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Rev.20 1- May 98

Blue/Green Electroluminescent Fibre

Product Specifications

Overall Diameter	2.3 mm +/- 0.2mm (0.086" +/- 0.008 ")

Absolute Maximum Ratings

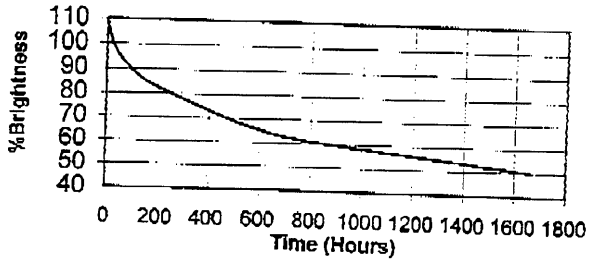
Power Supply Voltage	130 Volts (RMS)
Storage Temperature	-40 to +65 deg. C (-40 to +149 deg.F)
Operating Temperature	-20 to +55 deg. C (-4 to +131 deg.F)
Stretching Force	1 Kg
Bending Diameter	at least 5 times the fibre diameter
Twisting Angle	30 degrees per meter
Average AC current	50 mAmp
Insulation Breakdown Voltage	4000 Volts per IEC 335-1
Flammability	850 deg C per IEC 335-1

Electro-Optical Characteristics

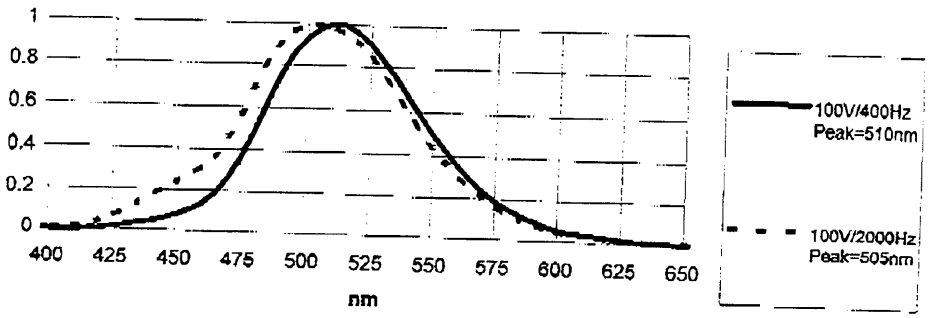
Typical Initial Performance

Brightness at 100 Volts / 400Hz	41 cd/m^2
Peak Wavelength at 100V/400 Hz	510 nm
Chromaticity Coordinates at 100V/400 Hz	X = 0.194, Y = 0.546
Brightness at 100 Volts / 800Hz	68 cd/m^2
Peak Wavelength at 100 Volts / 800Hz	510 nm
Chromaticity Coordinates at 100 Volts / 800Hz	X = 0.185, Y = 0.515
Brightness at 100 Volts / 2000Hz	116 cd/m^2
Peak Wavelength 100V / 2000 Hz	505 nm
Chromaticity Coordinates at 100 Volts / 2000Hz	X = 0.176, Y = 0.449
Dynamic Capacitance at 5 VAC in darkness	5.3 nF +/- 0.8 nF

