip is friendly to adapt in various Applications.

### 2. Features:

- ◆ Ultra Orange
- ◆ GaAsP/GaP
- ◆ VPE Process
- ◆ High Stability
- ◆ High Quality
- ◆ Various Applications

### 3. Chip Dimensions and Structure:



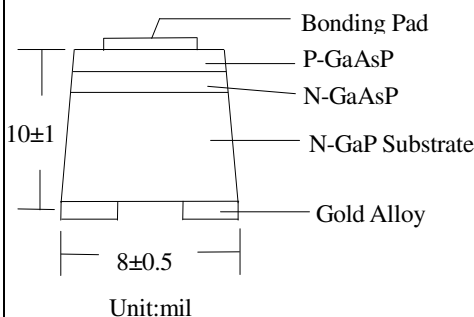
**1. Chip size:**  $(8\pm 0.5\text{mil})\times(8\pm 0.5\text{mil})$   
 $(200\pm 12.5\mu\text{m})\times(200\pm 12.5\mu\text{m})$

**2. Emitting area:**  $(7\pm 0.5\text{mil})\times(7\pm 0.5\text{mil})$   
 $(175\pm 12.5\mu\text{m})\times(175\pm 12.5\mu\text{m})$

**3. Thickness:**  $10\pm 1\text{mil}$

**4. Bonding pad:**  $3.8\pm 0.4\text{mil}$   
 $(95\pm 10\mu\text{m})$  in diameter

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



## 4. Electro-optical Characteristics at 25°C:

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
Forward Voltage	$V_F$	-	2.0	2.40	V	$I_F=20\text{mA}$
Reverse Voltage	$V_R$	5	-	-	V	$I_R=10\mu\text{A}$
Leakage current	$I_r$	-	-	1	$\mu\text{A}$	$V_r=9\text{V}$
Wavelength	$\lambda_D$	617	621	623	nm	$I_F=20\text{mA}$
Luminous Intensity	$I_v$	-	※	-	mcd	$I_F=20\text{mA}$

- Rank 0 : 10~10.99mcd
- Rank 1 : 11~11.99mcd
- Rank 2 : 12~12.99mcd
- Rank 3 : 13~13.99mcd
- Rank 4 : 14~14.99mcd
- Rank 5 : 15~15.99mcd
- Rank 6 : 16~16.99mcd
- Rank 7 : 17~17.99mcd

## 5. Absolute Maximum Ratings:

Parameter	Symbol	Condition	Rating
Forward DC current	$I_f$	$T_a=25^\circ\text{C}$	$\leq 30\text{mA}$
Junction Temp	$T_j$	---	$\leq 115^\circ\text{C}$
Reverse Voltage	$V_r$	$T_a=25^\circ\text{C}$	$\leq 10\text{V}$
Storage Temp	$T_{stg}$	chip	$-40\sim 85^\circ\text{C}$
		chip on tape/storage	$0\sim 30^\circ\text{C}$ $\text{RH} \leq 60\%$
		chip on tape/transportation	$-20\sim 50^\circ\text{C}$
Temp during packaging	---	---	Max $265^\circ\text{C}$ ( $\leq 15\text{sec}$ )

### 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  $115^\circ\text{C}$  can lead to damage of the LED chip.
- 2) Under the condition of maximum  $265^\circ\text{C}$  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  $30^\circ\text{C}$ , Relative humidity below 60%, shelf life is 1 year.



**Uni Light Technology Inc.**

■Tel : 0769-87631888 ■Fax : 0769-87631888-166

## 6.Characteristic Curves:

**Remark: These are the typical TC610HOUK measured values, along with different brightness and wavelength, the actual value is slightly different.**

