

# AlGaAs/Si High Power IR Chip ---TK0510IRP

## 1. Scope

- AlGaAs High power IR LED chip.

## 2. Structure

- AlGaAs on Silicon
- N Electrode (cathode) side : Gold.
- P Electrode (anode) side : Gold alloy.

## 3. Size

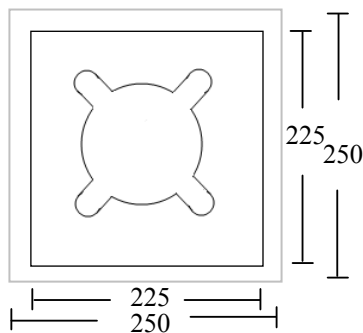
- Chip size : 250um × 250um
- Chip height : 170um ± 30um
- Pattern drawing : per fig. 1

## 4. Electro-Optical Characteristics

( $T_a = +25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F = 20\text{mA}$			1.80	V
Reverse Current	$I_R$	$V_R = 5\text{V}$			1	uA
Axis Radiant Power	$P_O$	$I_F = 20\text{mA}$	7.0	※		mW/sr
Peak Wavelength	$\lambda_p$	$I_F = 20\text{mA}$		850		nm
Spectrum Width of Half Value	$\Delta\lambda$	$I_F = 20\text{mA}$		30		nm
Optical Rise Time	$T_R$	$I_F = 20\text{mA}$		20		ns
Optical Rise Time	$T_F$	$I_F = 20\text{mA}$		20		ns

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- Rank G : 7.0 ~ 7.99
  - Rank H : 8.0 ~ 8.99



Unit :  $\mu\text{m}$

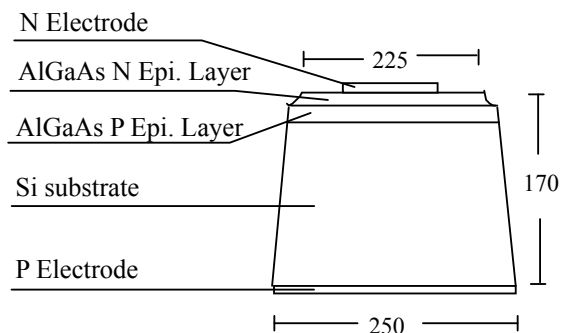


fig. 1

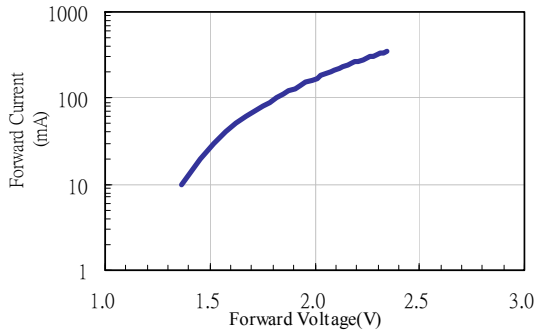
2014.Oct



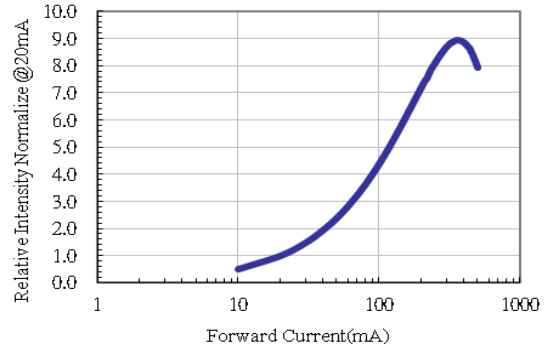
# AlGaAs/Si High Power IR Chip ---TK0510IRP

## Electro-Optical Characteristics Curve

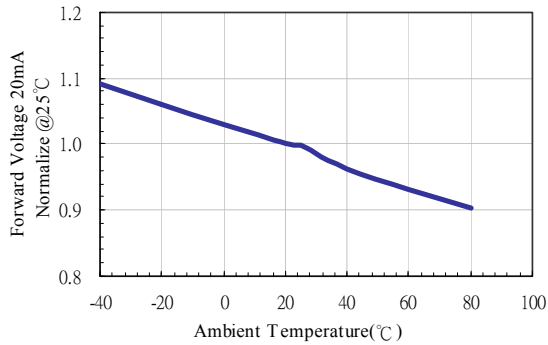
Forward current vs. Forward Voltage



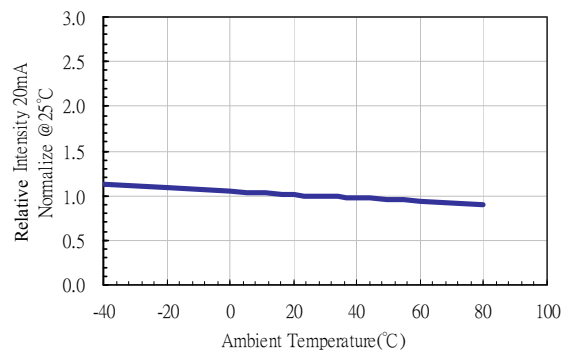
Relative Intensity vs. Forward Current



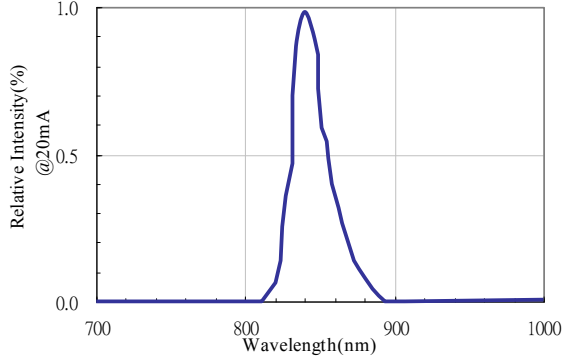
Forward Voltage vs. Temperature



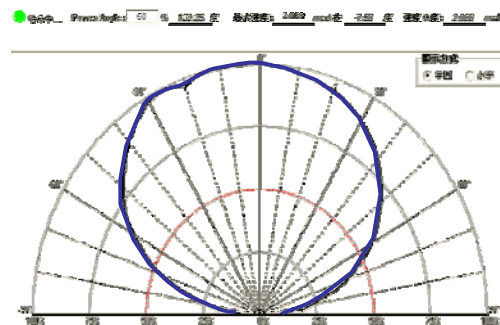
Relative Intensity vs. Temperature



Relative Intensity vs. Wavelength



Half power angle on TO-18



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