KGKLIGHT

SAMPLE APPROVAL SHEET

DESCRIPTIONS：

- •1.0x0.5x0.48mm SMD LED
- •Emitting Color:White
- •Lens Color:Yellow Fluorescent

CUSTOMER:_____

MASON P/N:KGK-1005T1D/S530-A4-3T

CUSTOMER P/N:_____

CUSTOMER APPROVED SIGNATURES

APPROVRD BY	CHECKED BY

KGKLIGHT

PRELIMINARY SPEC

1.0x0.5X0.48mm SMD CHIP LED

PART NO: **KGK-1005T1D/S530-A4-3**T WHITE

ATTENTION
OBSERVE PRECAUTIONS FOR HANDLING
LECTROSTATIC DISCHARGE SENSITIVE DEVICES

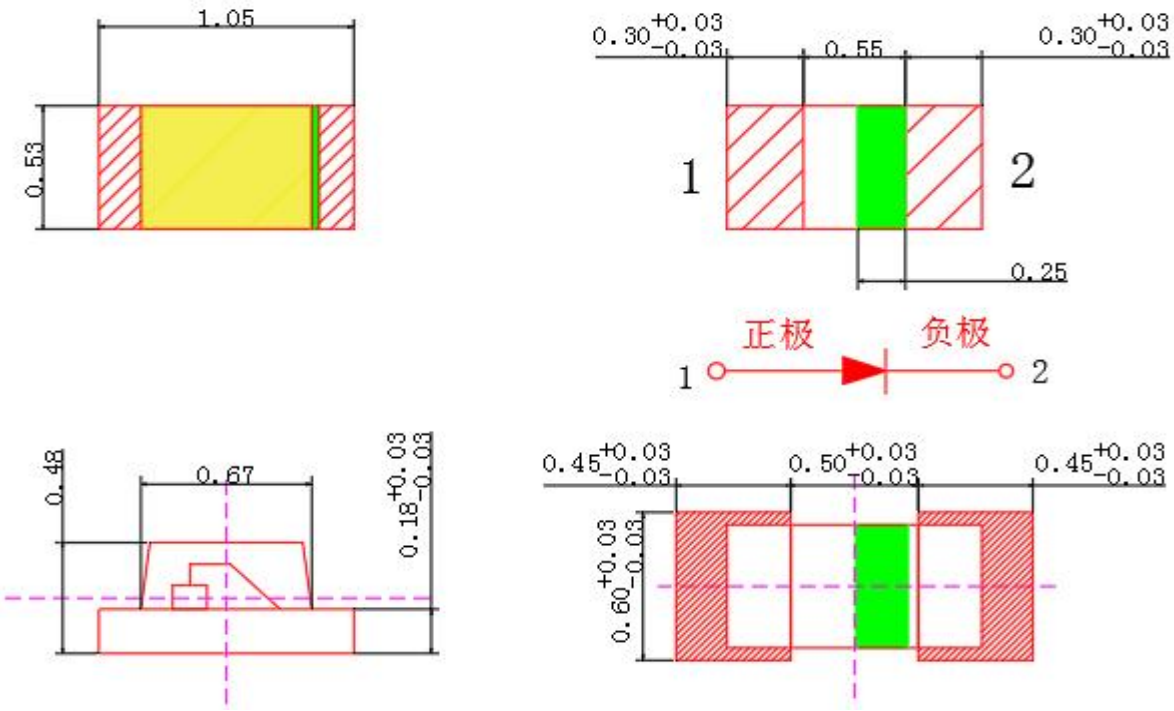
Features

- 1.0mmx0.4mm SMT LED, 0.48mm THICKNESS.
- SIDE 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 ±0.1mm unless otherwise noted.
3. Specifications are subject to change without notice.

