

IR Chip--ORT114IRA

1. Scope:

- This specification applies to GaAlAs/GaAs infrared emitting diode chips

2. Structure:

- Mesa Type: rough surface.
- Electrodes:
P (Anode) Side: gold alloy.
N (Cathode) Side: gold alloy.

3. Size:

- Top Size: $(320\mu\text{m} \times 320\mu\text{m}) \pm 30\mu\text{m}$; Bottom Size: $(350\mu\text{m} \times 350\mu\text{m}) \pm 30\mu\text{m}$ (include scribe line)
- Chip Height: $220\mu\text{m} \pm 20\mu\text{m}$
- Pad Size: $105\mu\text{m} \pm 10\mu\text{m}$
- Pattern Drawing: fig.1.

4. Electro-Optical Characteristics:

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Forward voltage	V_F	$I_F = 20\text{mA}$		1.2	1.4	V
	V_F	$I_F = 300\text{mA}$		1.6	1.75	V
Reverse voltage	V_R	$I_R = 10\mu\text{A}$	5			V
Peak wavelength	WLP	$I_F = 20\text{mA}$		940		nm
Radiated output Power	P_O	$I_F = 20\text{mA}$	1.8			mw

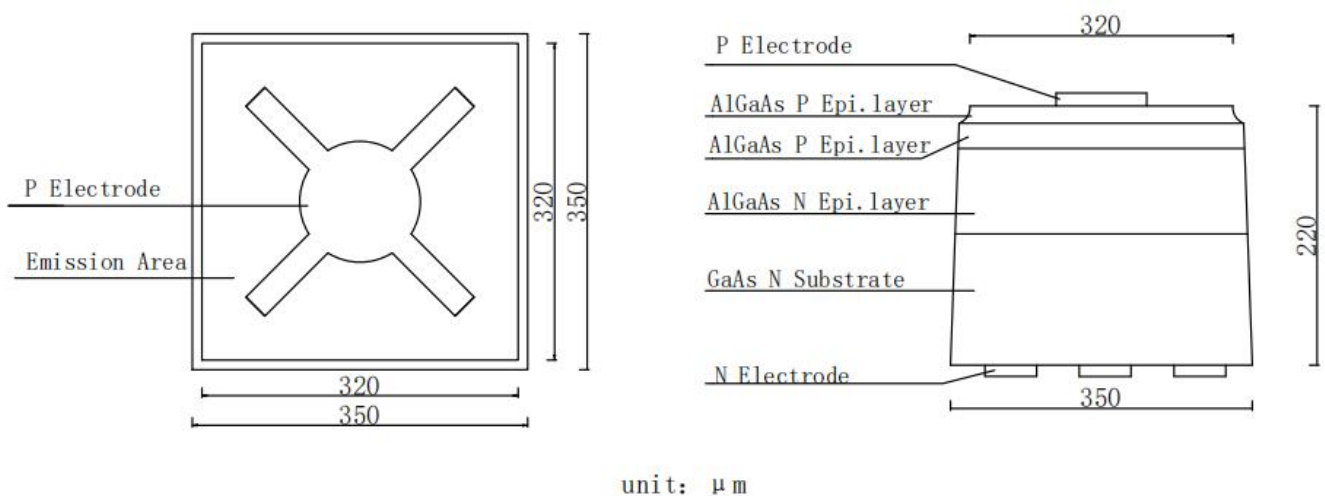


fig.1

5. Packing and Labeling:

- Packing: Sheet Type
- Each pellet is mounted on an adhesive sheet with wire-bonded electrode side up.
- Labeling: Each lot has a label sheet, writing Type、Lot No、Pcs、Avg P_O 、 V_F 、Wlp and quantity of good chips.

6. Application Notes:

- All data are measured by Orient's tester on bare chips within 98% of the nominal value.
- Measurement error for dominant wavelength and peak wavelength is $\pm 5\text{nm}$

7. Typical Electro-Optical Characteristics Curve:

Fig.1 Forward Current vs. Forward Voltage

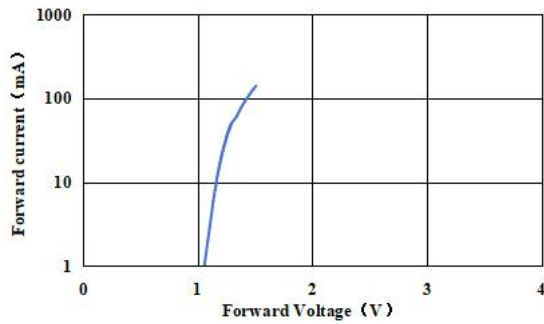


Fig.2 Relative Radiant Power vs. Wavelength

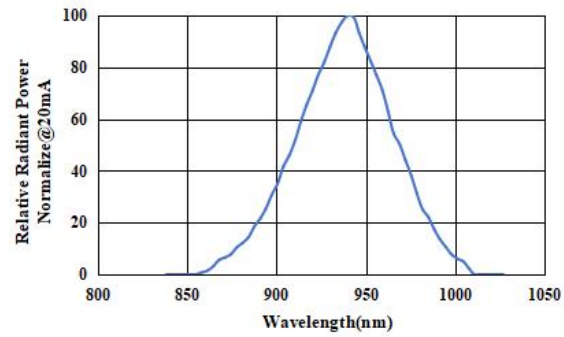


Fig.3 Relative Radiant Power vs. Forward DC Current

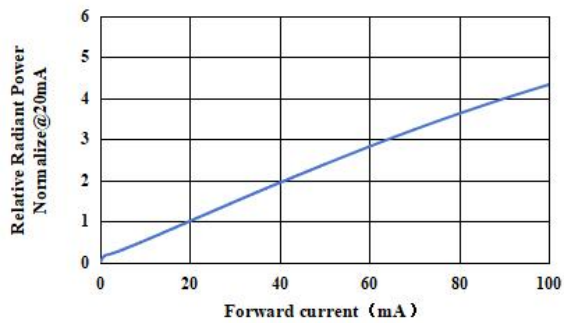


Fig.4 Forward Voltage vs. Ambient Temperature

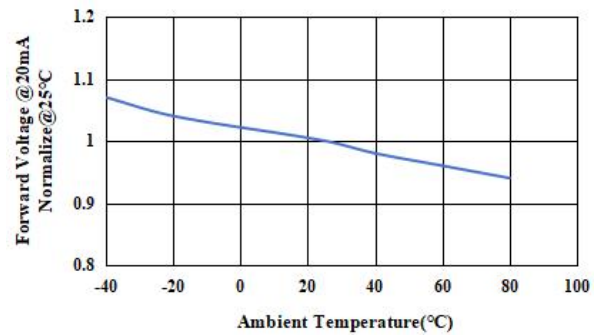


Fig.5 Relative Radiant Power vs. Ambient Temperature

