



ELAM Ltd
 P.O.B. 45071, Jerusalem 91450, Israel
 Phone: 972-2-532-8888
 Fax: 972-2-532-8889

Product Specification

Super Thick EL Wire 04S series

PD 0107/C, Rev. 11, 23.04.01

Common Characteristics*

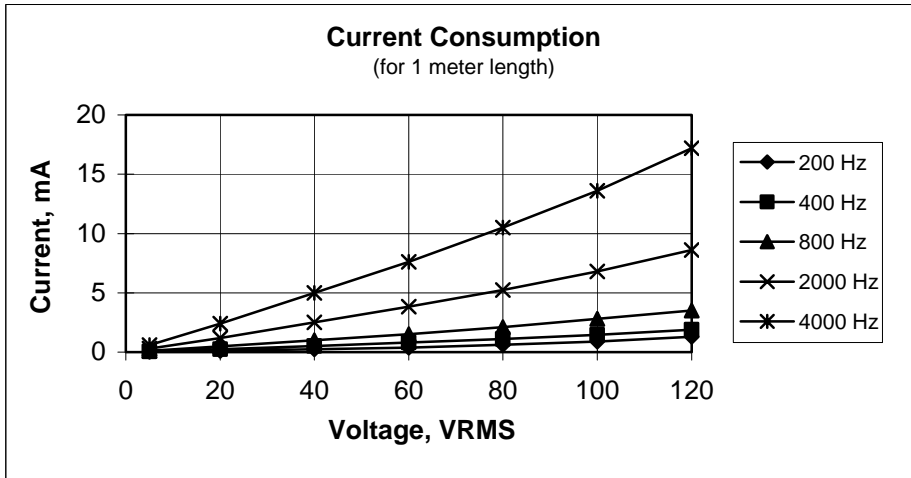
Overall Diameter	4.5 - 5.5 mm (0.177" - 0.216")
Storage Conditions:	
Temperature	-20 to +50 deg. C (-4 to +122 deg.F)
Humidity (R.H.)	not more than 65%
Max. Storage Time	1 year
Operating Temperature	-20 to +50 deg. C (-4 to +122 deg.F)

Absolute Maximum/Minimum Ratings

Max. Power Supply Voltage	130 Volts (RMS)
Dynamic Capacitance at 5 VAC in darkness	4.9 nF +/- 0.7 nF/m
Max. Stretching Force	1 Kg
Min. Bending Diameter	60 mm
Max. Twisting Angle	30 degrees per meter
Insulation Breakdown Voltage	4000 Volts per IEC 335-1
Average AC current	100 mA

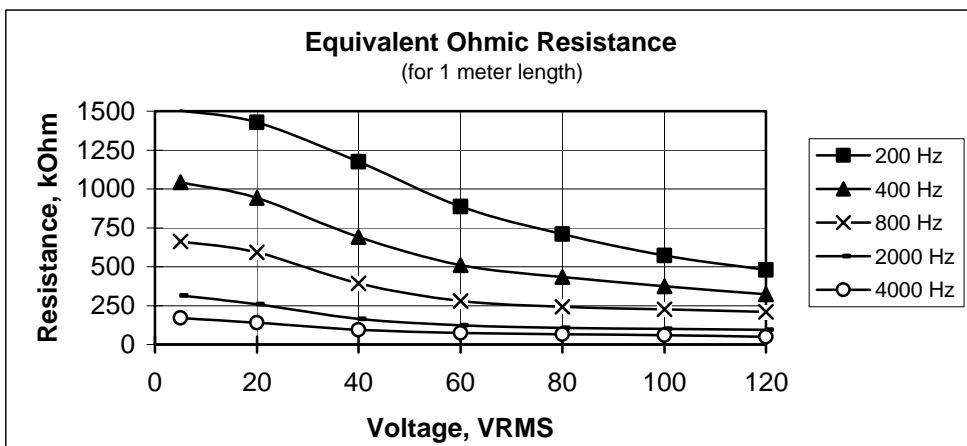
Current Consumption (mAmp) of 1meter length

