DESCRIPTIONS：

- 2.0x1.2x0.8mm SMD LED
- Emitting Color: Blue
- Lens Color:Water Clear

CUSTOMER:_____

MASON P/N:KGK-2012SUBC/S530-A3/3T

CUSTOMER P/N:_____

CUSTOMER APPROVED SIGNATURES

APPROVRD BY	CHECKED BY

KGKLIGHT

PRELIMINARY SPEC

2.0x1.2X0.8mm SMD CHIP LED

PART NO:KGK-2012SUBC/S530-A3/3T

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
LECTROSTATIC ISCHARGE
SENSITIVE DEVICES

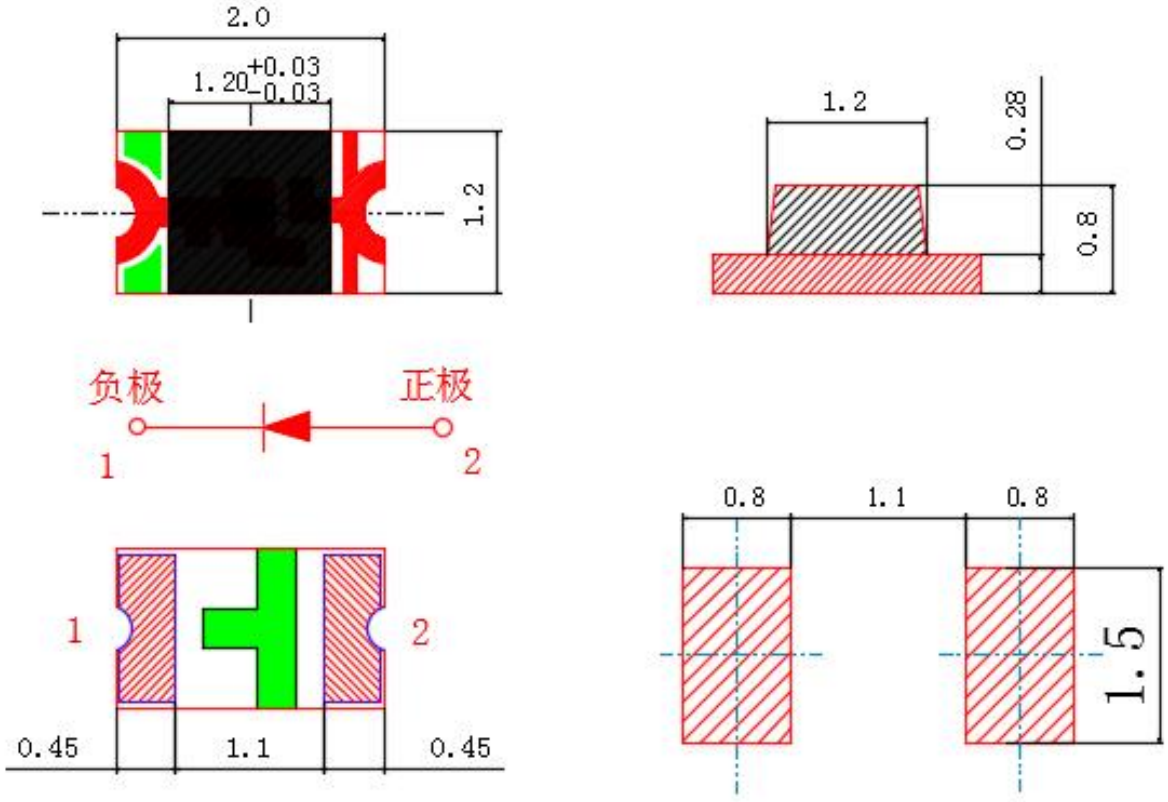
Features

- 2.0mmx1.2mm SMT LED, 0.8m THICKNESS.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE : 3000PCS / REEL.
- RoHS COMPLIANT.

Applications

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and back-lighting in telephone and fax.
- Flat backlight for LCD switch and symbol.

◆ Package Dimensions



Notes:
1. All dimensions are in millimeters.
2. Tolerance is ±0.15 unless otherwise noted.
3. Specifications are subject to change without notice.