◆ Device Selection Guide

Part No.	Chip		Lens color
T0402UW	Material	Emitted color	Yellow Fluorescent
	(InGaN)	WHITE	

◆ 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	2.6	—	3.2	V	IF=5mA
Reverse Current	IR	—	—	10	μA	VR=5V
Chromaticity Coordinates	X	—	0.27	—		IF=5mA
	Y	—	0.28	—		
Luminous Intensity	IV	130	—	320	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

◆ Typical Electrical/Optical Characteristics Curves

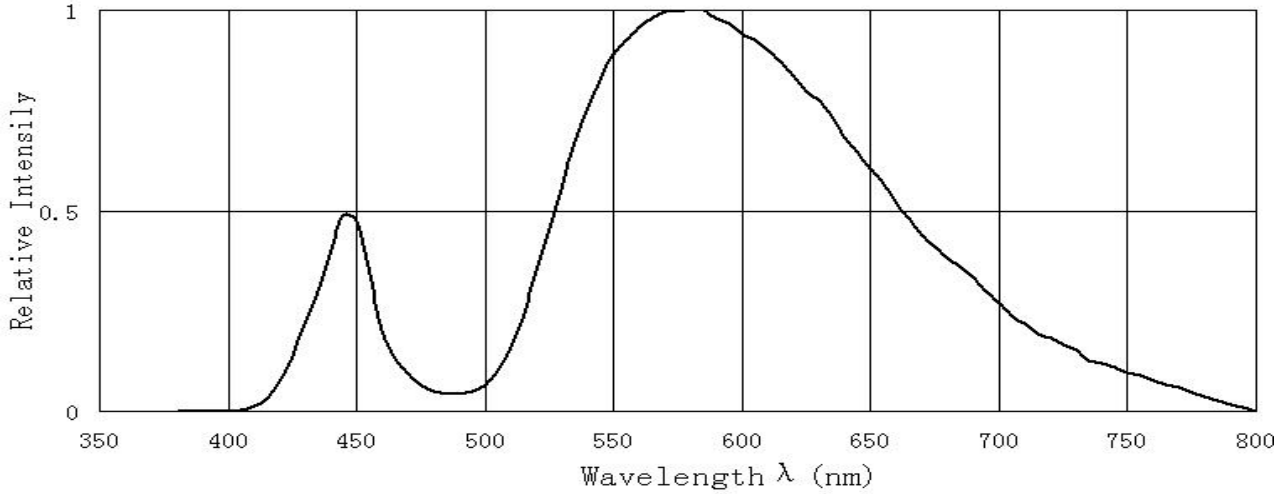


Fig. 1 Relative Intensity vs. Wavelength

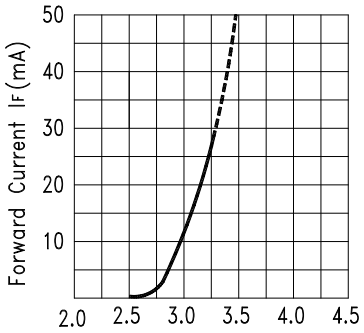


