

Electroluminescent Wires

Polar Light 3

WANYU(International) Technology Development Co.,Ltd concentrates on researching the core technology of Electroluminescent Wire(EL Wire).We have been experimenting with some new high polymer materials and achieved breakthroughs in the core technology of EL Wire.The new generation of EL wire -'Polar Light3' is available NOW!

Improved performances of 'Polar Light3'EL wire:

1. Higher Brightness

Brightness of 'Polar Light 3'is more than double that of 'Polar Light2'. It generates nicer light. However, it can be used in lumination fields which do not require high brightness.

2. Lower Voltage in application

'Polar Light 3' EL wire requires low voltage(40V).It is thus safer for user and compliant with a great range of applications.

3.Easy Bend-forming and Stay the Shape

'Polar Light 3' EL wire has a thick and hard core wire inside so it does not require any additional support.

4.Better Flexure Endurance

'Polar Light 3' is of a minimum bending diameter of 10mm ,you can use it to produce many complex patterns and shapes.

5. Longer Lifetime

*Specification

Diameter:2.6mm

Model:WY-ELPL3-W

Color:Blue green/Blue/Lime green/Grass green/Yellow/Orange/Red/Pink/Purple/White

*Physical Feature

Input Voltage: 40~110VAC

Input Frequency: 400~3000Hz

Electrical Current: <150 mA

Twisting Angle: 30°/M

Bending diameter: >10mm

Stretching Force:<1.5Kg

Operating Temperature: -10°C+60°C

Operating Humidity: <60%

Lifetime: 3000~6000Hrs

Storage Temperature: +5°C+35°C

Storage Humidity: <30%

Storage time: 2 years

*Please choose the **Input Voltage and Frequency** according to the requirement of Brightness and lifetime.

*The data of **Lifetime** is for reference only. Lifetime would be affected by many factors, such as voltage, frequency, working time, temperature, humidity etc.

Capacitance(nF / meter)

| Voltage (VAC) | Frequency(Hz) | | | |
|------------------|---------------|-------|-------|-------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 10.39 | 10.29 | 10.20 | 10.10 |
| 70 | 10.90 | 10.71 | 10.55 | 10.46 |
| 90 | 11.49 | 11.21 | 10.90 | 10.80 |
| 110 | 11.99 | 11.71 | 11.25 | 11.15 |

Power Consumption(mW / meter)

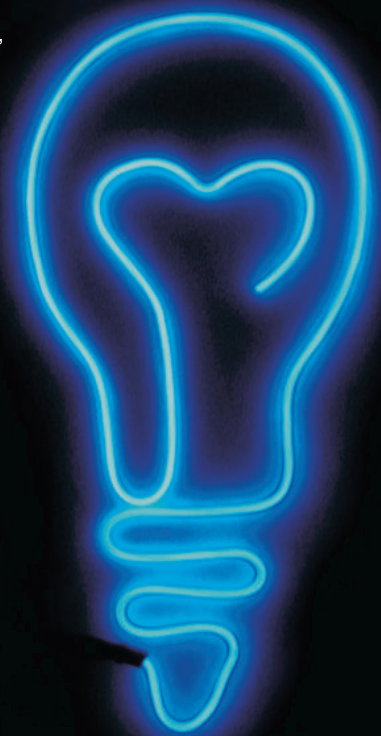
| Voltage (VAC) | Frequency(Hz) | | | |
|------------------|---------------|-------|-------|-------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 59 | 112.5 | 205.5 | 412.5 |
| 70 | 121.8 | 243.6 | 415.8 | 831.6 |
| 90 | 208.8 | 407.7 | 702 | 1404 |
| 110 | 330 | 643.5 | 1089 | 2178 |

Ohmic Resistance(KOhm / meter)

| Voltage (VAC) | Frequency(Hz) | | | |
|------------------|---------------|-----|------|------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 308 | 178 | 113 | 80 |
| 70 | 240 | 133 | 105 | 71 |
| 90 | 216 | 120 | 98 | 62 |
| 110 | 205 | 102 | 92 | 50 |

