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

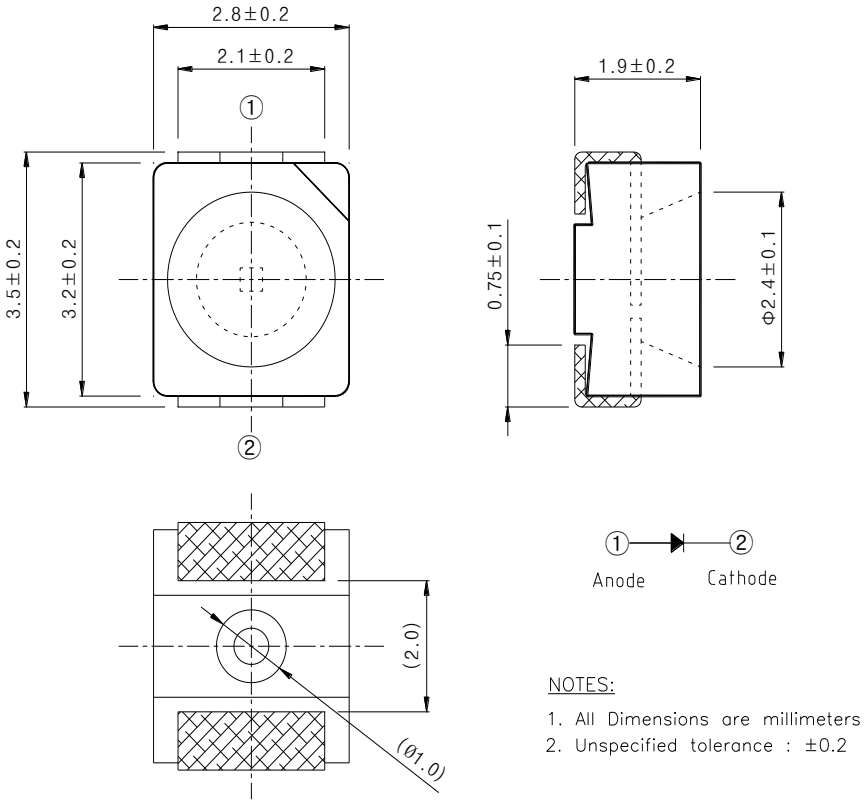
- Small Footprint Surface Mount Package (3.5 L × 2.8 W × 1.9 H [mm])
- Typical Forward Voltage(V_F) : 2.2 V @ Forward Current(I_F)=20mA
- Operation Temperature from -40℃ to +100℃
- Soldering methods : IR reflow soldering
- Taping : 8㎜ conductive black carrier tape & antistatic clear cover tape

3. Applications

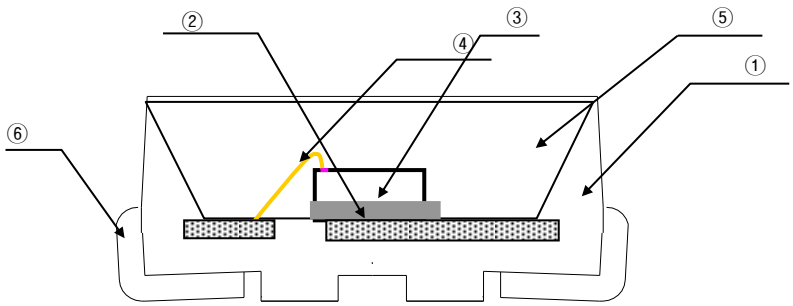
- Interior lighting
- General lighting
- Indoor and out door displays
- Architectural / Decorative lighting

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

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	℃	
Storage Temperature	Ts	-40	100	℃	
Soldering Temperature* 2	T_{sol}	-	260	℃	

*1. IFP was measured at Tw ≤ 1 msec of pulse width and D ≤ 1/10 of duty ratio.

*2. Soldering time : 5 Sec

6. Electro-Optical Characteristics (T_A = 25℃)

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

*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

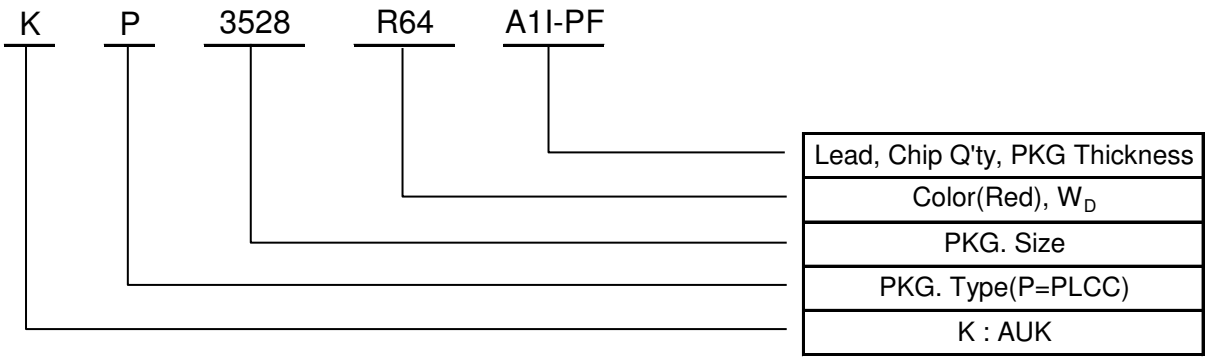
- V_F : ± 0.1 V, I_V : ± 10%, Ra : ± 3, X,Y : ± 0.01