Brightness Vs Time at 120V/400Hz
Room Temp. / R.H.=40%

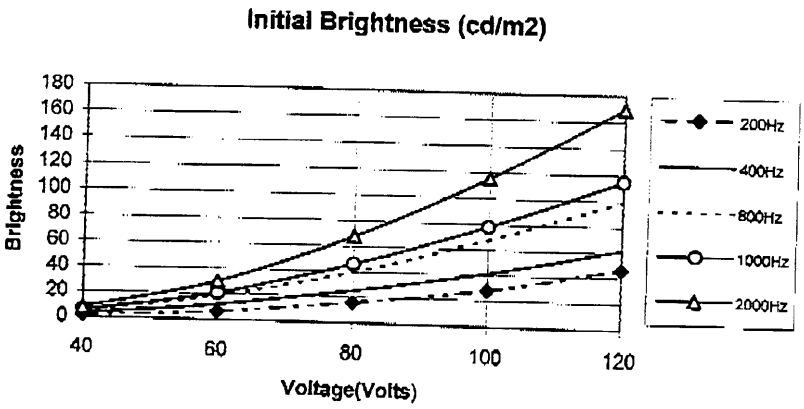


Blue/Green Fiber Spectrum



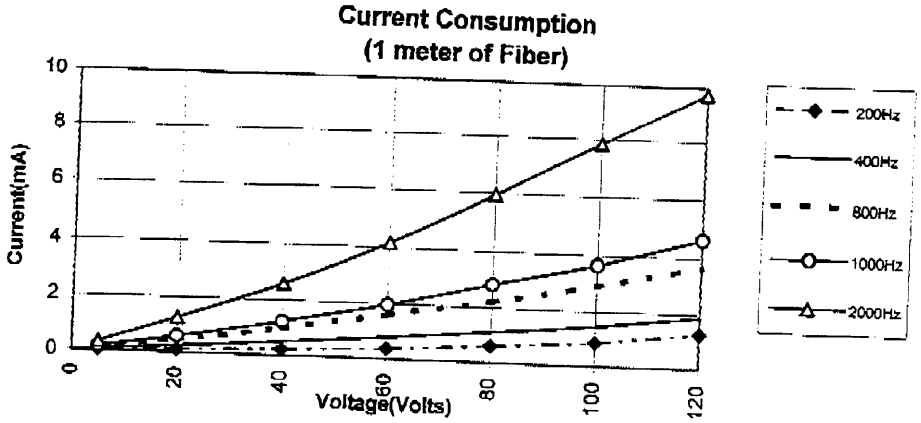
Initial Brightness (cd/m^2)

Voltage (VRMS)	200Hz	400Hz	800Hz	1000Hz	2000Hz
40	1	3	5	5	8
60	6	12	19	21	30
80	15	25	40	46	68
100	28	41	68	78	116
120	46	62	99	115	170



Current Consumption(mAmp) of 1meter

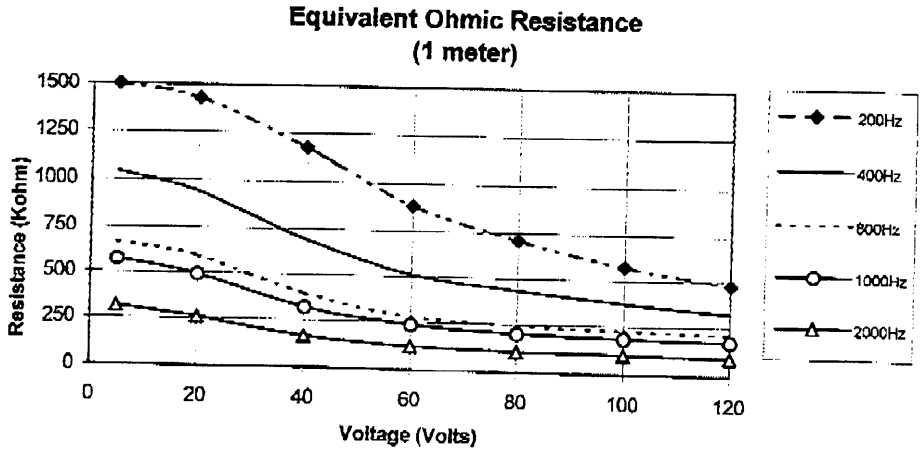
Voltage(VRMS)	200Hz	400Hz	800Hz	1000Hz	2000Hz
5	0.03	0.06	0.12	0.16	0.33
20	0.12	0.24	0.48	0.61	1.27
40	0.23	0.50	1.00	1.24	2.59
60	0.38	0.80	1.62	1.98	4.17
80	0.62	1.12	2.22	2.83	5.94
100	0.88	1.47	2.92	3.66	7.84
120	1.29	1.90	3.68	4.64	9.76



Equivalent Ohmic Resistance(kOhm) of 1 meter

(Ohmic Component of the Parallel RC Circuit)