Fig.2 Forward Current vs. Forward Voltage

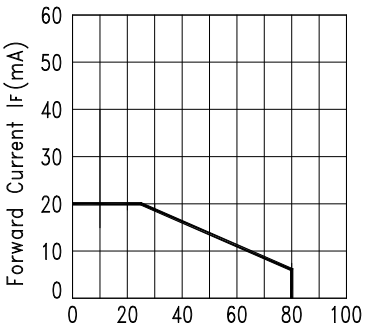


Fig.3 Forward Current Derating Curve

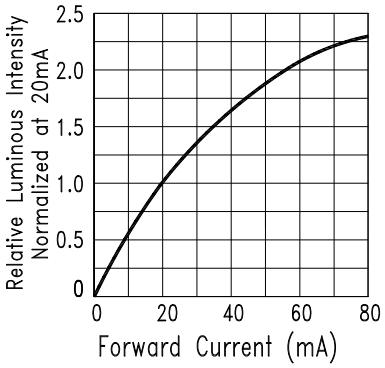


Fig.4 Relative Luminous Intensity vs. Forward Current

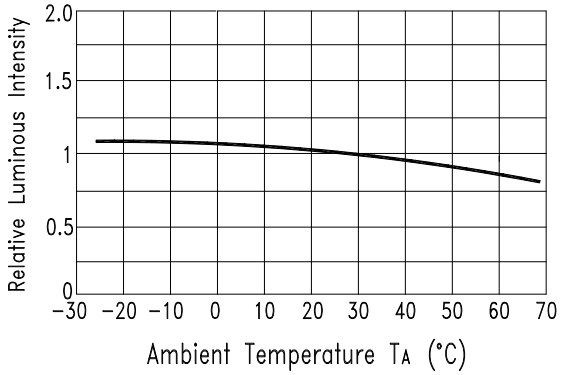


Fig.5 Luminous Intensity vs.Ambient Temperature

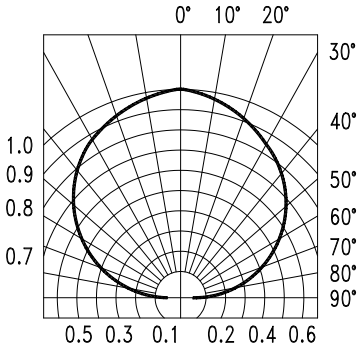


Fig.6 Spatial Distribution

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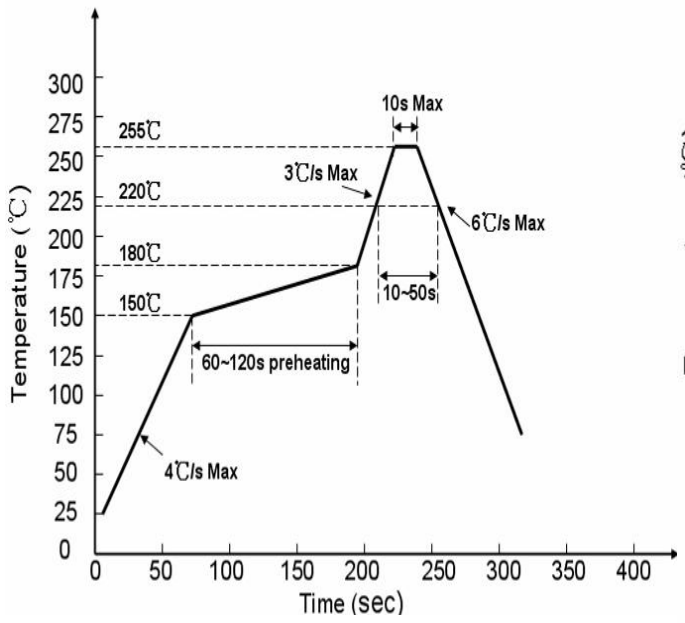
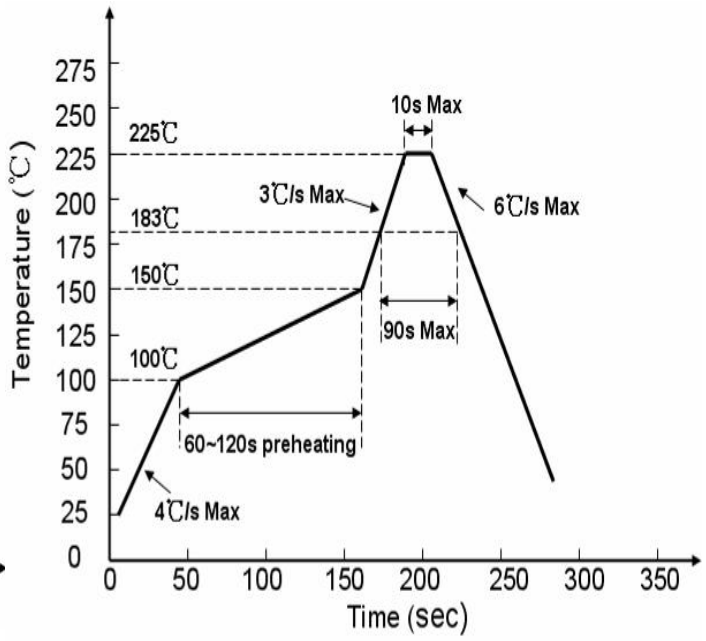
◆ Soldering Profile



