

AlGaAs/Si High Power IR Chip ---TK0514IRA

1. Scope

- AlGaAs High power IR LED chip.

2. Structure

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

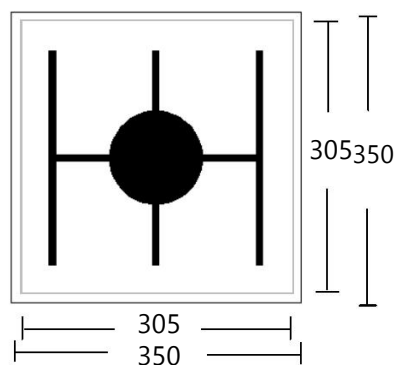
3. Size

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

4. Electro-Optical Characteristics

(Ta = +25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$		1.40	1.50	V
Forward Voltage	V_F	$I_F = 100\text{mA}$		1.60	1.75	V
Reverse Current	I_R	$V = -5\text{V}$			1	uA
Axis Radiant Power	P_o	$I_F = 20\text{mA}$	7.0			mW/sr
Axis Radiant Power	P_o	$I_F = 100\text{mA}$	38	※		mW/sr
Peak Wavelength	λ_p	$I_F = 20\text{mA}$		940		nm
Spectrum Width of Half Value	$\Delta\lambda$	$I_F = 20\text{mA}$		50		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



Unit: μm

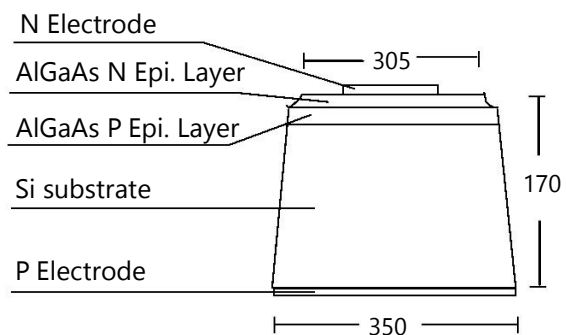


fig. 1

2014.Oct



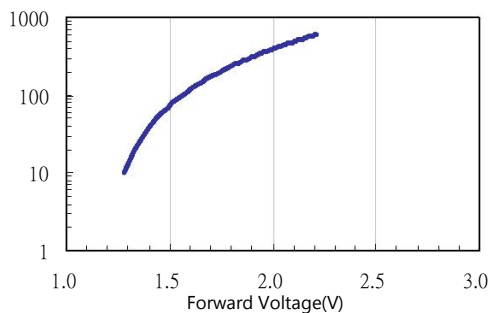
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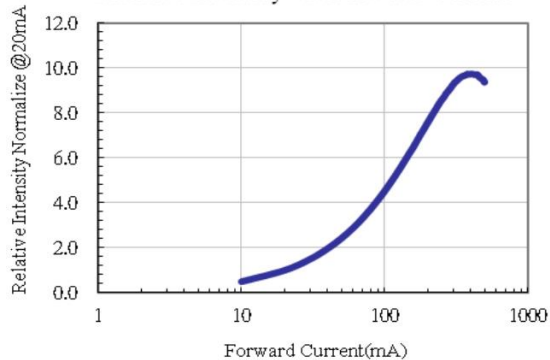
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Electro-Optical Characteristics Curve

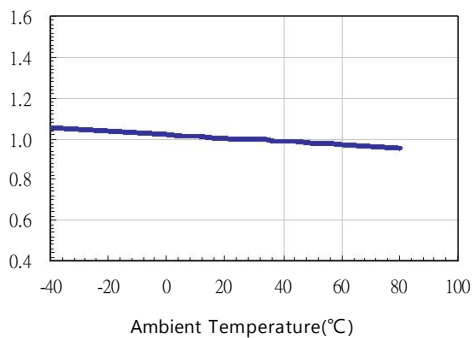
Forward current vs. Forward Voltage



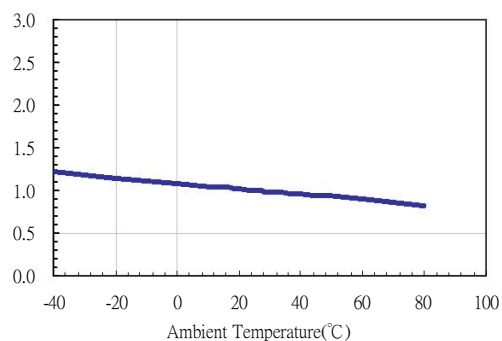
Relative Intensity vs. Forward Current



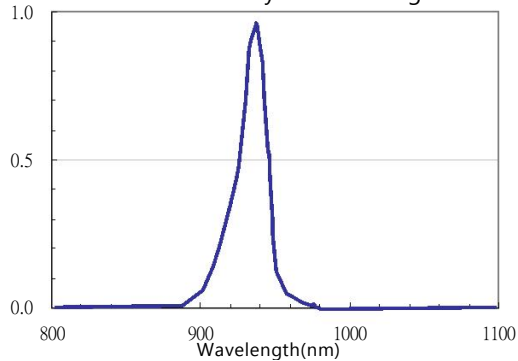
Forward Voltage vs. Temperature



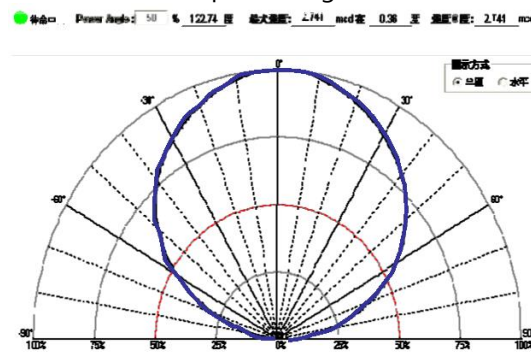
Relative Intensity vs. Temperature



Relative Intensity vs. Wavelength



Half power angle on TO-18



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