

Product Data Sheet

- ✧ KL23011WDBA/BW
- ✧ Digit height: : 2.3 inch (56.80mm)
- ✧ Digit number: 1 digit
- ✧ Emitting color: White

Dongguan Kinley Industrial Co., Ltd

Add: Humen 3rd Industrial District, Humen Town Dongguan City GD,CN

Tel: 0086 135 3866 1622

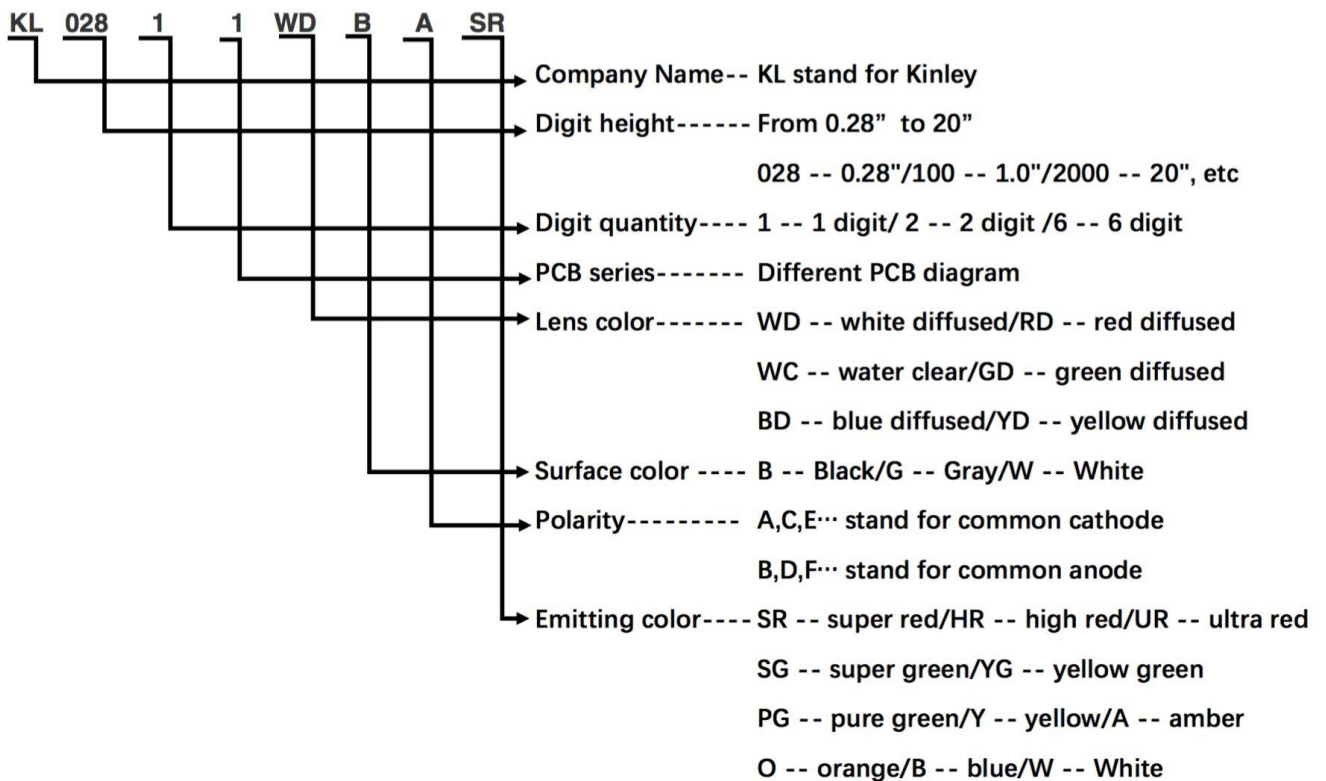
Email: sales@dgkinley.com

Web: www.dgkinley.com

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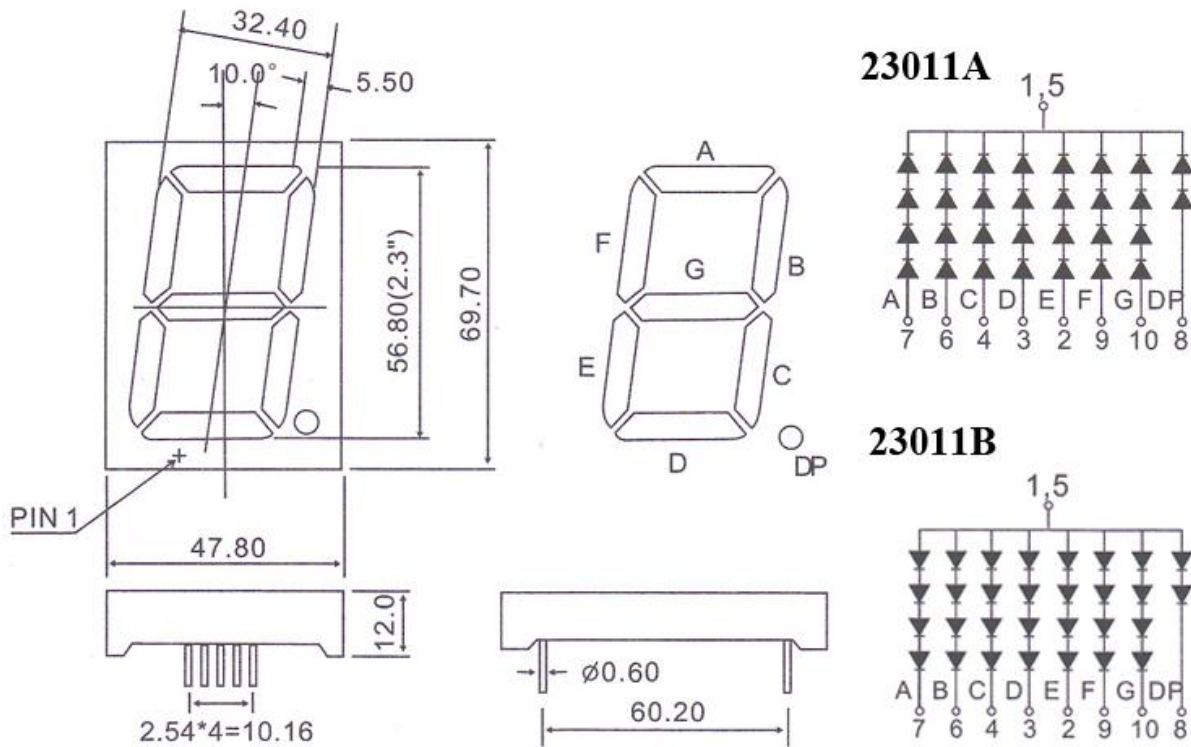
Selection Guide

Part No.	Emitting color	Color Temperature	Lens color	Intensity	Polarity	Surface color
KL23011WDBAW	White	4000-7000K	White diffused	1000-1350mcd	Common cathode	Black
KL23011WDBBW	White	4000-7000K	White diffused	1000-1350mcd	Common anode	Black
KL23011WDGAW	White	4000-7000K	White diffused	1000-1350mcd	Common cathode	Gray
KL23011WDGBW	White	4000-7000K	White diffused	1000-1350mcd	Common anode	Gray



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Dimension and Diagram



Notes:

1. Dimension in millimeter [inch], tolerance is ± 0.25 [.010] and angle is $\pm 1^\circ$ unless otherwise noted.
2. Bending \leq Length*1%.
3. The specifications characteristics and technical data described in the datasheet are subject to change without prior notice.

