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

Product Specification
T-type EL Wire 02T Series

PD 0112/c, Rev. 13, 30.04.03

Common Characteristics*

Overall Diameter	3.0 - 3.7 mm (0.118” - 0.146”)
Tail Length	8.6 - 9.6 mm (0.338’’ - 0.378’’)
Storage Conditions:	
Temperature	-20 to +50 deg. C (-4 to +122 deg.F)
Humidity (R.H.)	not more 65%
Max. Storage Time	2 year
Operating Temperature	-20 to +50 deg. C (-4 to +122 deg.F)

Absolute Maximum Ratings

Power Supply Voltage	130 Volts (RMS)
Dynamic Capacitance at 5 VAC in darkness	4.9 nF +/- 0.7 nF
Stretching Force	1 Kg
Bending Diameter	at least 5 times the fiber diameter
Twisting Angle	30 degrees per meter
Average AC current	100 mA
Insulation Breakdown Voltage	4000 Volts per IEC 335-1

Current Consumption (mAmp) of 1 meter length

Voltage, (VRMS)	200 Hz	400 Hz	800 Hz	2000 Hz	4000 Hz
40	0.26	0.50	1.00	2.40	4.68
60	0.38	0.80	1.56	3.81	7.46
80	0.58	1.12	2.18	5.36	10.54
100	0.74	1.47	2.84	6.97	13.78
120	0.92	1.81	3.54	8.68	17.03

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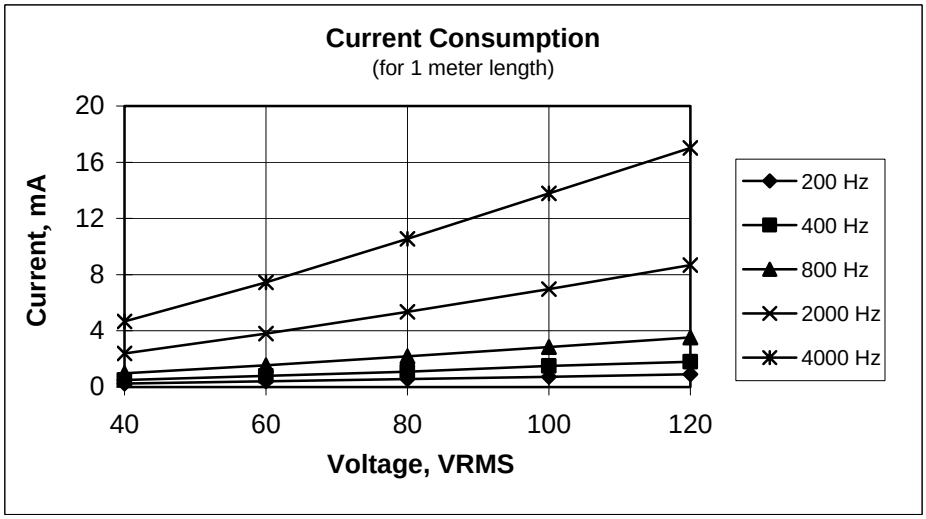
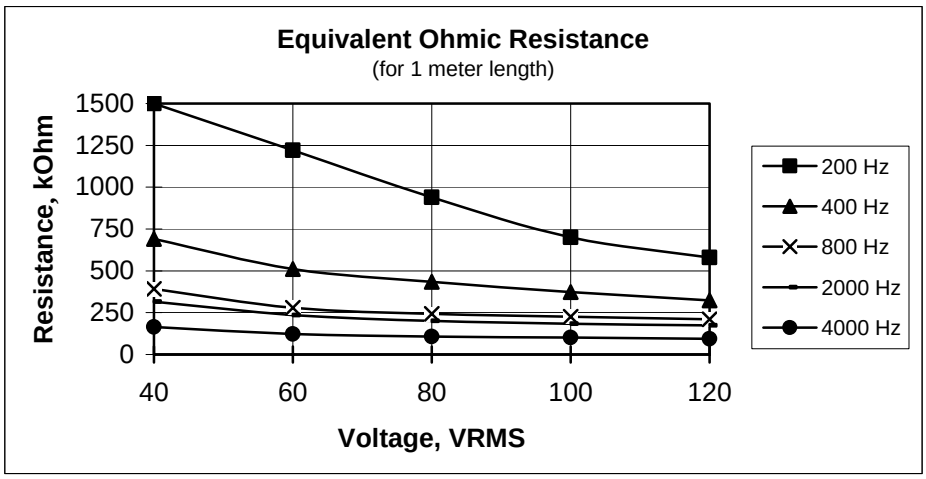


