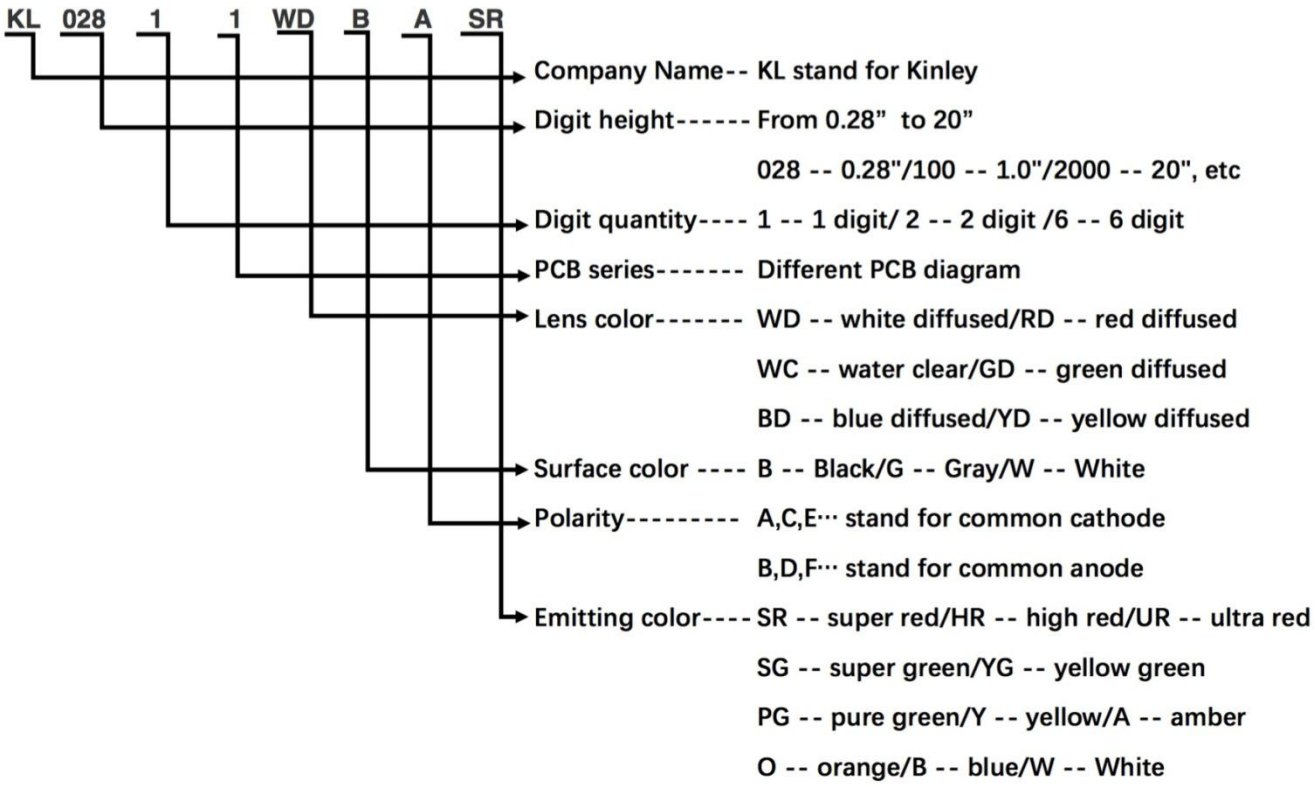
Product Data Sheet

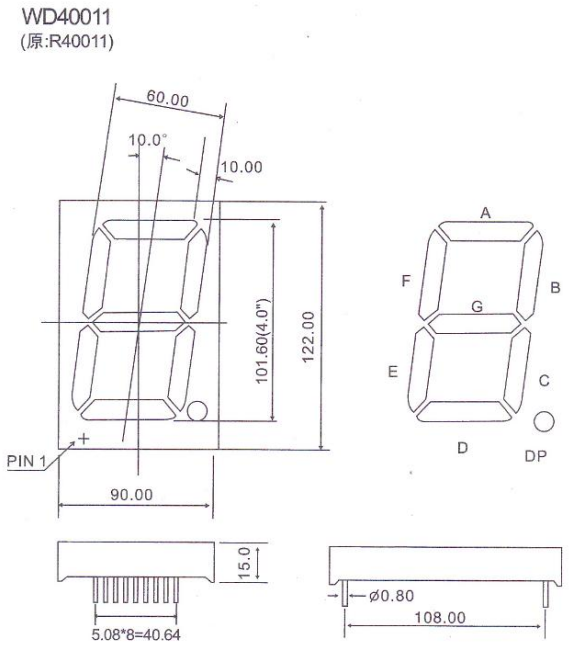
- KL40011WDBBSRPG
- Digit height:4.0 inch (101.60mm)
- Digit number: 1 digit
- Emitting color:Super red+Pure green