◆ Device Selection Guide

Part No.	Chip		Lens color
C0805UB	Material	Emitted color	Water Clear
	(AlGaInP)	Blue	

◆ Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	PD	100	mW
Forward Current	IF	20	mA
Peak Forward Current*1	IFP	100	mA
Reverse Voltage	VR	5	V
Operating Temperature	Topr	-40°C To +85°C	
Storage Temperature	Tstg	-40°C To +85°C	

Notes:
*1: Pulse width≤0.1ms, Duty cycle≤1/10

◆ Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Min	typ	Max	Unit	Test Conditions
Forward Voltage	VF	2.7	—	3.1	V	IF=5mA
Reverse Current	IR	—	—	10	μA	VR=5V
Peak Wave Length	λp	—	465	—	nm	IF=5mA
Dominant Wave Length	λd	457.5	—	475	nm	
Luminous Intensity	IV	30	—	89	mcd	IF=5mA
Viewing Angle	2θ1/2	—	120	—	Deg.	IF=5mA

Remarks:
If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or chromaticity), the typical accuracy of the sorting process is as follows:
1. Chromaticity Coordinates: ±0.01
2. Luminous Intensity: ±15%
3. Forward Voltage: ±0.1V

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◆ Typical Electrical/Optical Characteristics Curves

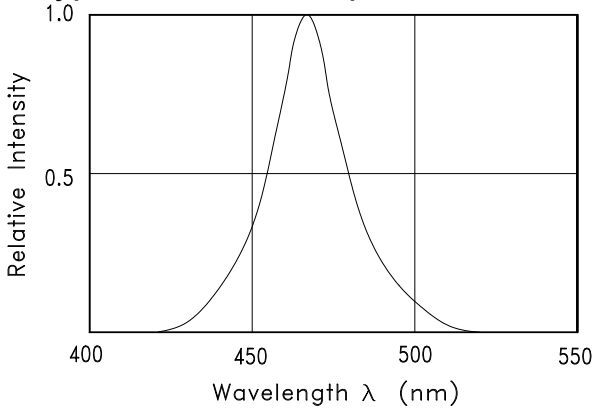


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

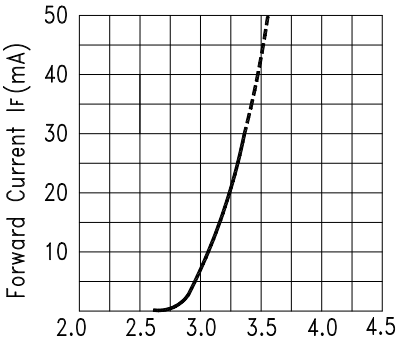


Fig.2 Forward Current vs. Forward Voltage

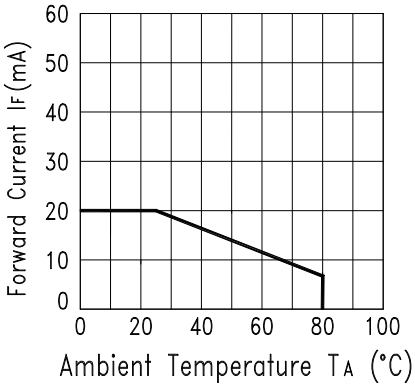


Fig.3 Forward Current Derating Curve

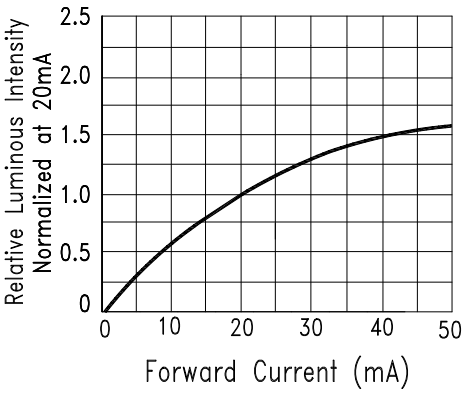


Fig.4 Relative Luminous Intensity vs. Forward Current

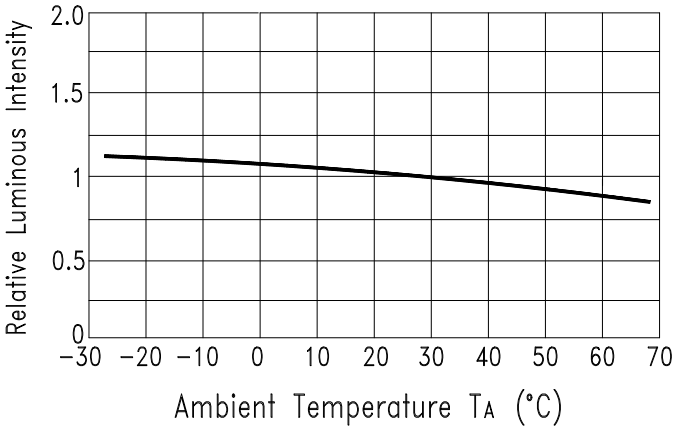


Fig.5 Luminous Intensity vs.Ambient Temperature

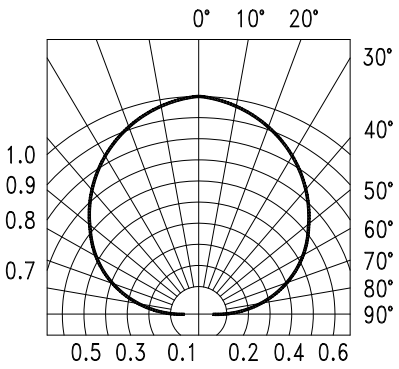
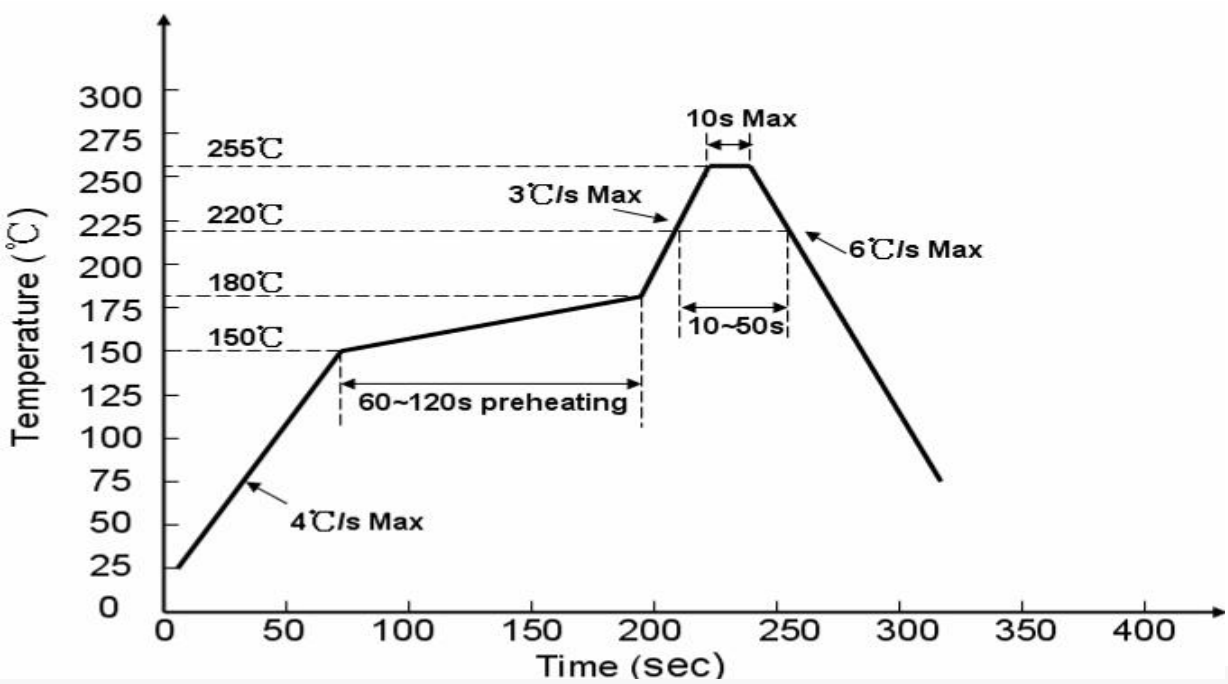