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Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Test Condition	Value		Unit
			Min	Max	
Reverse Voltage	VR	IR=30	5	—	V
Forward Current	IF	—	—	10	mA
Power Dissipation	Pd	—	—	100	mW
Pulse Current	Ipeak	Duty=0.1mS,1KHz	—	150	mA
Operating Temperature	T opr	—	-40	+85	°C
Storage Temperature	T str	—	-40	+85	°C

Electro-Optical Characteristics (Ta=25°C)

Parameter		Symbol	Min.	Typ.	Max.	Units	Condition
Forward Voltage	Per segment	VF	--	11.5	13	V	IF=10mA
	Per decimal point			2.9	3.2	V	
Reverse Current		IR	--	--	10	μA	VR=5V
Luminous Intensity	Per segment	IV	1000	1200	1350	mcd	IF=10mA
	Per decimal point		250	300	350		
Peak Wavelength		λp	--	/	--	nm	IF=10mA
Color temperature		λd	--		--	K	IF=10mA
Spectrum Radiation Bandwidth		Δλ	--	20	--	nm	IF=10mA

Note:

1. Luminous Intensity is based on the Kinley standards.

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2.Pay attention about Intensity is only for one chip

Reliability test items and conditions:

The reliability of products shall be satisfied with items listed below. Confidence level:90% LTPD:10%

