

# AlGaAs/Si High Power IR Chip ---TK0514IRP

## 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

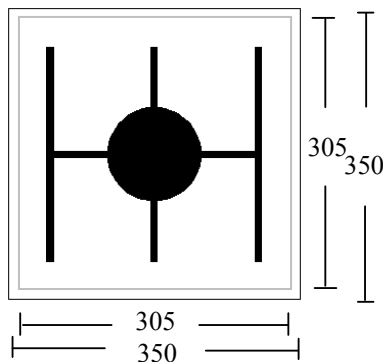
- Chip size : 350um × 350um
- Chip height : 170um ± 30um
- Pattern drawing : per fig. 1

## 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> = 20mA		1.45	1.55	V
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 100mA		1.65	1.80	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V			1	uA
Axis Radiant Power	P <sub>O</sub>	I <sub>F</sub> = 20mA	7.5			mW/sr
Axis Radiant Power	P <sub>O</sub>	I <sub>F</sub> = 100mA	38	※		mW/sr
Peak Wavelength	λ <sub>p</sub>	I <sub>F</sub> = 20mA		850		nm
Spectrum Width of Half Value	Δλ	I <sub>F</sub> = 20mA		30		nm
Optical Rise Time	T <sub>R</sub>	I <sub>F</sub> = 20mA		20		ns
Optical Rise Time	T <sub>F</sub>	I <sub>F</sub> = 20mA		20		ns

- ※
- Rank E : 38.0 ~ 43.99
  - Rank F : 44.0 ~ 49.99
  - Rank G : 50.0 ~ 55.99



Unit : μm

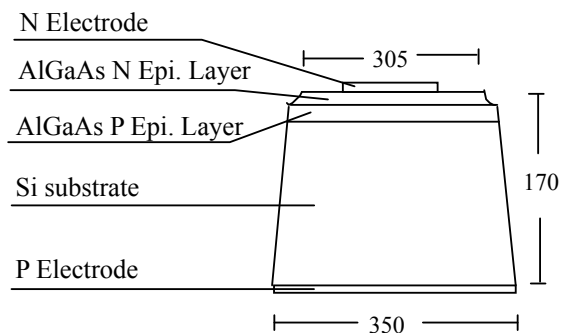


fig. 1

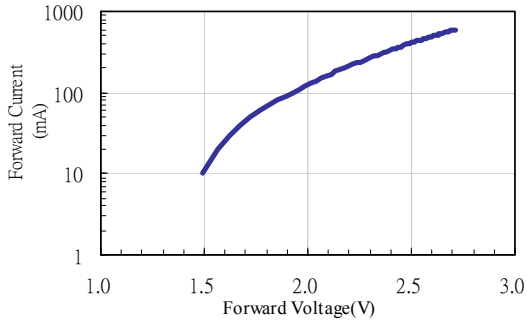
2014.Oct



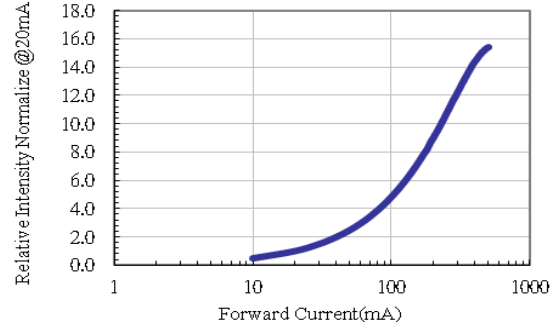
# AlGaAs/Si High Power IR Chip ---TK0514IRP

## Electro-Optical Characteristics Curve

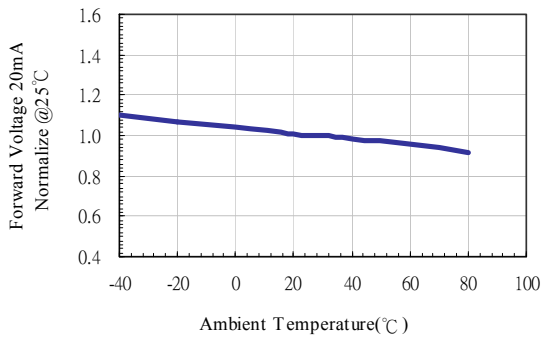
Forward current vs. Forward Voltage



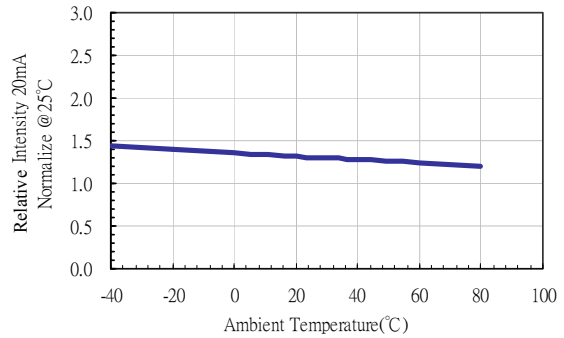
Relative Intensity vs. Forward Current



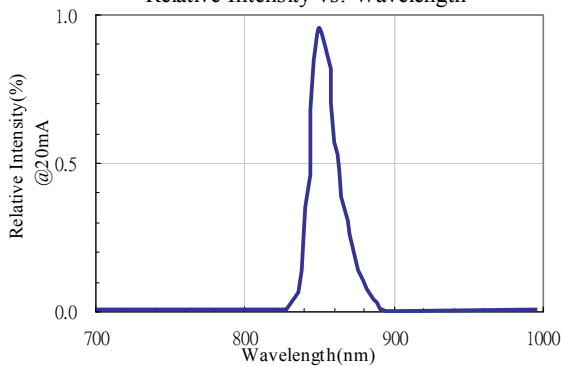
Forward Voltage vs. Temperature



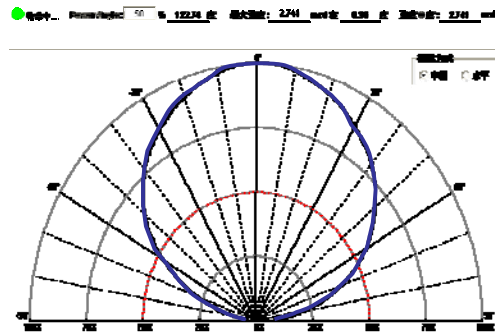
Relative Intensity vs. Temperature



Relative Intensity vs. Wavelength



Half power angle on TO-18



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