

# WK LED

Custom Made LED and EL Lighting

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## WK EL NEON WIRE



In our continuous search for smaller linear lighting solutions, now we introduce **WK NEON Wire** Based on Electroluminescent technology it is the smallest linear lighting source possible!

With diameters varying from only 1mm to 5mm it will fit anywhere..

Available in standard colours like **Red**, **Green**, **Blue**, **White** and **Warm White**

**WK NEON Wire** will be delivered on rolls of 50 or 100 meters and can be cut anywhere

Inverters are available to drive 0,1 to 100 meters

Minimum length 0,1 meter, maximum length 100 meters

WK EL Wire works best at 80VAC and 1000Hz

Usefull lamplife is 3000 hrs at these settings

**WK NEON Wire** can be made round or with flat backside



Mounting channel for round version:



Technical data:

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

Volt.(VAC)	Fre.(Hz)	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) \*\*\*

Volt.(VAC)	Fre.(Hz)	1000	1500	2000
50		7.3	7.2	7.1
80		7.7	7.6	7.5
110		8.1	8.0	7.9

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

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

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

Volt.(VAC)	Fre.(Hz)	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

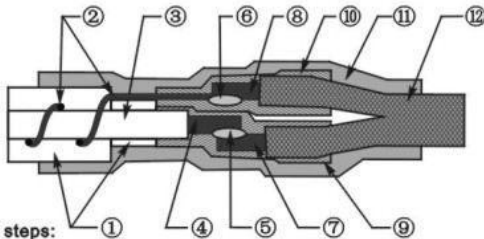
Diameter: 0.9mm/1.4mm/2.2mm/3.2mm/4.0mm/5.0mm  
 Brightness: 5cd/m<sup>2</sup>(30VAC/400Hz)~500cd/m<sup>2</sup>(150VAC/5000Hz)  
 Operating Voltage: 30-150VAC  
 Operating Frequency: 400-5000Hz  
 Operating Temperature: -10℃~+60℃  
 Operating Humidity: <60%  
 Storage Temperature: +5℃~+30℃  
 Storage Humidity: <45%  
 Storage Time: 2 years

Instant Breakdown Voltage: 3500VAC  
 Recommend Operating Voltage: 80-90VAC  
 Recommend Operating Frequency: 1000-2000Hz  
 Bending Diameter: >4times of 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 end of lifetime is the time when brightness fall to only 30% of the beginning brightness.  
 \*There will be error of ±15% between above data and actual data in application.

### 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 ⑪ 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 ⑪, then shrink them by hot wind;
  8. Last, slip the shrink tube ⑩ 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

WY-EL		PL2-W-		1	2	—	3	—	4	—	5	—	6
BRAND	ELECTROLUMINESCENT	POLAR LIGHT 2 GENERATION	WIRE	QUANTITY OF CORE	KIND	SHAPE	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-Weltd	S-Standard 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	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
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