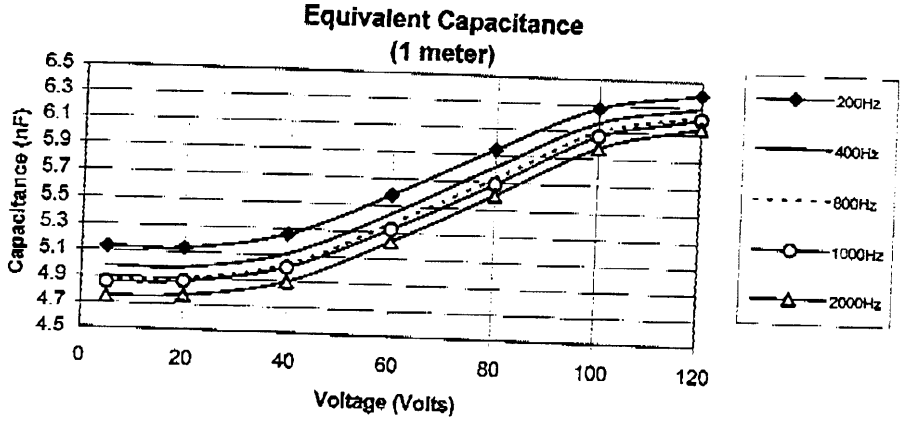
Voltage	200Hz	400Hz	800Hz	1000Hz	2000Hz
5	1504	1043	663	569	314
20	1428	942	592	494	259
40	1175	691	393	316	165
60	886	510	280	235	123
80	709	435	243	200	107
100	572	374	226	184	101
120	480	323	210	174	94



Equivalent Capacitance(nF) of 1 meter

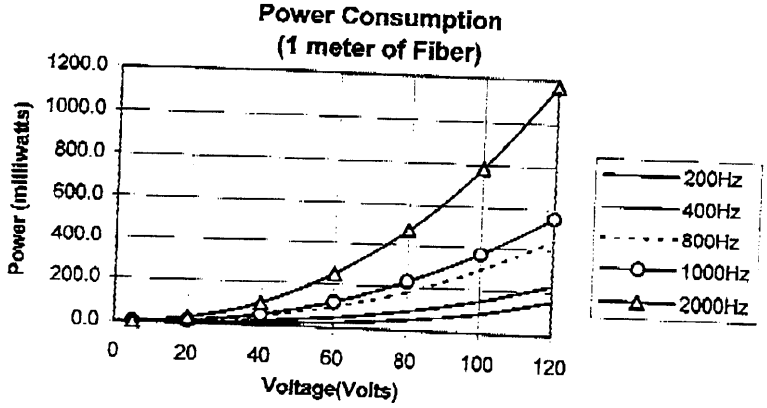
(Capacitive Component of the Parallel RC Circuit)

Voltage (VRMS)	200Hz	400Hz	800Hz	1000Hz	2000Hz
5	5.1	5.0	4.9	4.9	4.7
20	5.1	5.0	4.9	4.9	4.8
40	5.3	5.1	5.0	5.0	4.9
60	5.6	5.4	5.4	5.3	5.2
80	5.9	5.8	5.7	5.7	5.6
100	6.3	6.2	6.1	6.1	6.0
120	6.4	6.3	6.2	6.2	6.1



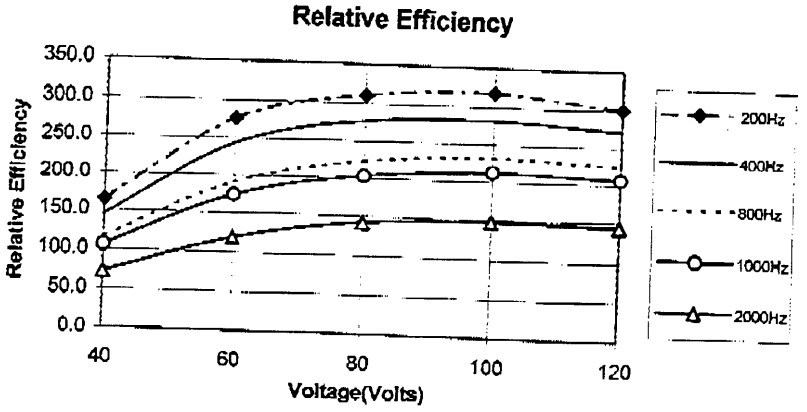
Power Consumption (milliWatt/meter)

Voltage(VRMS)	200Hz	400Hz	800Hz	1000Hz	2000Hz
5	0.2	0.3	0.6	0.8	1.7
20	2.5	4.9	9.7	12.2	25.5
40	9.1	20.2	39.9	49.7	103.6
60	22.8	47.8	97.1	118.9	250.5
80	49.6	89.8	177.2	226.6	475.4
100	88.0	147.0	291.8	366.4	783.8
120	154.4	227.5	442.2	557.2	1170.6



Relative Efficiency

Voltage(VRMS)	200Hz	400Hz	800Hz	1000Hz	2000Hz
40	164.0	144.5	115.6	105.9	72.6
60	276.3	243.4	190.6	174.1	118.8
80	310.5	277.1	223.2	203.3	142.2
100	318.2	282.2	231.6	212.8	147.5
120	301.0	271.8	224.9	206.7	145.0



Suggested Method of connecting EL Wire.

