EPISTAR

ES-FFHRPE04J

AlGaInP Red LED Chip

> Mechanical Specification:

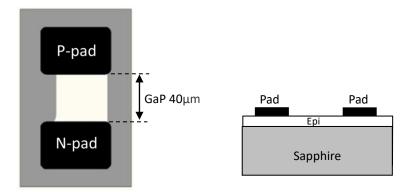
(1) Dimension

- Chip size: 4 mil x 6 mil (93±15 μm x 150±15 μm)

- Thickness: 3.1 mil (80±10 μ m) - P pad: 40±10 μ m x 59±10 μ m - N pad: 40±10 μ m x 59±10 μ m

(2) Metallization

- Electrode pad: Au



Features:

- · Compatible with Solder Process
- · Low Rth and Long life time

Applications:

- · RGB Display Signage
- · RGB TV

> Electro-optical Characteristics at 25°C:

Parameter	Symbol	Condition	Min.	Тур.	Max.	Unit
Forward Voltage	Vf1	If = 10μA	1.3	-	-	V
	Vf2	If = 1mA	-	1.9	2.1	V
Reverse Current	Ir	Vr = 10V	-	-	0.5	μΑ
Peak Wavelength	λр	If = 1mA	-	629	-	nm
Dominant Wavelength ⁽¹⁾	λd	If = 1mA	619	-	629	nm
Spectra Half-width	Δλ	If = 1mA	-	15	-	nm
Luminous Intensity ⁽²⁾⁽³⁾	Iv	If = 1mA	25	-	27.5	
			27.5	-	30	mcd
			30	-	33	

Note:

⁽¹⁾ Basically, the wavelength span is 10nm; however, customers' special requirements are also welcome.

⁽²⁾ Customers' special requirements are also welcome

⁽³⁾ Luminous intensity is measured by EPISTAR's equipment on bare chips.

> Absolute Maximum Ratings:

Parameter	Symbol	Condition	Rating	Unit
Forward DC Current	If	Ta = 25°C	≤ 5	mA
Reverse Voltage	Vr	Ta = 25°C	≤ 10	V
Junction Temperature	Tj	-	≤ 115	°C
		Chip	-40 ~ +85	°C
Storage Temperature	Tstg	Chip-on-tape/storage	5 ~ 35	°C
		Chip-on-tape/transportation	-20 ~ +65	°C

Note: Maximum ratings are package dependent. The above maximum ratings were determined using by EPISTAR standard. Stresses in excess of the absolute maximum ratings such as forward current and junction temperature may cause damage to the LED.

> Characteristic Curves:

Fig.1 – Relative luminous Intensity vs. Forward Current

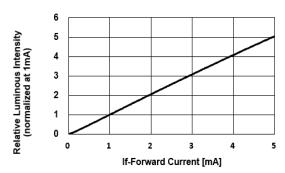


Fig.3 –Relative Intensity (@1mA) vs. Ambient Temperature

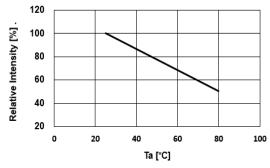


Fig.5 – Dominant Wavelength (@1mA) vs. Ambient Temperature

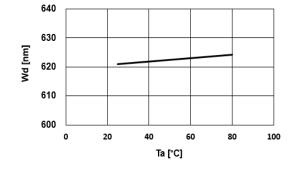


Fig.2 – Forward Current vs. Forward Voltage

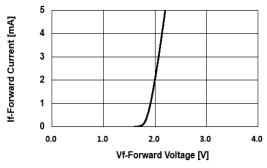


Fig.4 – Forward Voltage (@1mA) vs. Ambient Temperature

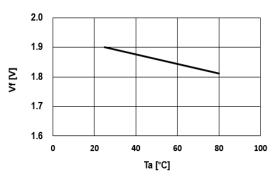


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 115°C)