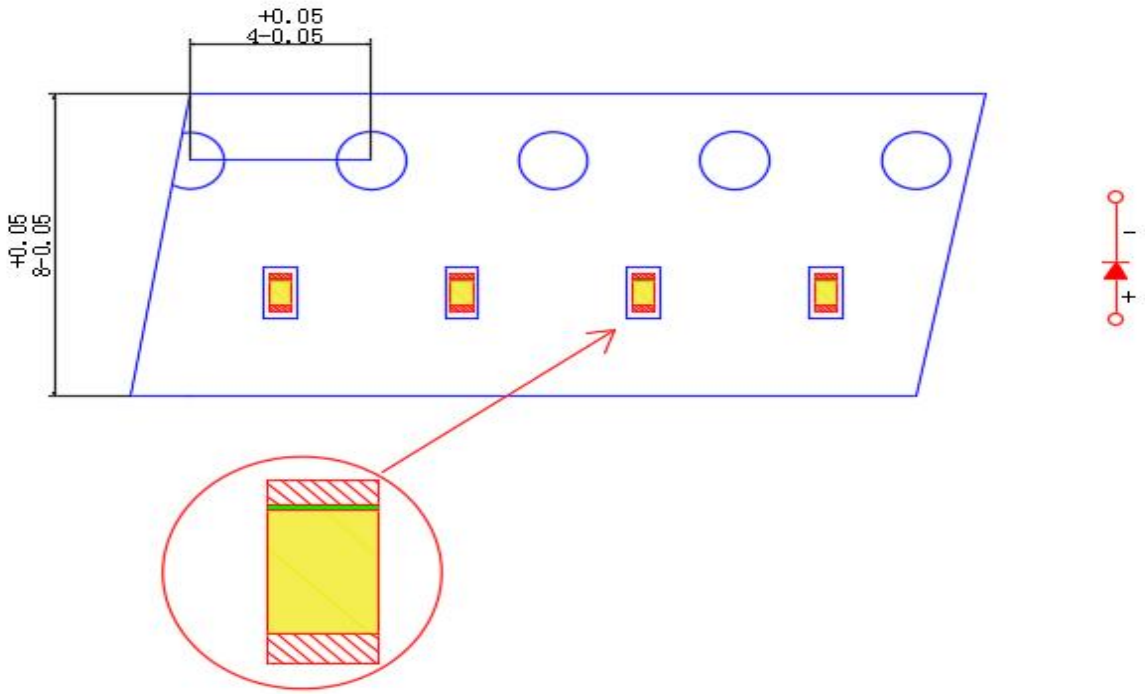
Free Lead process



Lead process

◆ Tape specifications

(Units:mm)



◆ VF Rank

Rank		VF		Condition
		MIN	MAX	
b	b2	2.6	2.7	IF=5mA
	b3	2.7	2.8	
	b4	2.8	2.9	
	b5	2.9	3.0	
c	c1	3.0	3.1	
	c2			

Tolerance:±0.05V

◆ IV Rank

Rank		IV		Condition
		MIN	MAX	
O	O1	130	170	IF=5mA
	O2	170	220	
p	p1	220	270	
	p2	270	320	

