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# KB3128O60 (KLB-320 O-12-T)

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## 1. Descriptions

The KB3128O60 (KLB-320 O-12-T) is a SMD type form package Orange LED Technology: InGaAlP

## 2. Features

- ◆ Small Footprint Surface Mount Package ( 3.1 L × 2.8 W × 3.2 H [mm])
- ◆ Forward Voltage( $V_F$ ) from 2.2 to 2.8V @ Forward Current( $I_F$ )=20mA
- ◆ Operation Temperature from -20°C to +85°C
- ◆ Soldering methods : IR reflow soldering
- ◆ Taping : 8 mm conductive black carrier tape & antistatic clear cover tape

## 3. Application

- ◆ Automotive : audio and watch back light
- ◆ Indoor Display Modules
- ◆ Signal and symbol luminaire
- ◆ Auto Focus

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The contents of this data sheet are subject to change without advance notice for the purpose of improvement.  
When using this product, would you please refer to the latest specifications.

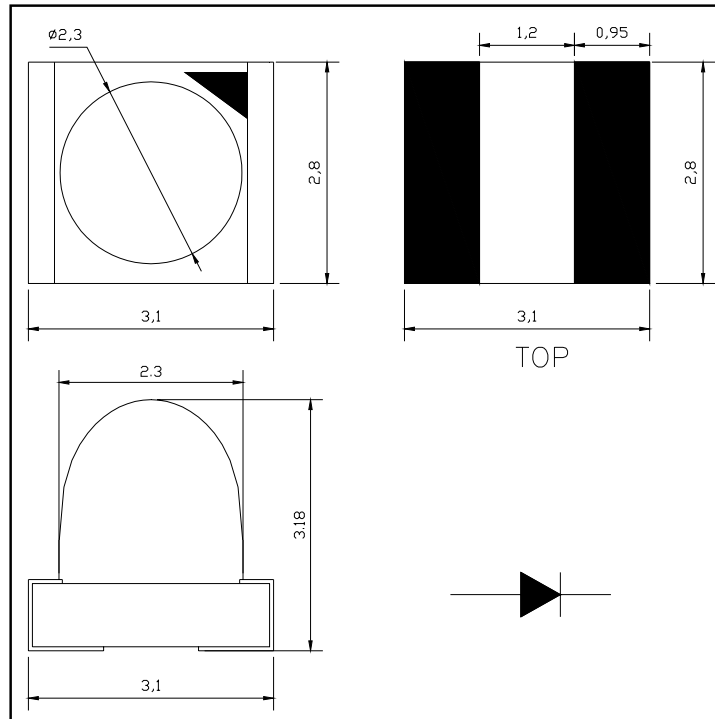
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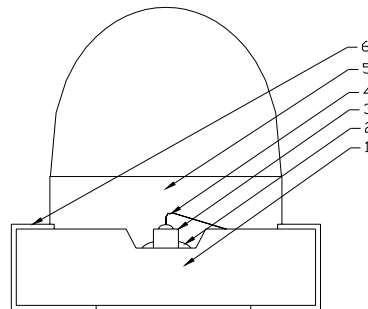
## 4. Outline Dimensions and Material Descriptions

### ◆ Outline Dimensions

Unit : [mm]



### ◆ Material Descriptions



No.	ITEM	Material
①	PCB	BT Resin
②	Paste	Ag Epoxy
③	LED Chip	InGaAlP
④	Wire	Au
⑤	EMC	Clear Epoxy
⑥	Lead	Cu

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**KB3128O60 (KLB-320 O-12-T)****5. Absolute Maximums**

ITEM	Symbol	MIN	MAX	Unit	Conditions
Forward Current	$I_F$	-	50	mA	
Peak Forward Current* <sup>1</sup>	$I_{FP}$	-	100	mA	
Power Dissipation	$P_D$	-	160	mW	
Reverse Voltage	$V_R$	-	5	V	
Operating Temperature	$T_{opr}$	-20	85	°C	
Storage Temperature	$T_{stg}$	-30	85	°C	
Soldering Temperature* <sup>2</sup>	$T_{sd}$		250	°C	5 Sec