Selection Guide

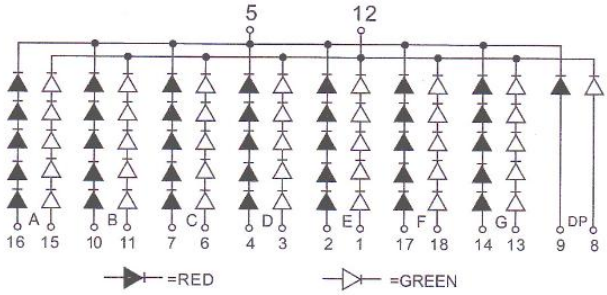
Part No.	Emitting color	Wavelength	Lens color	Polarity	Surface color
KL40011WDBBSR PG	Super red	620-630nm	White diffused	Common anode	Black
	Pure green	515-525nm			



Dimesion and Diagram



PCB:D40011G/HEG



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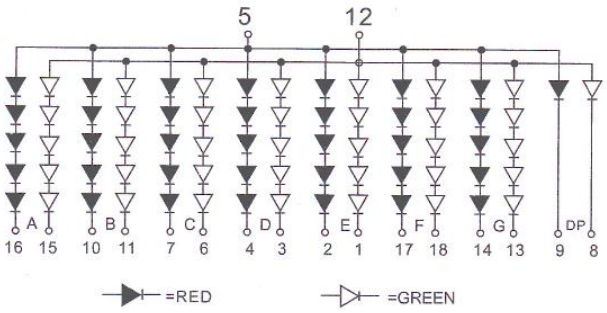


Notes:

1. Dimension in millimeter [inch], tolerance is ±0.25mm [.01”] and angle is ±1°unless otherwise noted.

2. Bending ≤ Length*1%.

3.The specifications characteristics and technical data described in the datasheet are subject to change without prior notice.

Absolute Maximum Ratings at TA=25℃

Parameter	Symbol	Test Condition	Value		Unit
			Min	Max	
Reverse Voltage	VR	IR=30	5	—	V
Forward Current	IF	—	—	20	mA
Power Dissipation	Pd	—	—	100	mW
Pulse Current	Ipeak	Duty=0.1mS,1KHz	—	150	mA
Operating Temperature	T opr	—	-40	+85	℃
Storage Temperature	T str	—	-40	+85	℃

Electro-Optical Characteristics (Ta=25℃) For Pure green

Parameter		Symbol	Min.	Typ.	Max.	Units	Condition
Forward Voltage	Per segment	V_F	--	14	15	V	I_F=20mA
	Per decimal point			2.8	3.1		
Reverse Current		I_R	--	--	10	μA	V_R=5V
Luminous Intensity	Per segment	I_V	1300	1400	1500	mcd	I_F=20mA
	Per decimal point		260	280	300		
Peak Wavelength		λp	--	525	--	nm	I_F=20mA
Dominant Wavelength		λd	--	520	--	nm	I_F=20mA
Spectrum Radiation Bandwidth		△λ	--	20	--	nm	I_F=20mA

Electro-Optical Characteristics (Ta=25℃) For Super red

Parameter		**Symbol**	**Min.**	**Typ.**	**Max.**	**Units**	**Condition**
Forward Voltage	Per segment	V_F	--	9	10	V	I_F=20mA
	Per decimal point			1.8	2		
Reverse Current		I_R	--	--	10	μA	V_R=5V
Luminous Intensity	Per segment	I_V	500	600	650	mcd	I_F=20mA
	Per decimal point		100	120	130		
Peak Wavelength		λp	--	625	--	nm	I_F=20mA
Dominant Wavelength		λd	--	620	--	nm	I_F=20mA
Spectrum Radiation Bandwidth		△λ	--	20	--	nm	I_F=20mA

Note:

1.Luminous Intensity is based on the Kinley standards.