Current Consumption (mA / meter)

| Voltage (VAC) | Frequency(Hz) | | | |
|------------------|---------------|------|------|-------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 1.18 | 2.25 | 4.11 | 8.25 |
| 70 | 1.74 | 3.48 | 5.94 | 11.88 |
| 90 | 2.32 | 4.53 | 7.80 | 15.50 |
| 110 | 3.01 | 5.85 | 9.90 | 19.80 |



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Brightness Feature

Lime green (G1)

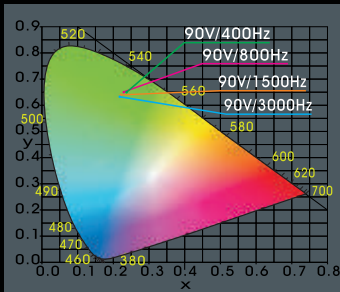


Chromaticity Coordinates

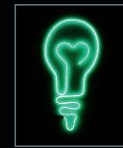
| Vol(VAC) /Fre(Hz) | Chromaticity Coordinates | |
|----------------------|--------------------------|--------|
| | X | Y |
| 90/400 | 0.2404 | 0.6504 |
| 90/800 | 0.2340 | 0.6518 |
| 90/1500 | 0.2274 | 0.6497 |
| 90/3000 | 0.2246 | 0.6433 |

Initial Reference (cd/m²)

| Vol(VAC) | Frequency(Hz) | | | |
|----------|---------------|--------|--------|--------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 11.84 | 18.40 | 24.64 | 31.68 |
| 70 | 29.12 | 46.88 | 65.12 | 89.44 |
| 90 | 53.12 | 84.80 | 123.04 | 169.60 |
| 110 | 79.36 | 133.76 | 197.44 | 279.84 |



Grass green(G2)

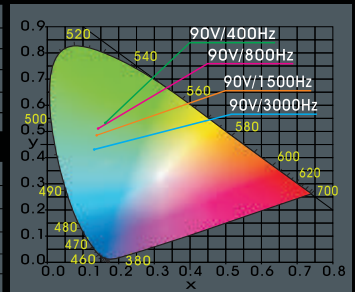


Chromaticity Coordinates

| Vol(VAC) /Fre(Hz) | Chromaticity Coordinates | |
|----------------------|--------------------------|--------|
| | X | Y |
| 90/400 | 0.1520 | 0.5429 |
| 90/800 | 0.1443 | 0.5148 |
| 90/1500 | 0.1413 | 0.4806 |
| 90/3000 | 0.1398 | 0.4239 |

Initial Reference (cd/m²)

| Vol(VAC) | Frequency(Hz) | | | |
|----------|---------------|-------|--------|--------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 8.80 | 13.44 | 17.92 | 24.62 |
| 70 | 21.76 | 33.12 | 46.88 | 66.24 |
| 90 | 38.24 | 60.16 | 87.84 | 129.60 |
| 110 | 57.28 | 94.88 | 141.92 | 203.52 |



Yellow(Y1)

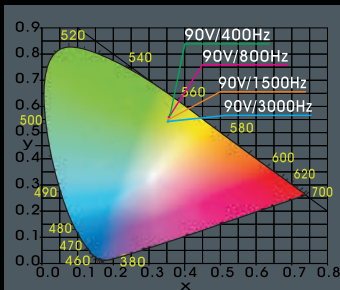


Chromaticity Coordinates

| Vol(VAC) /Fre(Hz) | Chromaticity Coordinates | |
|----------------------|--------------------------|--------|
| | X | Y |
| 90/400 | 0.3576 | 0.5800 |
| 90/800 | 0.3550 | 0.5790 |
| 90/1500 | 0.3544 | 0.5757 |
| 90/3000 | 0.3550 | 0.5633 |

Initial Reference (cd/m²)

| Vol(VAC) | Frequency(Hz) | | | |
|----------|---------------|-------|--------|--------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 8.80 | 21.44 | 38.72 | 57.60 |
| 70 | 12.96 | 33.12 | 61.28 | 95.36 |
| 90 | 17.44 | 46.72 | 88.16 | 141.44 |
| 110 | 24.16 | 66.88 | 130.24 | 206.56 |



Red(R3)

