

# KITELIGHT® PRODUCTS

## Parameter of *Polar Light 2* Electroluminescent Wire

### \*\*\*Current (mA/meter)\*\*\*

Fre.(Hz) Volt.(VAC)	1000	1500	2000
50	1.88	3.16	4.58
80	3.38	5.97	8.13
110	4.85	7.74	11.11

### \*\*\*Capacitance (nF/meter,calculated)\*\*\*

Fre.(Hz) Volt.(VAC)	1000	1500	2000
50	6.80	6.75	6.70
80	6.85	6.80	6.75
110	6.90	6.85	6.80

Remark:Static Capacitance:6.8nF/meter

### \*\*\*Power (mW/meter)\*\*\*

Fre.(Hz) Volt.(VAC)	1000	1500	2000
50	94	158	230
80	270	478	650
110	533	851	1223

### \*\*\*Operating lifetime (hours)\*\*\*

Fre.(Hz) Volt.(VAC)	1000	1500	2000
50	4500	3500	2500
80	3000	2500	2000
110	2500	2000	1500

Remark: Keep operating, no stop.

### \*\*\*Chromatogram(1500Hz,90V)\*\*\*

Color	Pink	Purple	Blue	Lime green	Grass green	Blue green	Orange
X	0.5308	0.2938	0.1183	0.2142	0.1289	0.1616	0.5308
Y	0.2751	0.1567	0.2873	0.6067	0.4383	0.3575	0.4811
Peak value of wavelength (nm)	608	463	496	511	506	502	585

Diameter: 0.9mm/1.4mm/2.2mm/3.2mm/4.0mm/5.0mm

Brightness: 5cd/m<sup>2</sup>(30VAC/400Hz)~500cd/m<sup>2</sup>(150VAC/5000Hz)

Operating Voltage: 30-150VAC

Operating Frequency: 400-5000Hz

Operating Temperature: -10℃~+60℃

Operating Humidity: <60%

Storage Temperature: +5℃~+35℃

Storage Humidity: <45%

Storage Time: 2 years

\*There will be error of ±15% between above data and actual data in application.

Instant Breakdown Voltage: 3500VAC

Recommend Operating Voltage: 80-90VAC

Recommend Operating Frequency: 1000-2000Hz

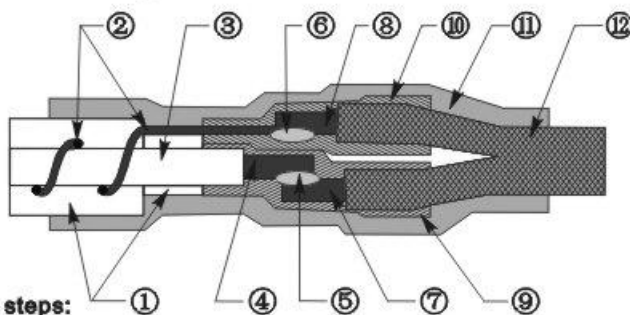
Bending Diameter: >4times of " *Polar Light2*" EL wire diameter

Twisting Angle: <30°

Stretching Force: 0.9mm-0.4Kg/1.4mm-0.8Kg/2.2mm-1.0Kg/  
3.2mm-1.2Kg/ 4.0mm-1.4Kg/5.0mm-1.6Kg

## The Indication of soldering EL wire with lead wire

Install configuration drawing:



Soldering steps:

1. Peel off insulating wrap of EL wire ①;
2. Take out the two small electrode ② and twist together;
3. Scrape off the electrolytic layer ③ on the core electrode and expose electrode ④;
4. Peel off the wrap of lead wire ⑫ and expose electrode ⑦ and ⑧, which length is 3mm-4mm;
5. Slip a PVC insulating shrink tube ⑩ which is suitable in diameter and length on the EL wire for convenience of next process.

- ① Insulating wrap of the ELW (Single layer/double layers)
- ② Electrode of the ELW (Double thin wires)
- ③ Electrolytic layer of the ELW
- ④ Core electrode of the ELW
- ⑤ Soldered joint
- ⑥ Soldered joint
- ⑦ Electrode which is input electrical source.
- ⑧ Electrode which is input electrical source.
- ⑨ PVC insulating shrink tube.
- ⑩ PVC insulating shrink tube.
- ⑪ PVC insulating shrink tube.
- ⑫ Lead wire which input electrical source.

6. Slip another two suitable PVC insulating shrink tube ⑨ and ⑩ each on the Electrode ⑦ and ⑧, then solder ④ and ⑦ on ⑤, solder ② and ⑧ on ⑥;
7. Cover ⑤ and ⑥ with shrink tube ⑨ and ⑩, then shrink them by hot wind;
8. Last, slip the shrink tube ⑪ which has worn already at step 5 to the proper position and shrink it by hot wind;

Remark: The size of inner hole of shrink tube must be a little bigger than the diameter of EL wire.

## Explanation of Model

KL -EL PL2-W-		1	2	3	4	5	6
BRAND	ELECTROLUMINESCENT	POLAR LIGHT 2, WIRE	QUANTITY OF CORE	KIND	SHAPE	DIAMETER	COLOR
			0-Single core 1-Double core 2-Three core 3-Four core	1-Single color 2-Spire multi-color 3-Subsection multi-color 4-Alterable multi-color 5-Spring shape 6-Nonskid elasticity 7-Strong force PU wire	G-Round L-Welted A-Single welt in center B-Double welt in center C-Single welt in bottom D-Double welt in bottom E-Double thick welt in bottom E-Egg-shape (elliptical) F- Flat Bottom	0.9mm 1.4mm 2.2mm 2.8mm 3.2mm 4.0mm 5.0mm	B1-Blue R3-Red O1-Orange Y1-Yellow P1-Purple P2-Pink PB-Purple-Blue G2-Grass-Green W2-White-Glow-white W1-Red-Glow-White G1-Lime TG3-Blue-Green