

Product Specification

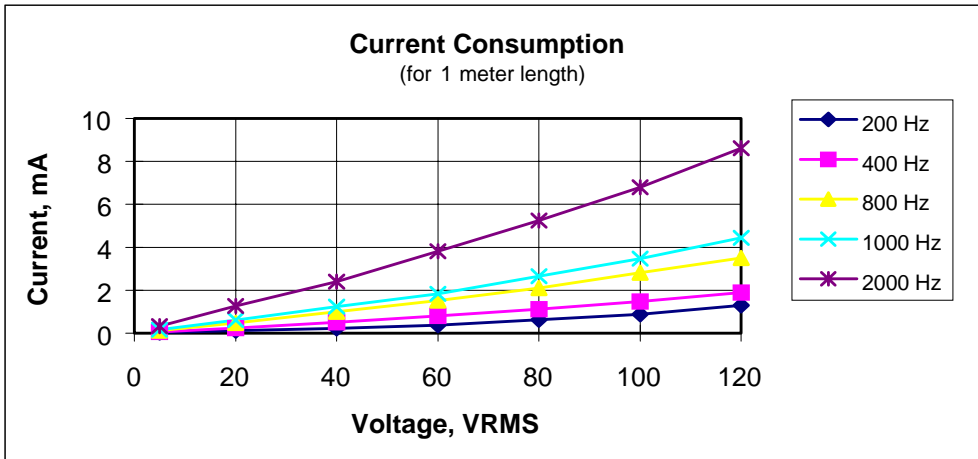
Heavy Duty EL Wire 02S series

Common Characteristics*

| | |
|--|---------------------------------------|
| Overall Diameter | 3.0 - 3.7 mm (0.118" - 0.146") |
| 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 Ratings | |
| Power Supply Voltage | 130 Volts (RMS) |
| Dynamic Capacitance at 5 VAC in darkness | 5.3 nF +/- 0.8 nF |
| Stretching Force | 1 Kg |
| Bending Diameter | at least 5 times the fiber diameter |
| Twisting Angle | 30 degrees per meter |
| Average AC current | 100 mAmp |
| Insulation Breakdown Voltage | 4000 Volts per IEC 335-1 |
| Flammability | 850 deg C per IEC 335 -1 |

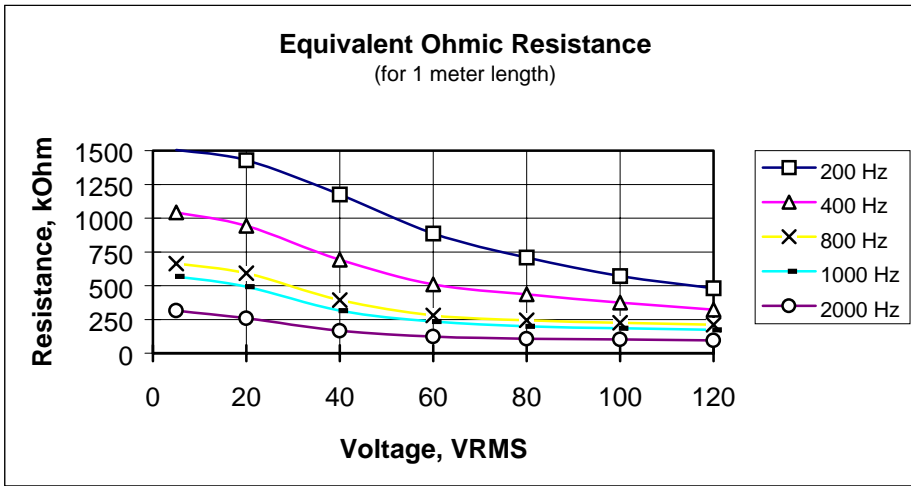
Current Consumption (mAmp) of 1meter length

| Voltage, (VRMS) | 200 Hz | 400 Hz | 800 Hz | 1000 Hz | 2000 Hz |
|-----------------|--------|--------|--------|---------|---------|
| 5 | 0.03 | 0.06 | 0.12 | 0.16 | 0.33 |
| 20 | 0.12 | 0.24 | 0.48 | 0.61 | 1.27 |
| 40 | 0.23 | 0.50 | 1.00 | 1.24 | 2.40 |
| 60 | 0.38 | 0.80 | 1.52 | 1.83 | 3.82 |
| 80 | 0.62 | 1.12 | 2.10 | 2.65 | 5.24 |
| 100 | 0.88 | 1.47 | 2.81 | 3.47 | 6.80 |
| 120 | 1.29 | 1.90 | 3.50 | 4.44 | 8.61 |