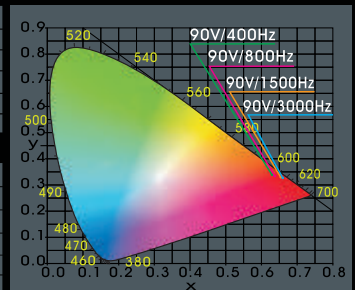


Chromaticity Coordinates

| Vol(VAC) /Fre(Hz) | Chromaticity Coordinates | |
|----------------------|--------------------------|--------|
| | X | Y |
| 90/400 | 0.6379 | 0.3441 |
| 90/800 | 0.6462 | 0.3418 |
| 90/1500 | 0.6522 | 0.3401 |
| 90/3000 | 0.6552 | 0.3389 |

Initial Reference (cd/m²)

| Vol(VAC) | Frequency(Hz) | | | |
|----------|---------------|-------|-------|-------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 5.92 | 8.32 | 11.20 | 16.64 |
| 70 | 9.76 | 14.72 | 21.12 | 32.80 |
| 90 | 13.76 | 22.56 | 32.48 | 53.28 |
| 110 | 17.60 | 29.76 | 46.56 | 73.12 |



Pink(P2)

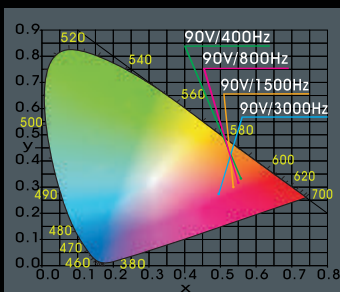


Chromaticity Coordinates

| Vol(VAC) /Fre(Hz) | Chromaticity Coordinates | |
|----------------------|--------------------------|--------|
| | X | Y |
| 90/400 | 0.5660 | 0.3322 |
| 90/800 | 0.5508 | 0.3172 |
| 90/1500 | 0.5346 | 0.3007 |
| 90/3000 | 0.4989 | 0.2758 |

Initial Reference (cd/m²)

| Vol(VAC) | Frequency(Hz) | | | |
|----------|---------------|-------|-------|-------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 3.68 | 4.95 | 6.24 | 8.16 |
| 70 | 7.52 | 11.36 | 14.72 | 21.44 |
| 90 | 12.64 | 19.52 | 26.88 | 41.92 |
| 110 | 18.24 | 29.76 | 43.84 | 65.44 |



Orange(O1)

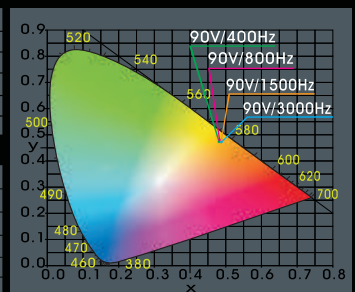


Chromaticity Coordinates

| Vol(VAC) /Fre(Hz) | Chromaticity Coordinates | |
|----------------------|--------------------------|--------|
| | X | Y |
| 90/400 | 0.4812 | 0.4758 |
| 90/800 | 0.4815 | 0.4772 |
| 90/1500 | 0.4821 | 0.4773 |
| 90/3000 | 0.4843 | 0.4748 |

Initial Reference (cd/m²)

| Vol(VAC) | Frequency(Hz) | | | |
|----------|---------------|-------|--------|--------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 8.48 | 11.52 | 16.70 | 20.96 |
| 70 | 17.60 | 27.52 | 38.40 | 53.92 |
| 90 | 29.92 | 48.32 | 69.76 | 102.88 |
| 110 | 45.12 | 73.44 | 111.52 | 168.96 |



Purple(P1)

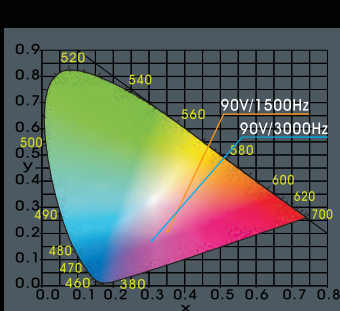


Chromaticity Coordinates

| Vol(VAC) /Fre(Hz) | Chromaticity Coordinates | |
|----------------------|--------------------------|--------|
| | X | Y |
| 90/400 | — | — |
| 90/800 | — | — |
| 90/1500 | 0.3546 | 0.2089 |
| 90/3000 | 0.3129 | 0.1710 |