Tolerance:±15%

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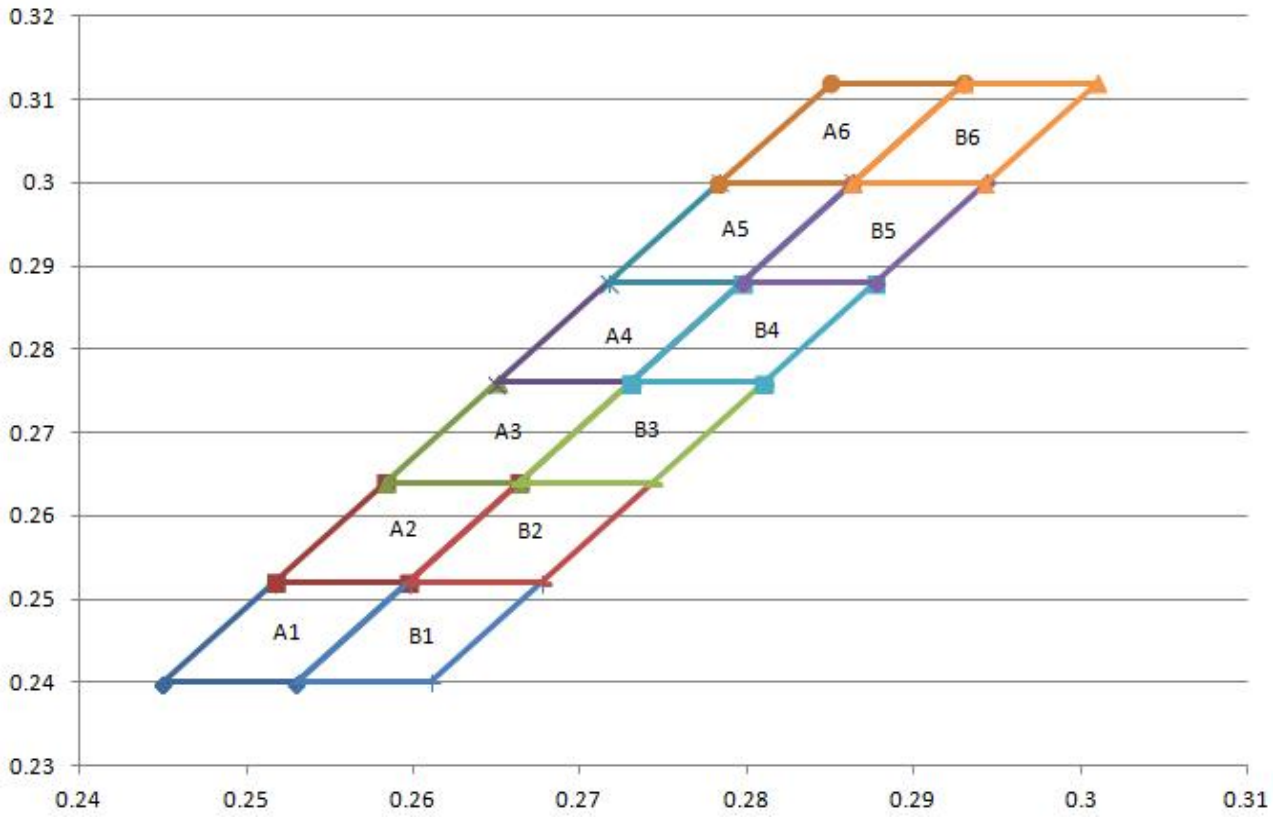
◆ X Y Rank

	X1Y1	X1Y2	X3Y3	X4Y4		X1Y1	X1Y2	X3Y3	X4Y4
A1	0. 245	0. 2517	0. 2597	0. 253	B1	0. 253	0. 2597	0. 2677	0. 261
	0. 24	0. 252	0. 252	0. 24		0. 24	0. 252	0. 252	0. 24
A2	0. 2517	0. 2583	0. 2663	0. 2597	B2	0. 2597	0. 2663	0. 2743	0. 2677
	0. 252	0. 264	0. 264	0. 252		0. 252	0. 264	0. 264	0. 252
A3	0. 2583	0. 265	0. 273	0. 2663	B3	0. 2663	0. 273	0. 281	0. 2743
	0. 264	0. 276	0. 276	0. 264		0. 264	0. 276	0. 276	0. 264
A4	0. 265	0. 2717	0. 2797	0. 273	B4	0. 273	0. 2797	0. 2877	0. 281
	0. 276	0. 288	0. 288	0. 276		0. 276	0. 288	0. 288	0. 276
A5	0. 2717	0. 2783	0. 2863	0. 2797	B5	0. 2797	0. 2863	0. 2943	0. 2877
	0. 288	0. 3	0. 3	0. 288		0. 288	0. 3	0. 3	0. 288
A6	0. 2783	0. 285	0. 293	0. 2863	B6	0. 2863	0. 293	0. 301	0. 2943
	0. 3	0. 312	0. 312	0. 3		0. 3	0. 312	0. 312	0. 3



Tolerance:±0.005

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◆ 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°CHumidity: 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.

3.Please be careful when using in an environment with high concentrations of sulphur or sulphuric gases,as sulphuration can lead to disconnection from the chip resistor or a poor contact connection.