

1. Descriptions

The KP3528R64A1I-PF is a small and thin form plastic leaded chip carrier(PLCC) 2-pin package with AlInGaP Red LED.

2. Features

- ◆ Small Footprint Surface Mount Package (3.5 L × 2.8 W × 1.9 H [mm])
- ◆ Typical Forward Voltage(V_F) : 2.2 V @ Forward Current(I_F)=20mA
- ◆ Operation Temperature from -40°C to +100°C
- ◆ Soldering methods : IR reflow soldering
- ◆ Taping : 8mm conductive black carrier tape & antistatic clear cover tape

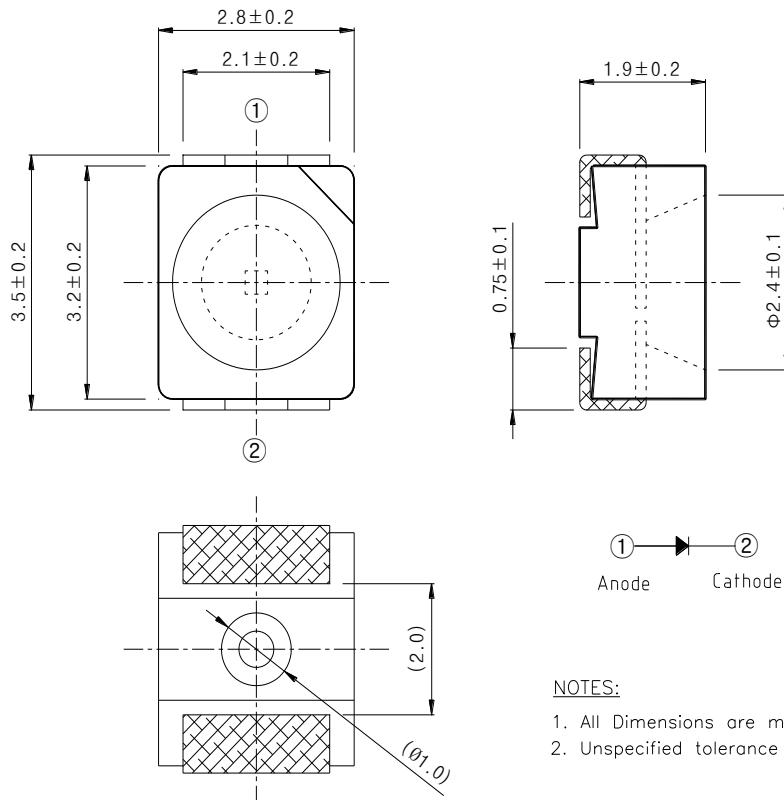
3. Applications

- ◆ Interior lighting
- ◆ General lighting
- ◆ Indoor and out door displays
- ◆ Architectural / Decorative lighting

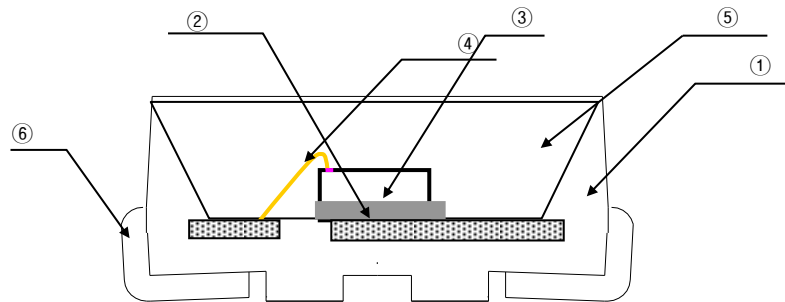
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When using this product, would you please refer to the latest specifications.

4. Outline Dimensions and Material Descriptions

◆ Outline Dimensions



◆ Material Descriptions



No.	ITEM	Material
①	Frame Resin	Polyamide
②	Paste	Ag Epoxy
③	LED Chip	AlInGaP
④	Wire	Au
⑤	Encapsulant	Clear Silicone
⑥	Electrode	Cu alloy

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5. Absolute Maximums

Item	Symbol	Min.	Max.	Unit	Conditions
Forward Current	I_F	-	30	mA	
Peak Forward Current* ¹	I_{FP}	-	60	mA	
Power Dissipation	P_D	-	72	mW	
Reverse Voltage	V_R	9	-	V	
Operating Temperature	T_{OP}	-40	100	°C	
Storage Temperature	T_S	-40	100	°C	
Soldering Temperature* ²	T_{sol}	-	260	°C	

*1. IFP was measured at $T_w \leq 1$ msec of pulse width and $D \leq 1/10$ of duty ratio.

*2. Soldering time : 5 Sec

6. Electro-Optical Characteristics ($T_A = 25^\circ\text{C}$)

Item	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage* ³	V_F	1.7	-	2.5	V	$I_F=20\text{mA}$
Reverse current	I_R	-	-	10	μA	$V_R=5\text{V}$
Luminous intensity* _{1,3}	I_V	150	-	650	mcd	$I_F=20\text{mA}$
Dominant wavelength	W_D	635	-	645	nm	$I_F=20\text{mA}$
Half angle* ²	$2\theta_{1/2}$	-	120	-	deg	$I_F=20\text{mA}$

*1. The luminous intensity I_V was measured at the peak of the spatial pattern which may not be aligned with the mechanical axis of the LED package.