7. Ranks

◆ V_F, I_V, W_D @ I_F = 20 mA

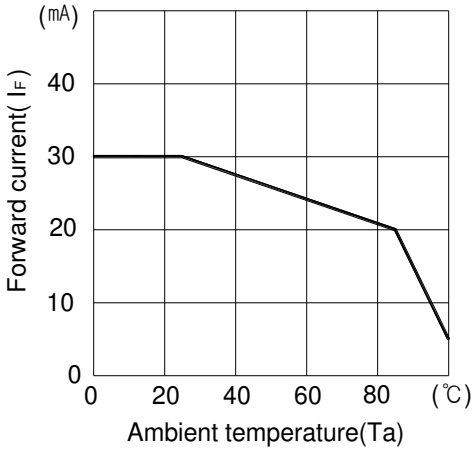
Forward Voltage [V]	Luminuous Intensity [mcd]	Wavelength [nm]
1 : 1.7 ~ 2.1	**O** : 150 ~ 250	**a** : 635 ~ 637
2 : 2.1 ~ 2.5	**P** : 250 ~ 350	**b** : 637 ~ 639
	Q : 350 ~ 450	**c** : 639 ~ 641
	R : 450~ 550	**d** : 641 ~ 643
	S : 550 ~ 650	**e** : 643 ~ 645

8. Part Numbering

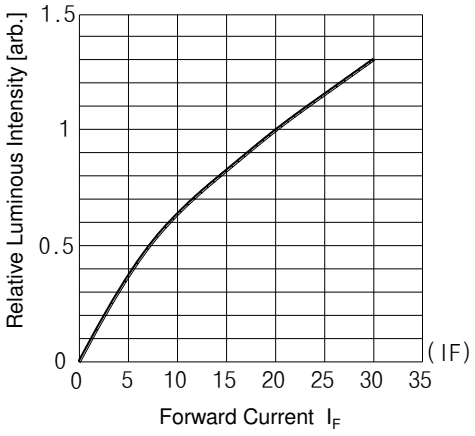


9. Characteristic Graphs

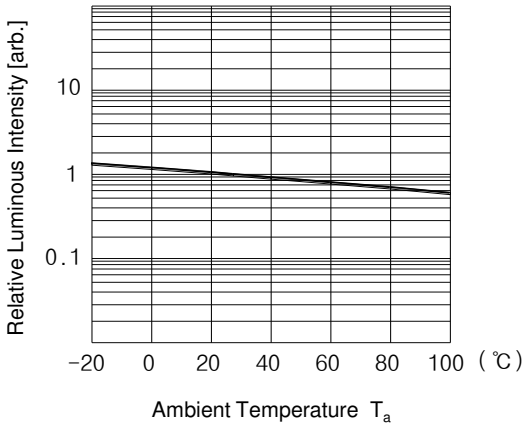
Forward Current Vs Ambient Temperature



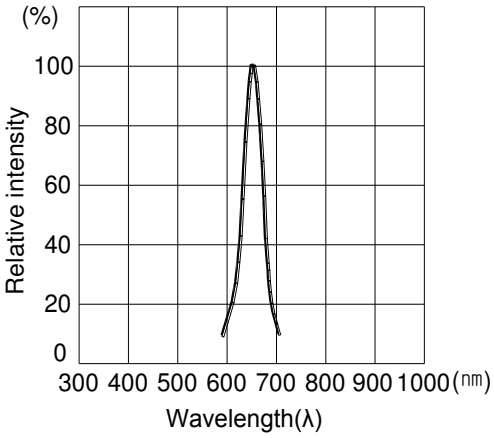
Relative Luminous Intensity vs. Forward Current



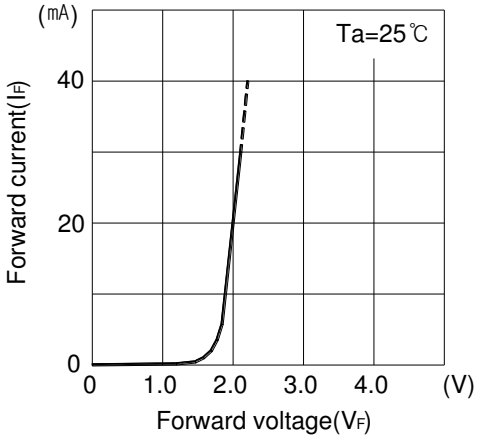
Relative luminous Intensity vs. Ambient Temperature



Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Radiant Pattern