Voltage, (VRMS)	200 Hz	400 Hz	800 Hz	2000 Hz	4000 Hz
5	0.03	0.06	0.12	0.30	0.60
20	0.12	0.24	0.48	1.21	2.42
40	0.23	0.50	1.00	2.50	5.00
60	0.38	0.80	1.52	3.82	7.58
80	0.62	1.12	2.10	5.24	10.47
100	0.88	1.47	2.81	6.80	13.63
120	1.29	1.90	3.50	8.61	17.24



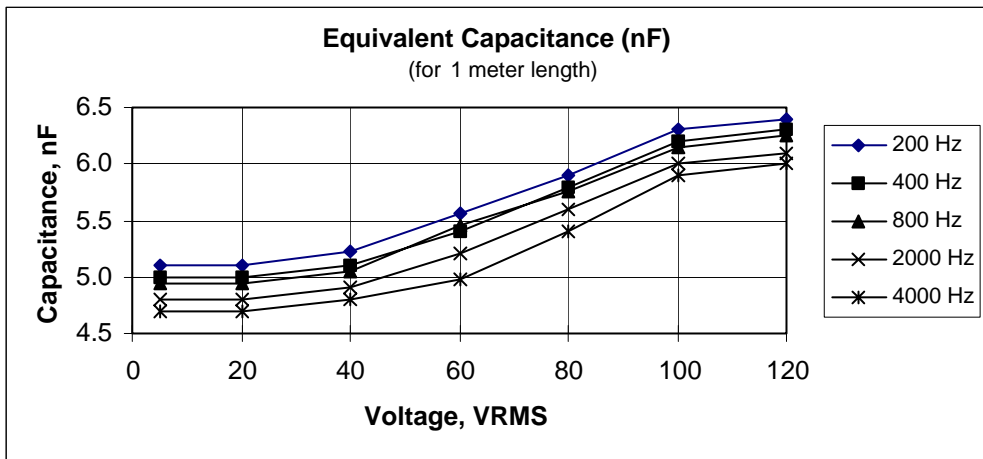
Equivalent Ohmic Resistance (kOhm) of 1 meter length

Voltage, (VRMS)	200 Hz	400 Hz	800 Hz	2000 Hz	4000 Hz
5	1504	1043	663	314	170
20	1428	942	592	259	140
40	1175	691	393	165	94
60	886	510	280	123	75
80	709	435	243	107	65
100	572	374	226	101	60
120	480	323	210	94	50



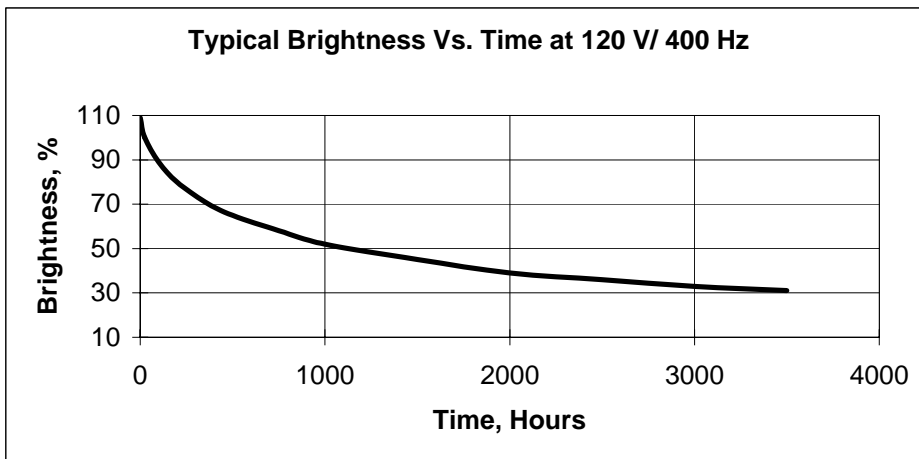
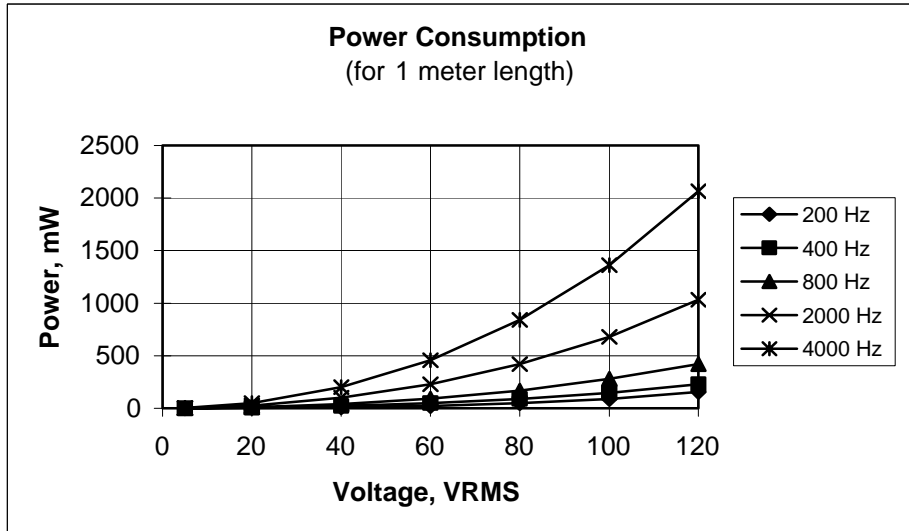
Equivalent Capacitance (nF) of 1meter length