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Failure Judgment Criteria	Ac/Re
1	Reflow Soldering	TEMP:230°C±5°C Min. 5 SEC	6 Min	22 PCS	Iv ≤ Ivt*0.5 or VF ≥ U or VF ≤ L	0/1
2	Temperature Cycle	H:+100°C 15min ∫ 5min L:-40°C 15min	300 Cycles	22 PCS		0/1
3	Thermal Shock	H:+100°C 5min ∫ 10 sec L:-10°C 5min	300 Cycles	22 PCS		0/1
4	High Temperature Storage	TEMP:100°C	1000 HRS	22PCS		0/1
5	Low Temperature Storage	TEMP:-40°C	1000 HRS	22 PCS		0/1
6	DC Operating Life	TEMP:25°C If=10mA	1000 HRS	22 PCS		0/1
7	High Temperature / High Humidity	85°C / 85% RH	1000 HRS	22 PCS		0/1

Note:

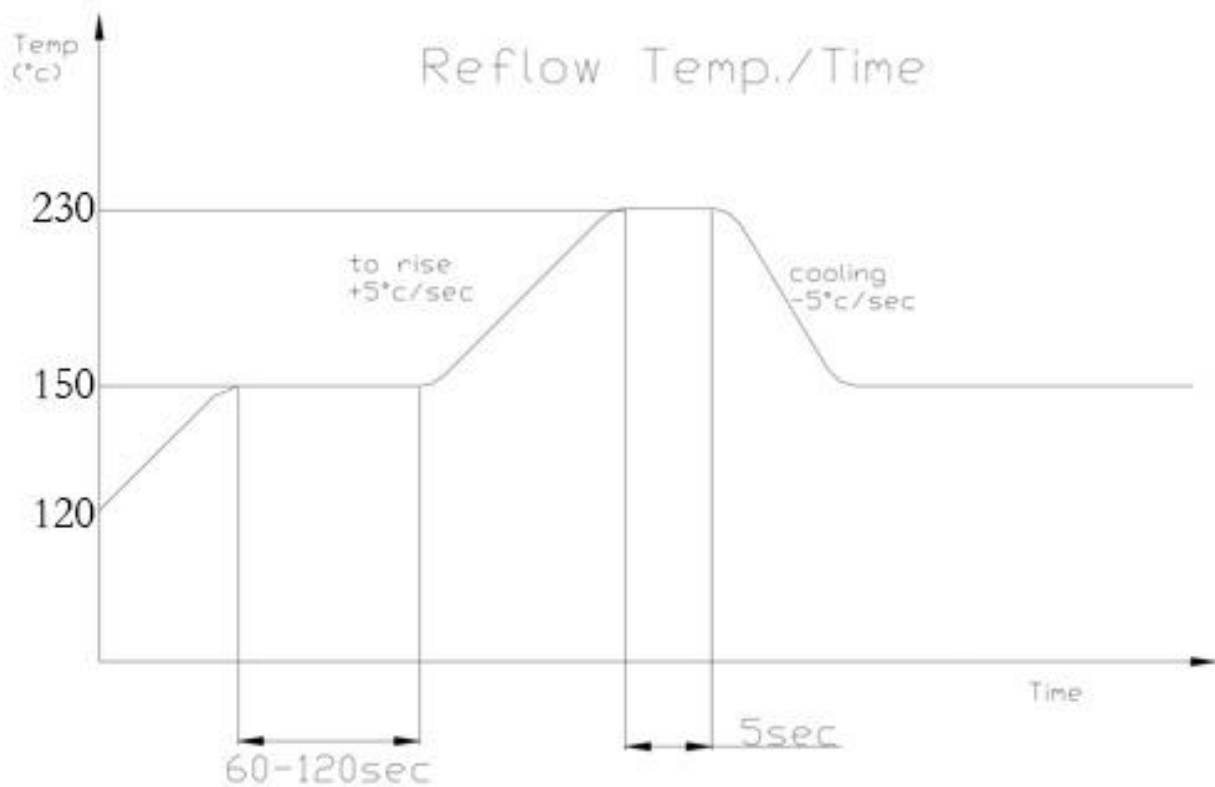
Ivt: The test Iv value of the chip before the reliability test

Iv: The test value of the chip that has completed the reliability test

U: Upper Specification Limit L: Lower Specification Limit

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Reflow Temp. / Time :



■ Soldering Iron :

Basic spec is ≤ 5 sec when 230°C. If temperature is higher, time should be shorter (+10°C \rightarrow -1sec).

Power dissipation of iron should be smaller than 15 W, and temperature should be controllable. Surface temperature of the device should be under 230 °C.

■ Rework :

1. Customer must finish rework within 5 sec under 230°C.
2. The head of iron can not touch copper foil.