\*1. Duty Ratio  $\leq 1/10$ , @1 kHz

\*2. Soldering time  $\leq 5$  Sec

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

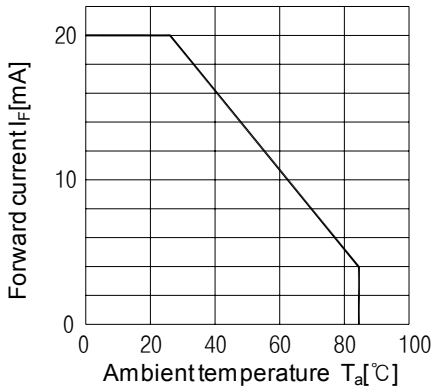
ITEM	Symbol	MIN	TYP	MAX	Unit	Conditions
Forward Voltage	$V_F$	-	2.2	2.8	V	$I_F=20\text{mA}$
Intensity	$I_V$	10	20	50	cd	$I_F=20\text{mA}$
Dominant Wavelength	$W_D$	600	609	620	nm	$I_F=20\text{mA}$
Reverse Current	$I_R$	-	-	100	$\mu\text{A}$	$V_R=5\text{V}$
FWHM	$\Delta\lambda$	-	15	-	nm	$I_F=20\text{mA}$
Half angle	$\Delta\theta$		$\pm 6$		deg	$I_F=20\text{mA}$

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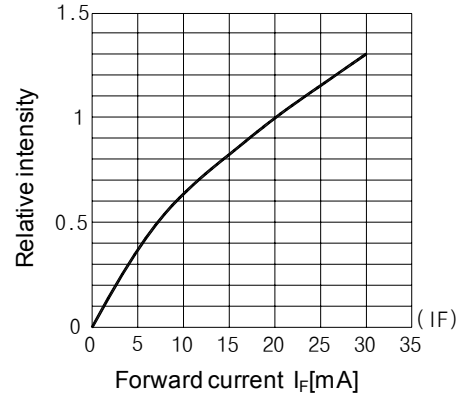
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## 7. Characteristic Graphs

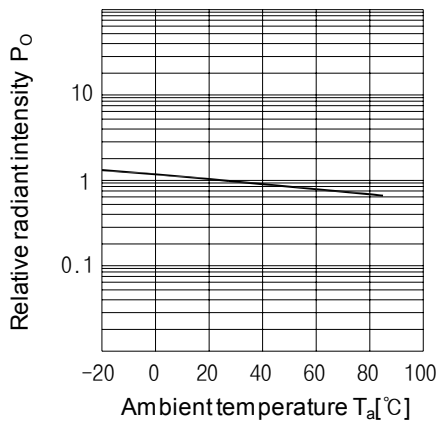
**Forward current vs. Ambient temperature**



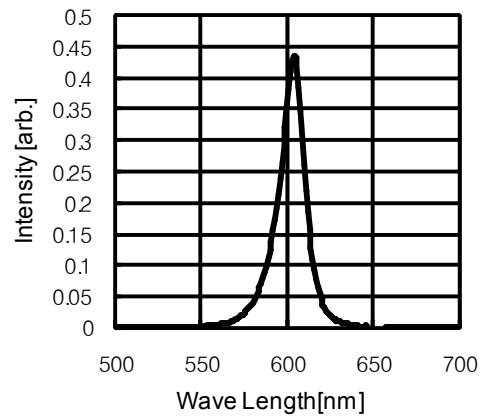
**Radiant Intensity vs. Forward current**



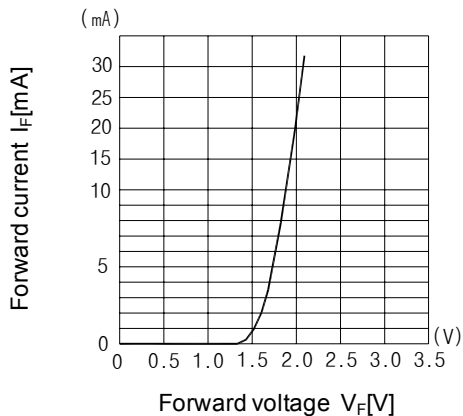
**Relative radiant intensity vs. Ambient temperature**



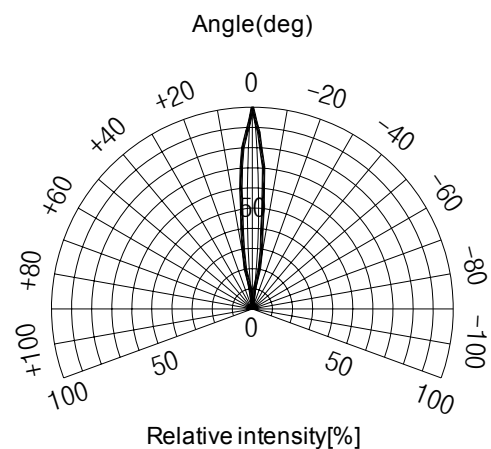
**Relative intensity vs. Wavelength**



**Forward current vs. Forward voltage**



**Radiant Pattern**



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