Equivalent Ohmic Resistance (kOhm) of 1 meter length

Voltage, (VRMS)	200 Hz	400 Hz	800 Hz	2000 Hz	4000 Hz
40	1500	790	400	180	85
60	1220	550	320	146	74
80	1000	502	255	120	65
100	700	415	225	110	57
120	580	380	200	100	55



Equivalent Capacitance (nF) of 1 meter length

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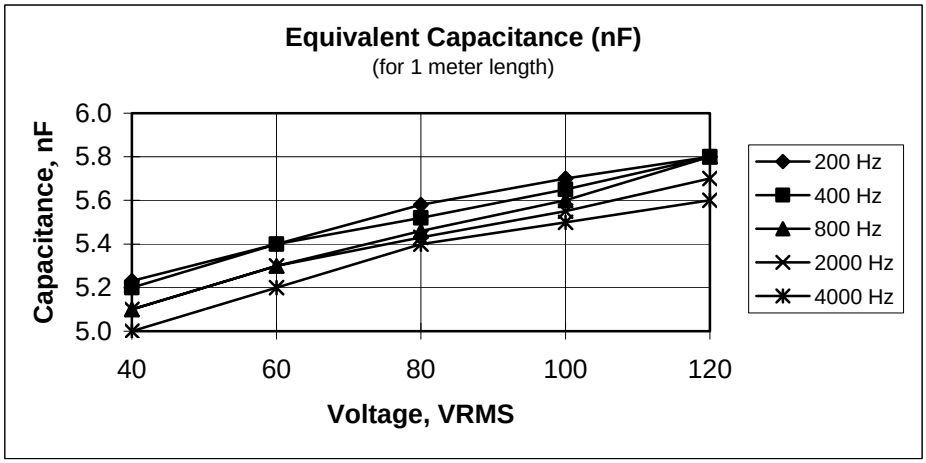
Voltage, (VRMS)	200 Hz	400 Hz	800 Hz	2000 Hz	4000 Hz
40	5.2	5.2	5.1	5.1	5.0
60	5.4	5.4	5.3	5.3	5.2
80	5.6	5.5	5.4	5.4	5.4
100	5.7	5.7	5.6	5.5	5.5
120	5.8	5.8	5.8	5.7	5.6



Power Consumption (mW) of 1 meter length

Voltage, (VRMS)	200 Hz	400 Hz	800 Hz	2000 Hz	4000 Hz
40	10.0	20	39	96	187
60	24	48	94	228	448
80	46	88	174	429	843
100	74	146	284	696	1378
120	110	216	424	1042	2040

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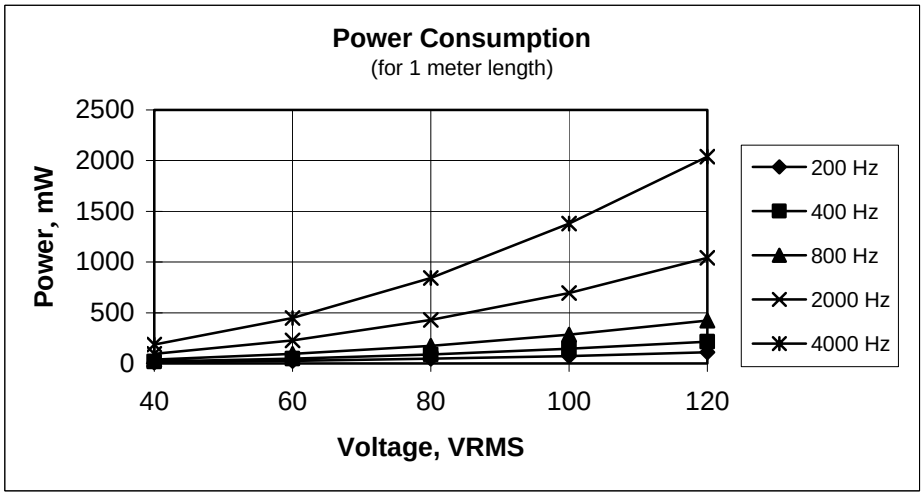
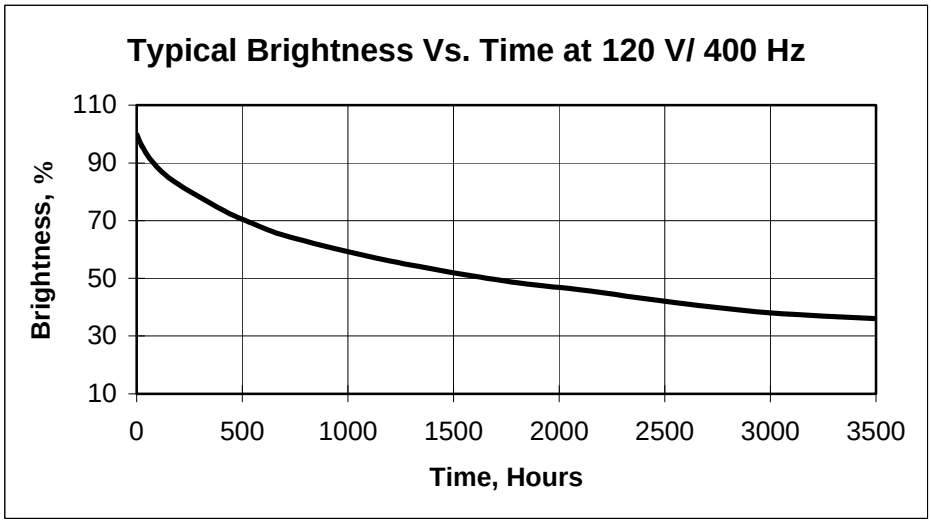