Voltage, (VRMS)	200 Hz	400 Hz	800 Hz	2000 Hz	4000 Hz
5	5.1	5.0	5.0	4.8	4.7
20	5.1	5.0	5.0	4.8	4.7
40	5.2	5.1	5.1	4.9	4.8
60	5.6	5.4	5.5	5.2	4.9
80	5.9	5.8	5.8	6.0	5.4
100	6.3	6.2	6.2	6.0	5.9
120	6.4	6.3	6.3	6.1	6.0



Power Consumption (mW) of 1meter length

Voltage, (VRMS)	200 Hz	400 Hz	800 Hz	2000 Hz	4000 Hz
5	0.2	0.3	0.6	1.5	3.0
20	2.5	4.9	9.7	24	48
40	9.1	20	40	100	200
60	23	48	91	229	456
80	50	90	168	419	840
100	88	147	281	680	1360
120	154	228	420	1033	2064



* Remark: Actual parameters of each lot may vary from Common Characteristics within +/- 20%. All parameters shown for room conditions.

Contact Preparation

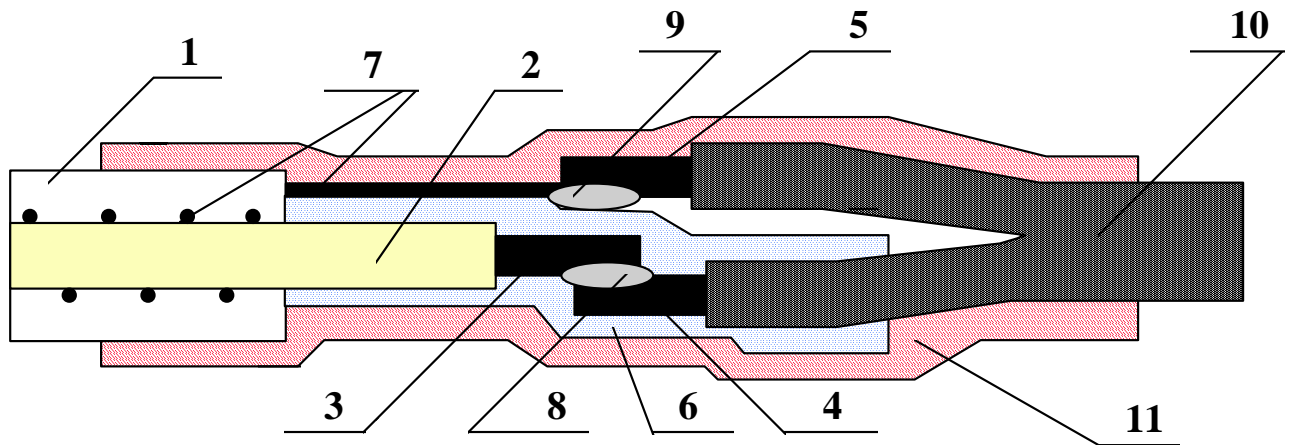


Fig. 1

Step by step instructions for connection preparation:

1. Strip the external insulator(1) off using a usual wire stripper. Be careful
not to damage the additional electrodes (7).
2. Pull the free ends of the additional electrodes(7) back
3. Strip the dielectric layers(2) off the core copper electrode(3) using a magnet wire stripper or a sharp knife.
4. Strip the insulation off both edges (4 and 5) of a dual conductor flexible insulated wire(10) leaving the ends ~4cm long.
5. Put a 3 cm long shrinkable tube (6) on the insulated wire (4), solder the edge of wire (4) to the core electrode (3), pull the tube (6) to cover the soldering area (8) and shrike the tube (6) with the heat gun.
6. Bring the free ends of the additional electrodes (7) forward and solder them to the edge of the insulated wire (5).
7. Cover the contact areas (8 and 9) with a 6 cm long shrinkable tube (11) in such way that one side of the tube (11) is on top of the ELF (1) and the other side is on top and shrink it using a heat gun.
8. The ELF can be connected to an AC power source by soldering contacts A and B.

• Recommended Components:

- (6) 3M Shrink Tubing 1/8 inch 80610220230 MW Black
or Raychem Shrink Tubing CGAT 3/1-0 MW Black
- (11) 3M Shrink Tubing 1/4 inch 80610220255 MW Black
or Raychem Shrink Tubing CGAT 6/2-0 MW Black

ELF Free End Termination

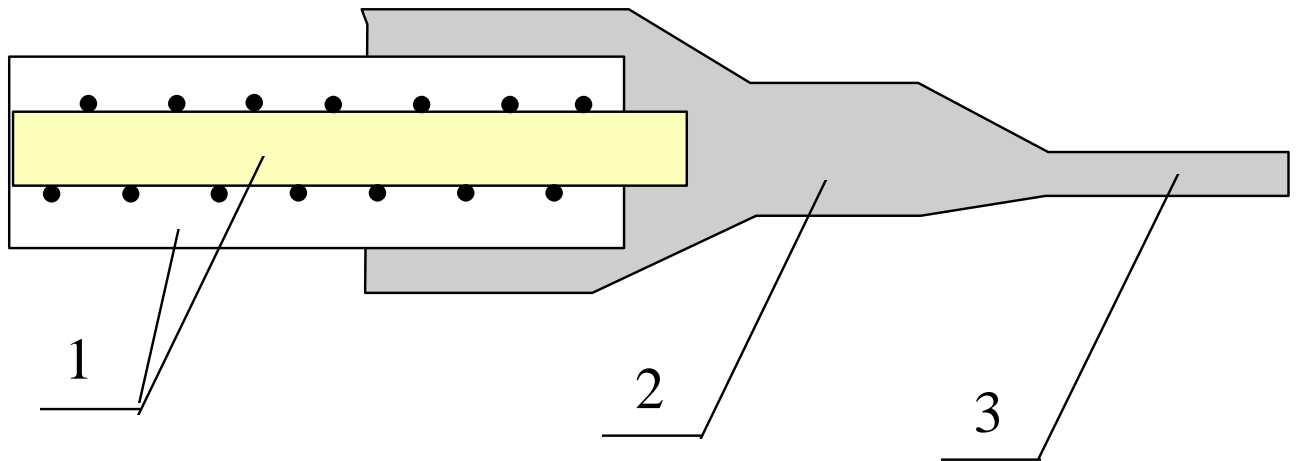


Fig. 3

1. ELF
2. Shrinkable Tube
3. Shrink Edge Sealed off

It is recommended to terminate the free end of the ELF to reduce moisture penetration into the phosphor layers.

- Recommended Components:
 - (2) 3M Shrink Tubing 1/4 inch 80610220255 MW Black
or Raychem Shrink Tubing CGAT 6/2-0 MW Black