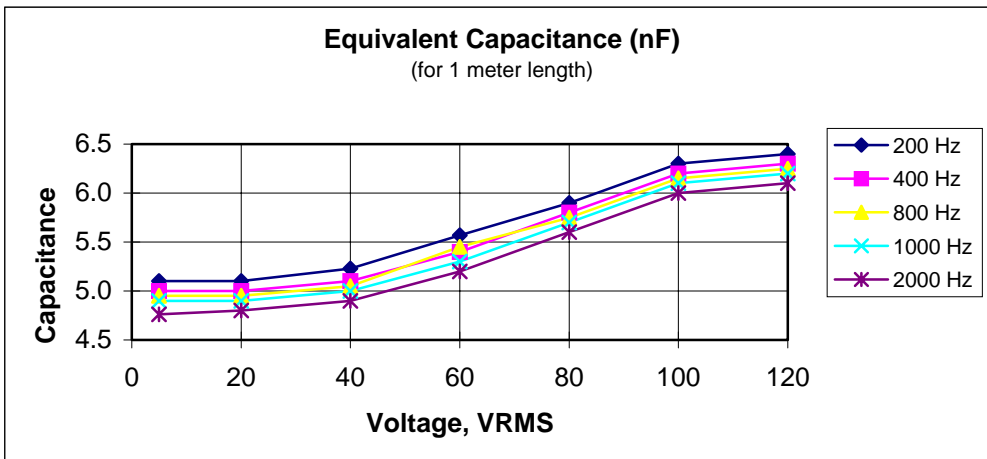
Equivalent Ohmic Resistance (kOhm) of 1meter length

| Voltage, (VRMS) | 200 Hz | 400 Hz | 800 Hz | 1000 Hz | 2000 Hz |
|-----------------|--------|--------|--------|---------|---------|
| 5 | 1504 | 1043 | 663 | 569 | 314 |
| 20 | 1428 | 942 | 592 | 494 | 259 |
| 40 | 1175 | 691 | 393 | 316 | 165 |
| 60 | 886 | 510 | 280 | 235 | 123 |
| 80 | 709 | 435 | 243 | 200 | 107 |
| 100 | 572 | 374 | 226 | 184 | 101 |
| 120 | 480 | 323 | 210 | 174 | 94 |



Equivalent Capacitance (nF) of 1meter length

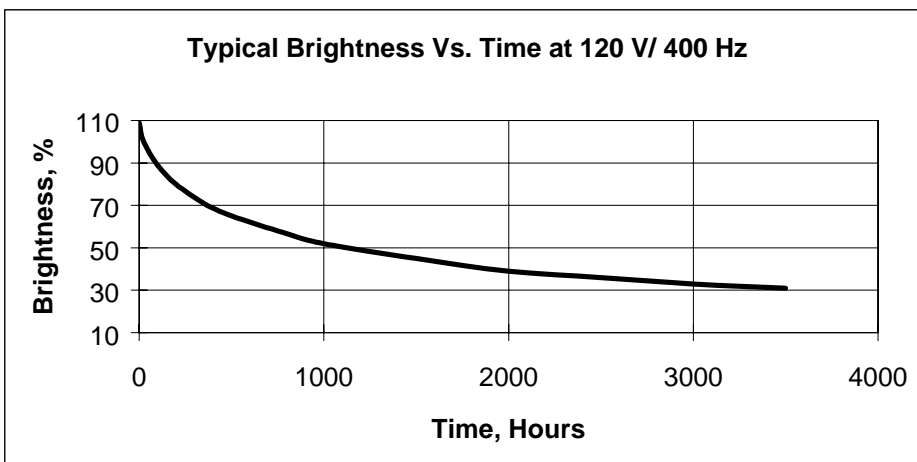
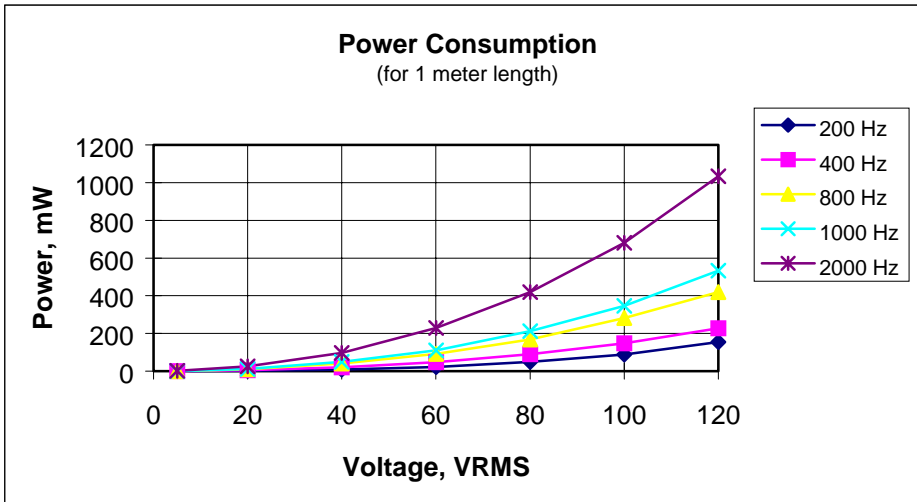
| Voltage, (VRMS) | 200 Hz | 400 Hz | 800 Hz | 1000 Hz | 2000 Hz |
|-----------------|--------|--------|--------|---------|---------|
| 5 | 5.1 | 5.0 | 5.0 | 4.9 | 4.8 |
| 20 | 5.1 | 5.0 | 5.0 | 4.9 | 4.8 |
| 40 | 5.2 | 5.1 | 5.1 | 5.0 | 4.9 |
| 60 | 5.6 | 5.4 | 5.5 | 5.3 | 5.2 |
| 80 | 5.9 | 5.8 | 5.8 | 5.7 | 5.6 |
| 100 | 6.3 | 6.2 | 6.2 | 6.1 | 6.0 |
| 120 | 6.4 | 6.3 | 6.3 | 6.2 | 6.1 |