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 ℃±5 ℃ 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 ℃ 15min	300 Cycles	22 PCS		0/1
3	Thermal Shock	H:+100°C 5min ∫ 10 sec L:-10 ℃ 5min	300 Cycles	22 PCS		0/1
4	High Temperature Storage	TEMP:100 ℃	1000 HRS	22PCS		0/1
5	Low Temperature Storage	TEMP:-40 ℃	1000 HRS	22 PCS		0/1
6	DC Operating Life	TEMP:25 ℃ If=10mA	1000 HRS	22 PCS		0/1
7	High Temperature / High Humidity	85 ℃ / 85% RH	1000 HRS	22 PCS		0/1

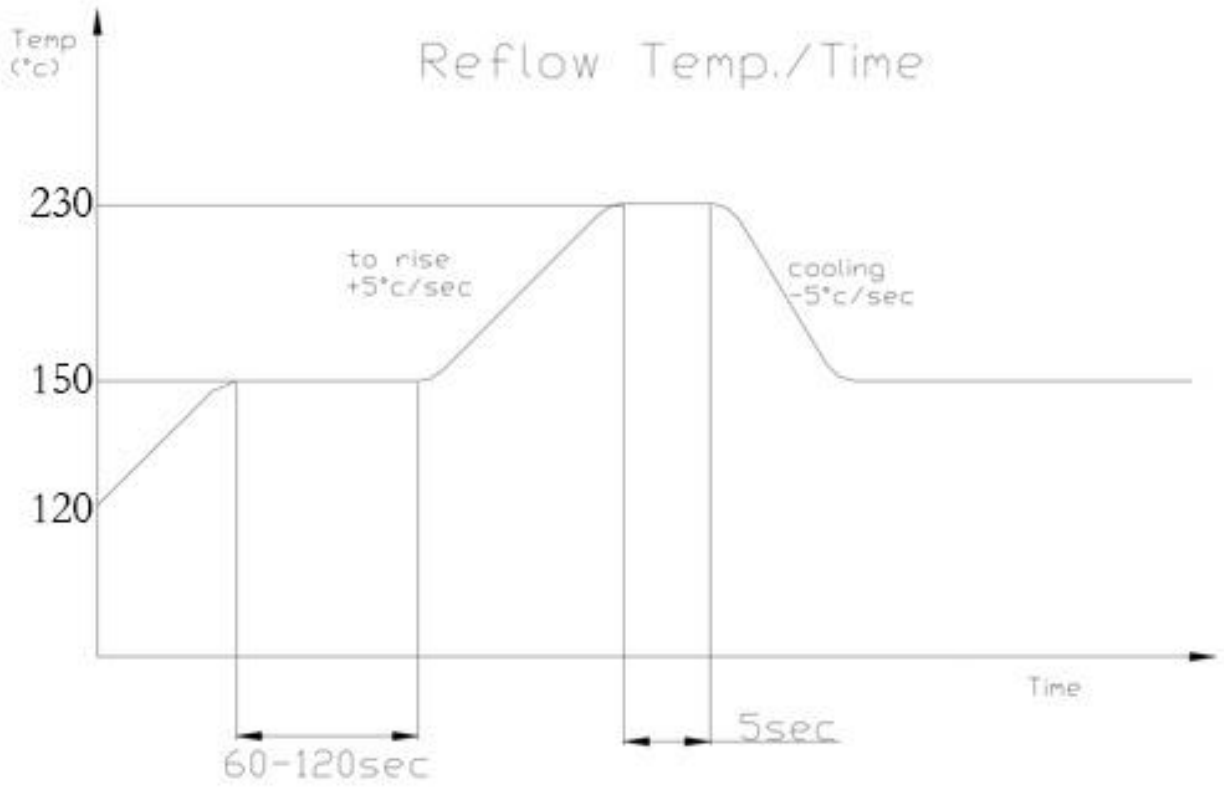
Note:

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

Reflow Temp. / Time :



■ Soldering Iron :

Basic spec is ≦5 sec when 230 ℃. If temperature is higher, time should be shorter (+10°C → -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 ℃.

■ Rework :

1. Customer must finish rework within 5 sec under 230 ℃.

2. The head of iron can not touch copper foil.