Initial Reference (cd/m²)

| Vol(VAC) | Frequency(Hz) | | | |
|----------|---------------|-----|-------|-------|
| | 400 | 800 | 1500 | 3000 |
| 50 | — | — | 3.36 | 4.32 |
| 70 | — | — | 7.04 | 9.92 |
| 90 | — | — | 12.01 | 17.12 |
| 110 | — | — | 17.44 | 26.40 |



Blue green(TG3)

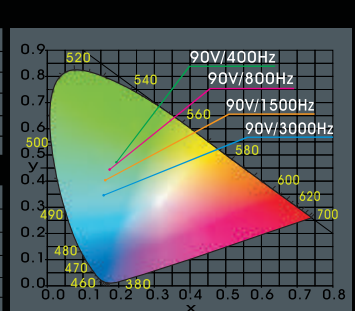


Chromaticity Coordinates

| Vol(VAC) /Fre(Hz) | Chromaticity Coordinates | |
|----------------------|--------------------------|--------|
| | X | Y |
| 90/400 | 0.1911 | 0.4730 |
| 90/800 | 0.1759 | 0.4430 |
| 90/1500 | 0.1686 | 0.4003 |
| 90/3000 | 0.1618 | 0.3409 |

Initial Reference (cd/m²)

| Vol(VAC) | Frequency(Hz) | | | |
|----------|---------------|--------|--------|--------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 15.68 | 23.20 | 31.36 | 41.12 |
| 70 | 36.62 | 56.64 | 79.85 | 112.16 |
| 90 | 49.92 | 103.35 | 147.20 | 213.76 |
| 110 | 95.68 | 157.12 | 235.04 | 328.32 |



Red glow white(W1)

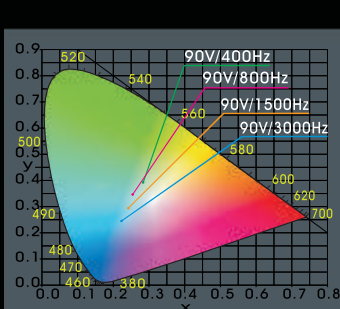


Chromaticity Coordinates

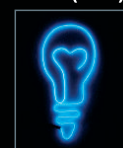
| Vol(VAC) /Fre(Hz) | Chromaticity Coordinates | |
|----------------------|--------------------------|--------|
| | X | Y |
| 90/400 | 0.2804 | 0.3936 |
| 90/800 | 0.2590 | 0.3419 |
| 90/1500 | 0.2399 | 0.2907 |
| 90/3000 | 0.2244 | 0.2420 |

Initial Reference (cd/m²)

| Vol(VAC) | Frequency(Hz) | | | |
|----------|---------------|--------|--------|--------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 18.88 | 24.96 | 30.72 | 37.92 |
| 70 | 35.84 | 53.12 | 69.12 | 82.52 |
| 90 | 58.40 | 86.24 | 114.72 | 146.56 |
| 110 | 80.48 | 133.76 | 166.08 | 224.95 |



Blue(B1)

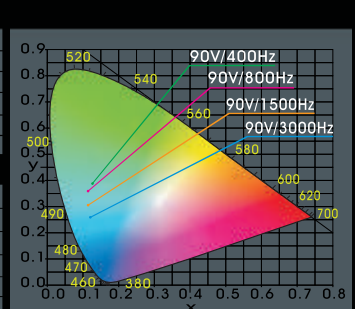


Chromaticity Coordinates

| Vol(VAC) /Fre(Hz) | Chromaticity Coordinates | |
|----------------------|--------------------------|--------|
| | X | Y |
| 90/400 | 0.1281 | 0.3914 |
| 90/800 | 0.1190 | 0.3559 |
| 90/1500 | 0.1198 | 0.3134 |
| 90/3000 | 0.1234 | 0.2671 |

Initial Reference (cd/m²)

| Vol(VAC) | Frequency(Hz) | | | |
|----------|---------------|-------|--------|--------|
| | 400 | 800 | 1500 | 3000 |
| 50 | 5.92 | 11.36 | 20.32 | 28.32 |
| 70 | 12.48 | 27.84 | 46.88 | 76.80 |
| 90 | 21.44 | 48.48 | 81.60 | 148.32 |
| 110 | 31.84 | 78.72 | 119.04 | 214.72 |



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