Power Consumption (mW) of 1 meter length

PD 0102/c
Rev. 15
13.08.00

| Voltage, (VRMS) | 200 Hz | 400 Hz | 800 Hz | 1000 Hz | 2000 Hz |
|-----------------|--------|--------|--------|---------|---------|
| 5 | 0.2 | 0.3 | 0.6 | 0.8 | 1.7 |
| 20 | 2.5 | 4.9 | 9.7 | 12 | 26 |
| 40 | 9.1 | 20 | 40 | 50 | 96 |
| 60 | 23 | 48 | 91 | 110 | 229 |
| 80 | 50 | 90 | 168 | 212 | 419 |
| 100 | 88 | 147 | 281 | 347 | 680 |
| 120 | 154 | 228 | 420 | 533 | 1033 |



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

Contact Preparation

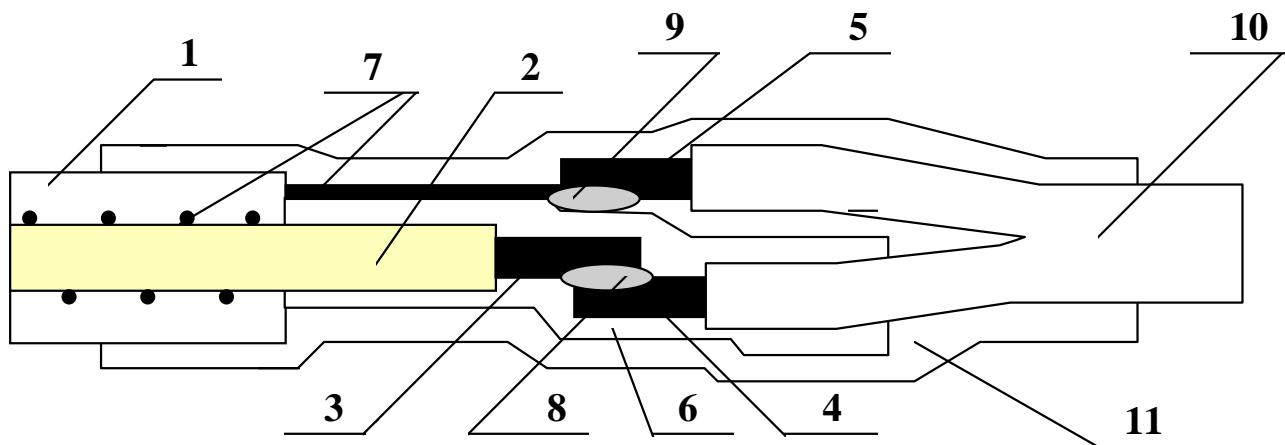


Fig. 1

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

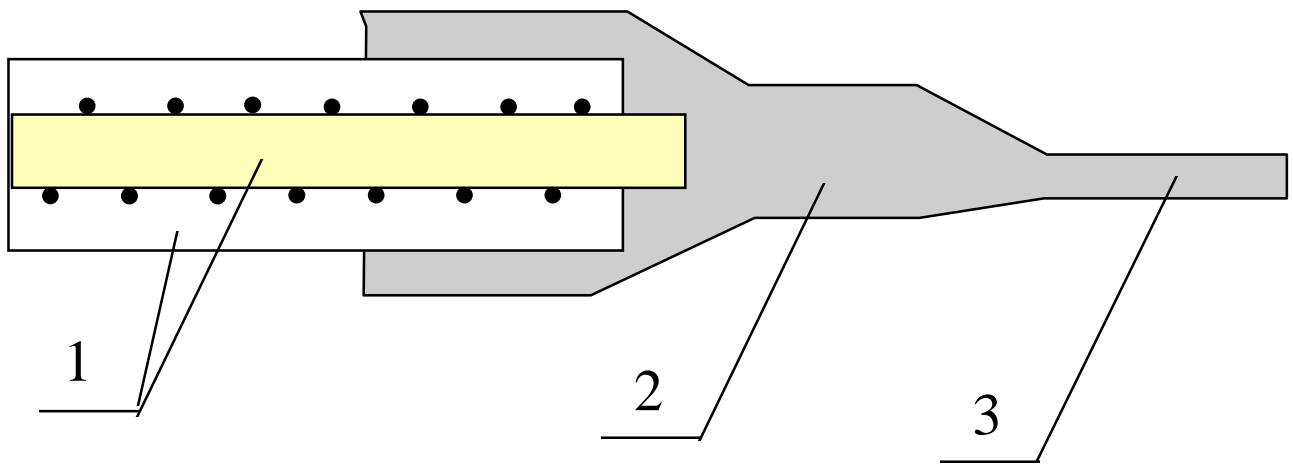


Fig. 3

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