Lifetime



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

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Contact Preparation

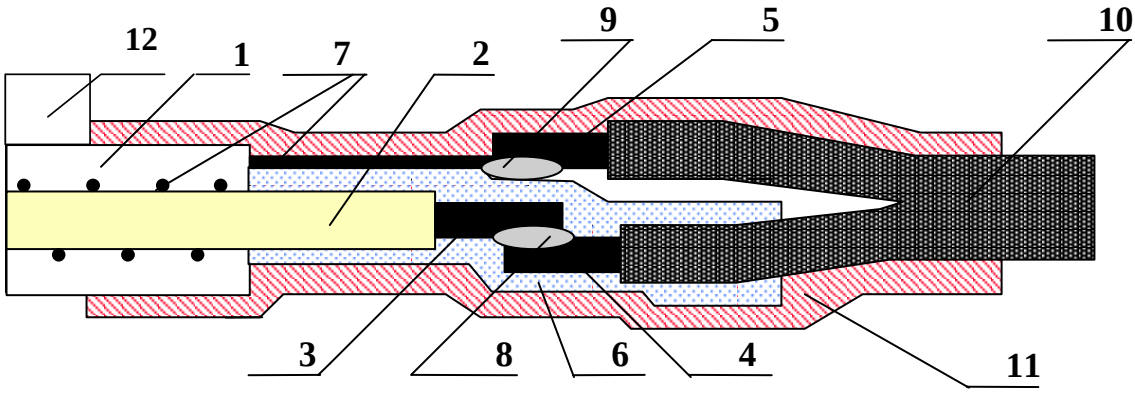

Fig. 1

Step by step instructions for connection preparation:

1. Cut the tail (12) by scissors. The length of cut tail should be about 3 cm.
2. Strip the external insulator (1) off using a usual wire stripper. Be careful not to damage the additional electrodes (7).
3. 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 1/4 inch 80610220255 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

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ELF Free End Termination

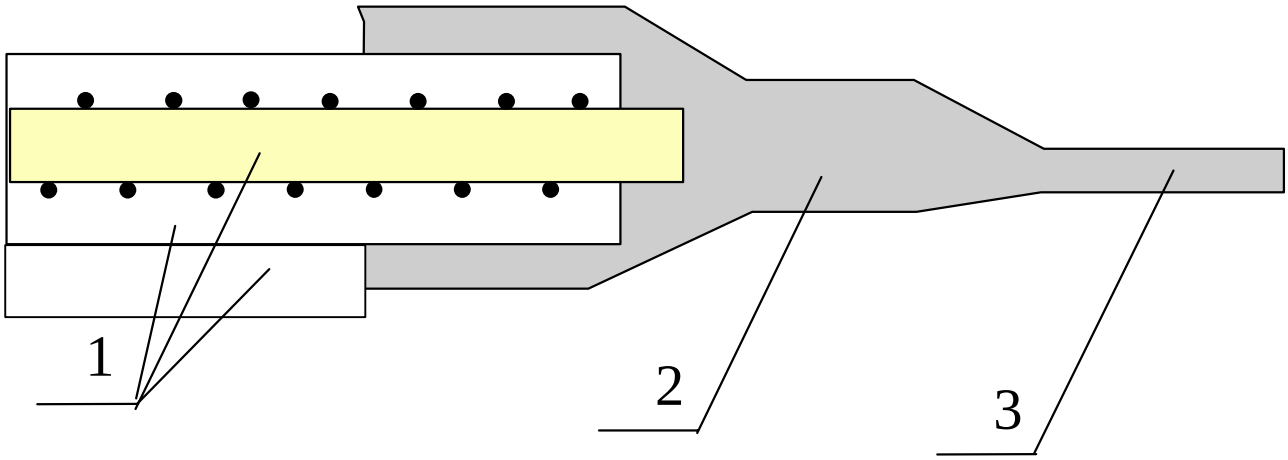

Fig. 3

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 3/1-0 MW Black