Contact Preparation

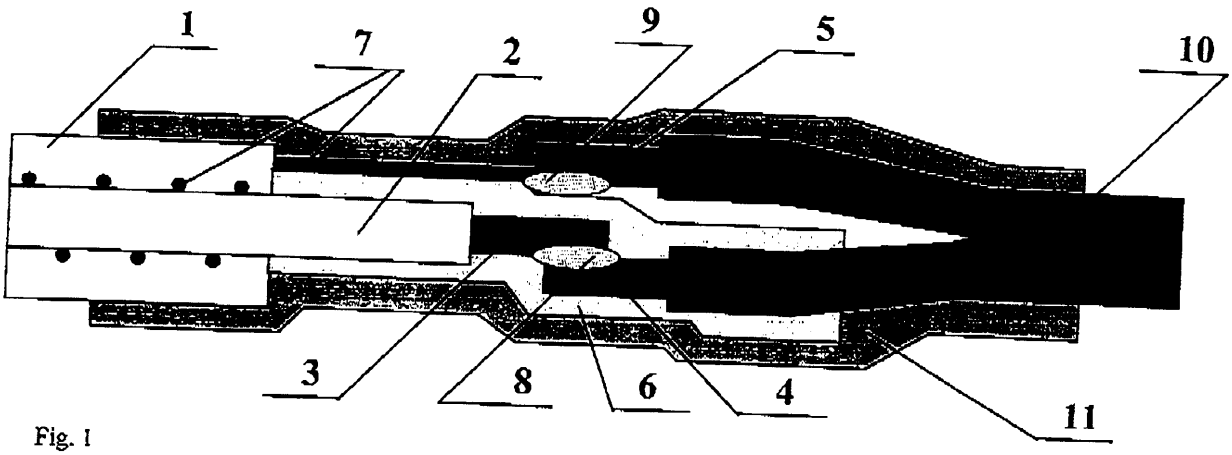


Fig. I

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 EL Wire (1) and the other side is on top and shrink it using a heat gun.
8. The EL Wire can be connected to an AC power source by soldering contacts A and B.

EL WIRE END TERMINATION.

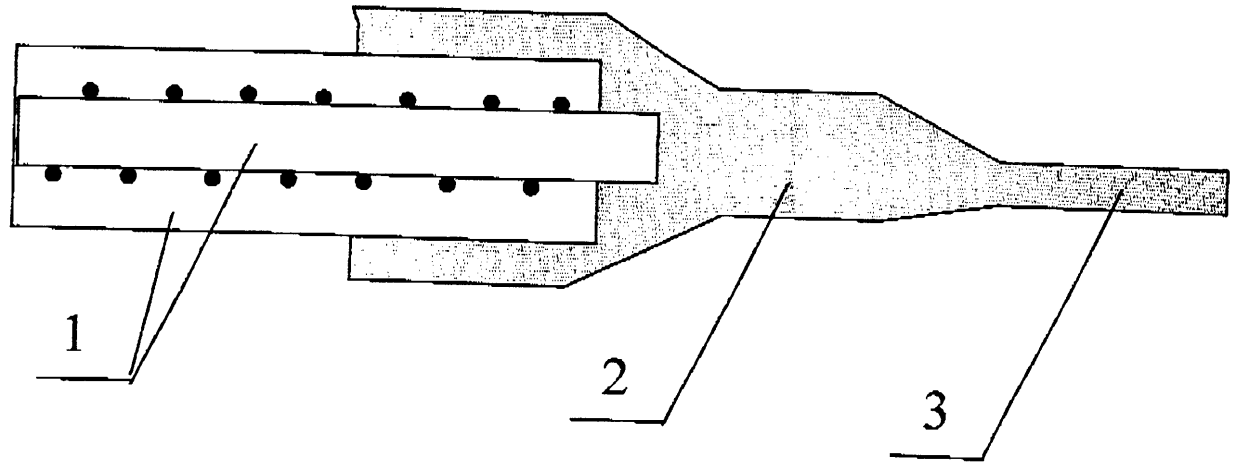


Fig. 3

1. EL Wire
2. Shrinkable Tube
3. Shrink Edge Sealed off

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