*2. $2\theta_{1/2}$ is the off-axis where the luminous intensity is 1/2 of the peak intensity.

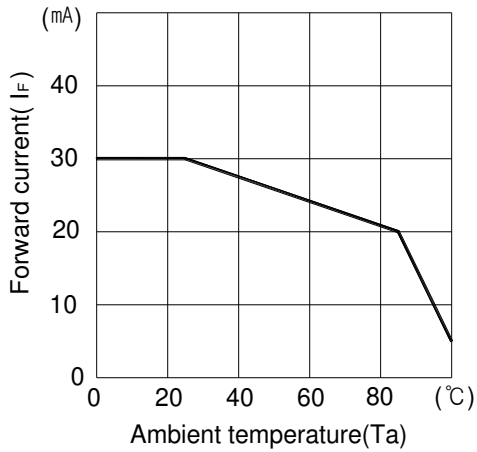
*3. Measuring Tolerance

- $V_F : \pm 0.1 \text{ V}$, $I_V : \pm 10\%$, $R_a : \pm 3$, $X, Y : \pm 0.01$

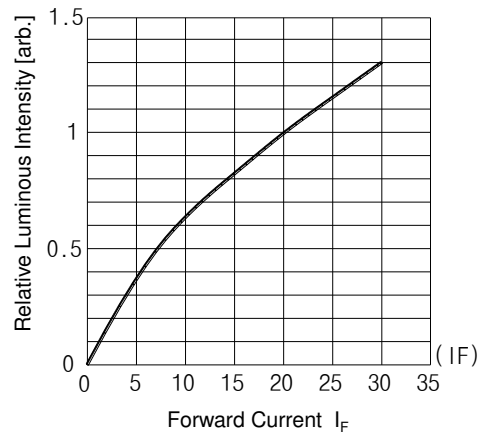
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9. Characteristic Graphs

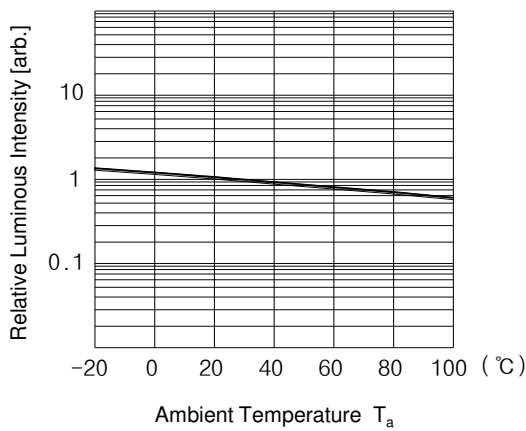
Forward Current Vs Ambient Temperature



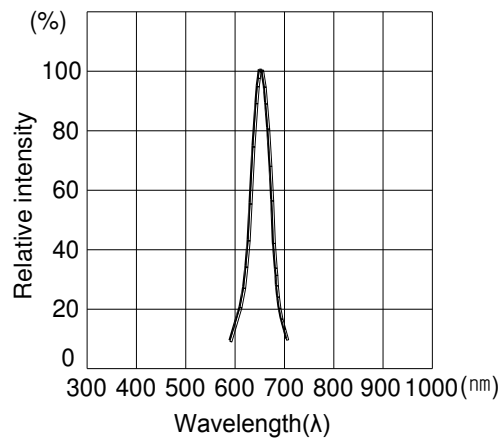
Relative Luminous Intensity vs. Forward Current



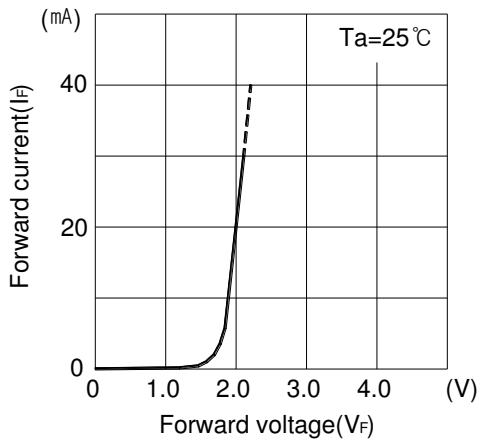
Relative luminous Intensity vs. Ambient Temperature



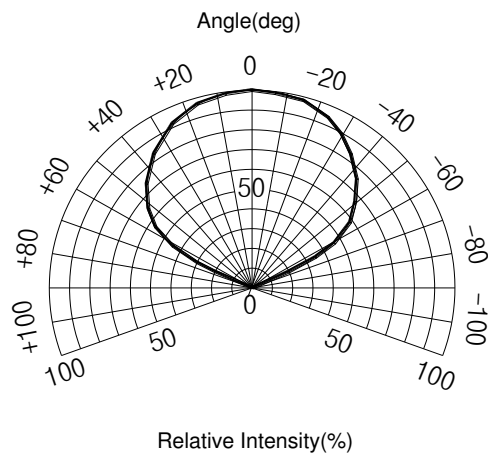
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Radiant Pattern



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