Fig.6 Spatial Distribution

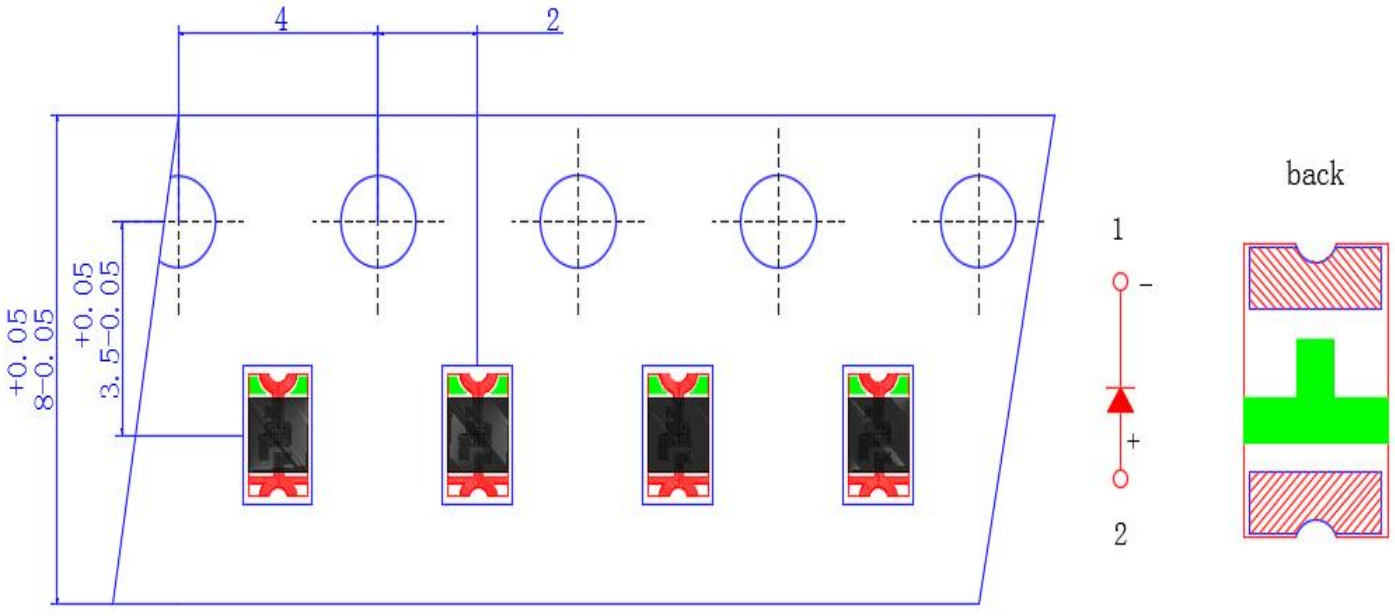
◆ Soldering Profile



Lead process

◆ Tape specifications

(Units:mm)



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◆ VF Rank

Rank		VF		Condition
		MIN	MAX	
b	b3	2.7	2.8	IF=5mA
	b4	2.8	2.9	
	b5	2.9	3.0	
	c1	3.0	3.1	

Tolerance:±0.05V

◆ IV Rank

Rank	IV		Condition
	MIN	MAX	
k	30	43	IF=5mA
l	43	62	
m	62	89	

olerance:±15%

◆ WLD Rank

Rank		WLD		Condition
		MIN	MAX	
A	A4	457.5	460	IF=5mA
B	B1	460	462.5	
	B2	462.5	465	
	B3	465	467.5	
	B4	467.5	470	
C	C1	470	472.5	
	C2	472.5	475	

Tolerance:±1nm

◆Judgment criteria of failure for the reliability

Measuring items	Symbol	Measuring conditions	Judgement criteria for failure
Forward voltage	V_F(V)	I_F=5mA	Initial Level*1.1
Reverse current	I_R(UA)	V_R=5V	Over U*2
Luminous intensity	IV(mcd)	I_F=5mA	Initial Level*0.7

Note: 1.U means the upper limit of specified characteristics.
2.Measurment shall be taken between 2 hours and after the test pieces have been retumed to normal ambient conditions after completion of each test.

◆ CAUTIONS:

1.Storage

• In order to avoid the absorption of moisture, it is recommended to store in the dry box (or desicca tor) with a desiccant. Otherwise, to store them in the following environment is recommended.
Temperature: 5°C~30°C Humidity: 60%HR max.
• Attention after opened
However LED is corresponded SMD, when LED be soldered dip, interfacial separation may affect The light transmission efficiency, causing the light intensity to drop. Attention in followed.
a. After opened and mounted, the soldering shall be quickly.
b. Keeping of a fraction
Temperature: 5°C~40°C Humidity: less than 30%
• In case or more than 1 week passed after opening or change color of indicator on desiccant compo nents shall be dried 10-12hr. at 60°C±3°C.
• In case of supposed the components is humid, shall not be dried dip-solder just before. 100Hr at 80°C±3°C or 12Hr at 100°C±3°C

2.ESD (Electrostatic Discharge)

Static Electricity or power surge will damage the LED.
The following procedures may decrease the possibility of ESD damage.
• All production machinery and test instruments must be electrically grounded.
• Use a conductive wrist band or anti-electrostatic glove when handling these LEDs.
• Maintain a humidity level of 50% or higher in production areas.
• Use anti-static packaging for transport and storage.