Fig1. Intensity vs. Forward Current

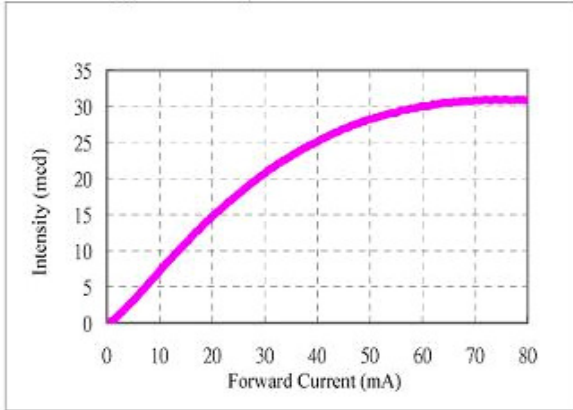


Fig2. Forward Current vs. Forward Voltage

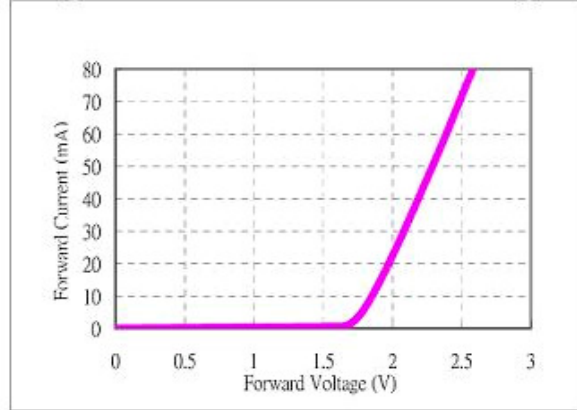


Fig3. Wavelength vs. Forward Current

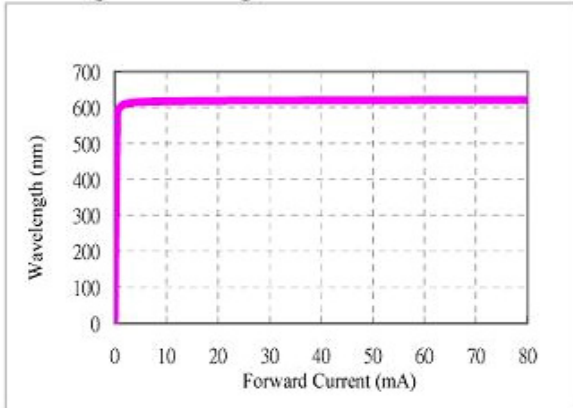


Fig4. Relative Wavelength vs. Temperature

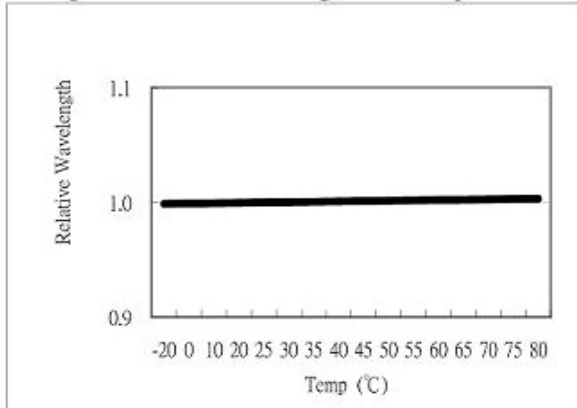


Fig5. Relative Intensity vs. Temperature

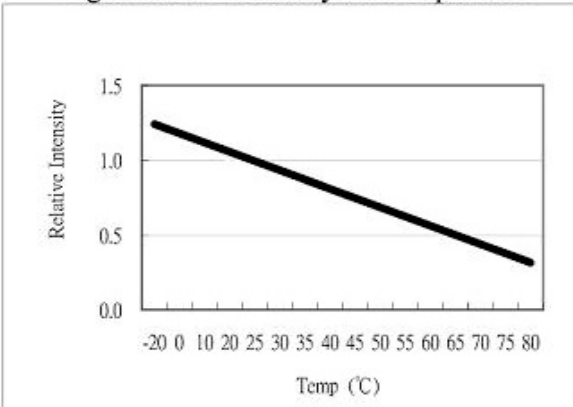
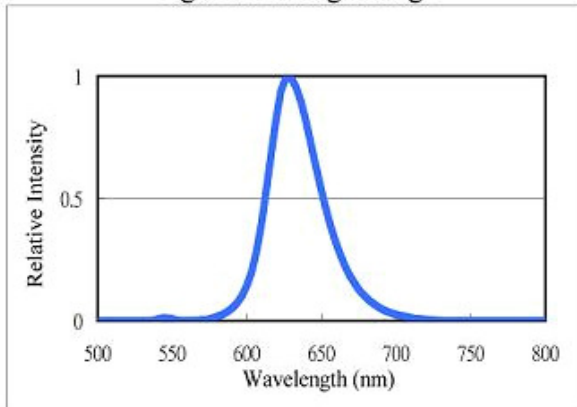


Fig6. Wavelength range



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