

# AlGaInP/GaAs Yellow Chip ---TK0509UYN

## 1. Scope

- The specification applies to AlGaInP LED chips.
- Type : TK0509UYN.

## 2. Structure

- AlGaInP/GaAs yellow LED chip.
- Electrode P (anode) side : Aluminum or Gold.
- Electrode N (cathode) side : Gold alloy.

## 3. Size

- Chip size : 225 $\mu$ m  $\times$  225 $\mu$ m
- Chip height : 180 $\mu$ m  $\pm$  30 $\mu$ m
- Pattern drawing : per fig. 1

## 4. Electro-Optical Characteristics

(T<sub>a</sub> = +25 °C)

| Parameter                    | Symbol           | Condition                   | Min. | Typ. | Max. | Unit |
|------------------------------|------------------|-----------------------------|------|------|------|------|
| Forward Voltage              | V <sub>F</sub>   | I <sub>F</sub> = 20 mA      |      | 2.00 | 2.30 | V    |
| Reverse Voltage              | V <sub>R</sub>   | I <sub>R</sub> = 10 $\mu$ A | 5    |      |      | V    |
| Luminous Intensity           | I <sub>V</sub>   | I <sub>F</sub> = 20 mA      |      | ※    |      | mcd  |
| Wavelength                   | $\lambda_d$      | I <sub>F</sub> = 20 mA      |      | 588  |      | nm   |
| Spectrum Width of Half Value | $\Delta \lambda$ | I <sub>F</sub> = 20 mA      |      | 20   |      | nm   |

- |                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ※ Rank E : min. $\geq$ 25.0, 35.0 $\leq$ avg. < 45.0<br>Rank F : min. $\geq$ 35.0, 45.0 $\leq$ avg. < 55.0<br>Rank G : min. $\geq$ 40.0, 55.0 $\leq$ avg. < 65.0<br>Rank H : min. $\geq$ 50.0, 65.0 $\leq$ avg. < 75.0<br>Rank I : min. $\geq$ 60.0, 75.0 $\leq$ avg. < 85.0 | Rank J : min. $\geq$ 70.0, 85.0 $\leq$ avg. < 95.0<br>Rank K : min. $\geq$ 80.0, 95.0 $\leq$ avg. < 105.0<br>Rank L : min. $\geq$ 90.0, 105.0 $\leq$ avg. < 115.0<br>Rank M : min. $\geq$ 90.0, 115.0 $\leq$ avg. < 125.0 |
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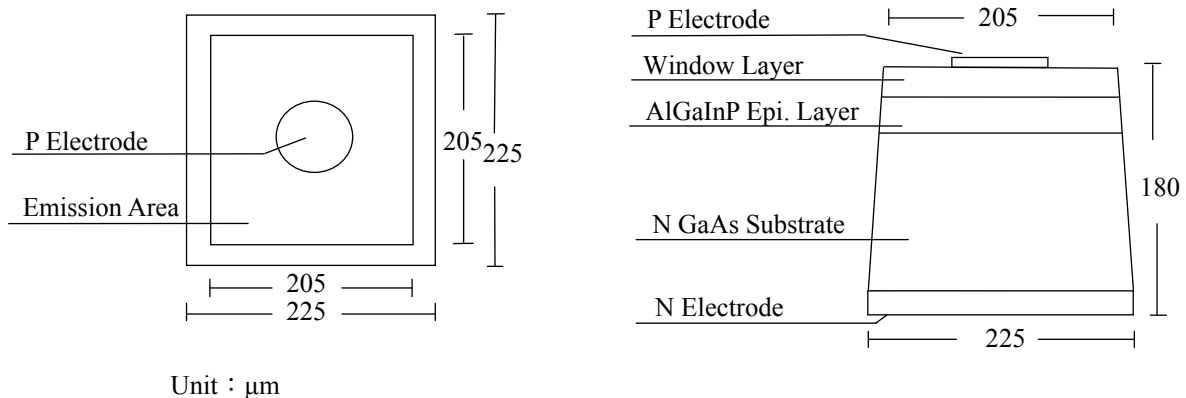


fig. 1

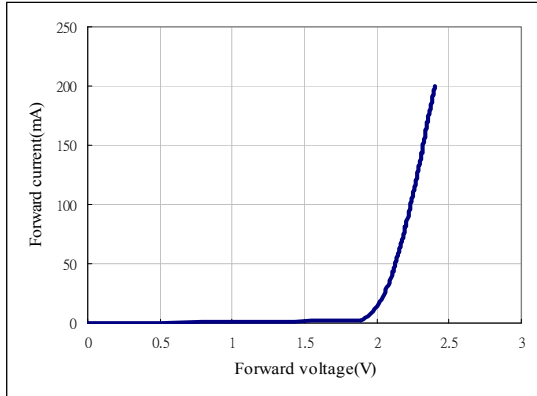
2012.May



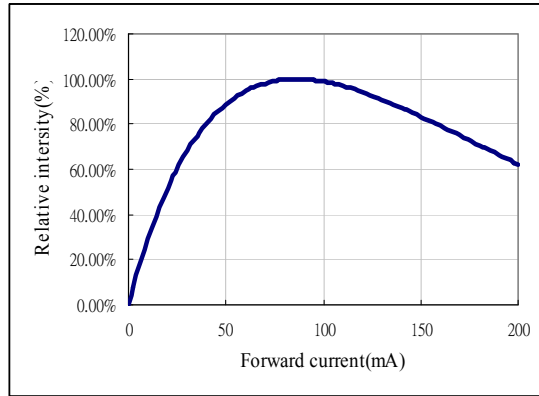
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## Electro-Optical Characteristics Curve

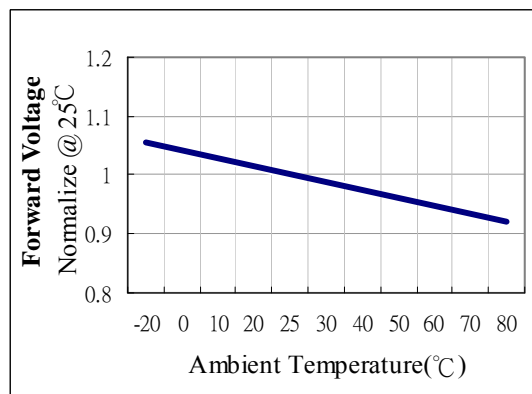
Forward current vs. Forward voltage



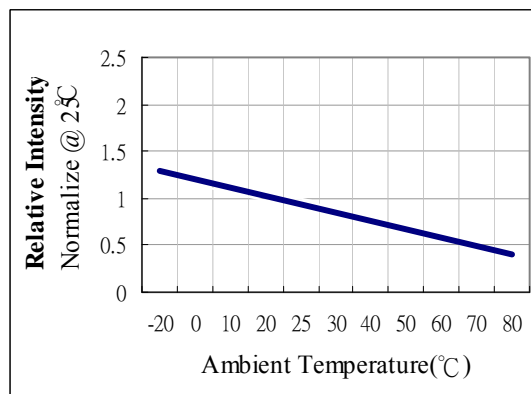
Relative intensity vs. Forward current



Forward voltage vs. Temperature



Relative intensity vs. Temperature



Relative intensity vs. Wavelength

