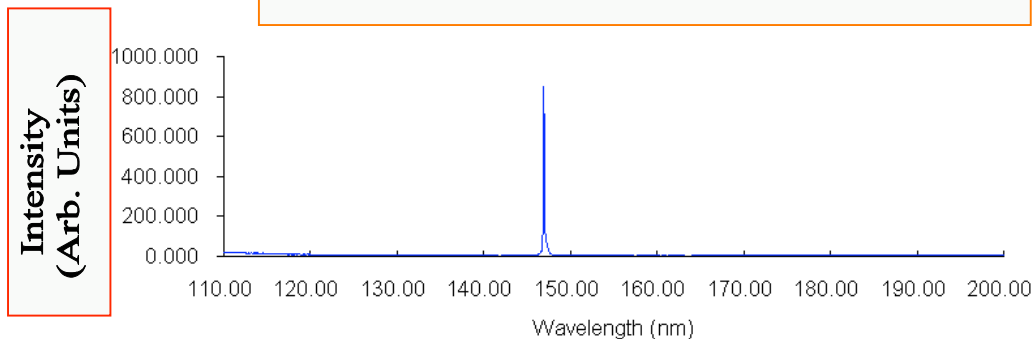


|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Model No:</b> | <b>Description:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| XeLM-L           | <p><b>Xenon Vacuum Ultraviolet (VUV) Line Source</b></p> <p>This Xenon filled RF powered lamp system is a reliable and maintenance free high intensity source of deep VUV emissions at <b>147.0 NM</b>. This source mounts to a 2.75 inch CF flange for convenient connection to a HV system. VUV fluxes greater than 5 milliwatts are delivered through the output window for use in vacuum applications such as photoluminescence, photoionization, photolithography and mass spectroscopy.</p> |

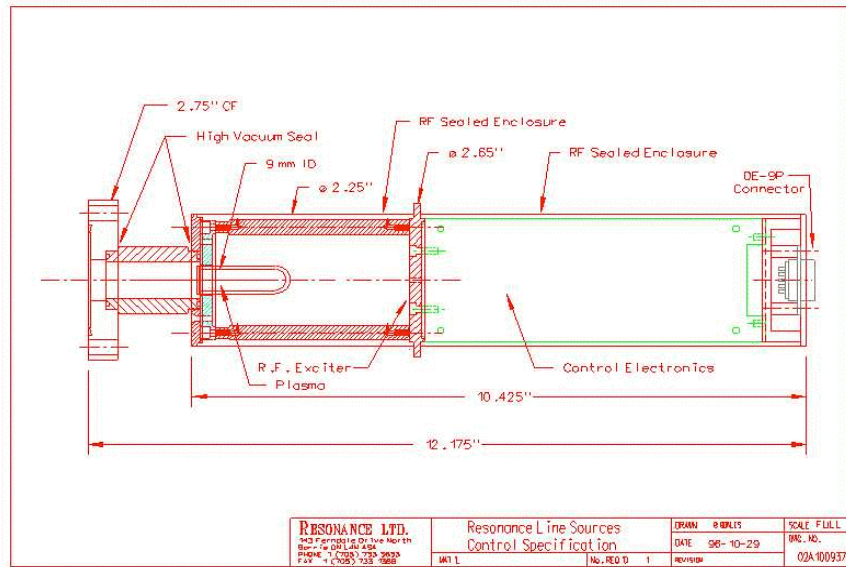
| Electrical /Optical Specifications/General: |                                                                                                                                      |                    |                      |                           |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------|---------------------------|
| Specification                               | Minimum                                                                                                                              | Typical            | Maximum              | units                     |
| Gas Fill                                    |                                                                                                                                      | Xenon              |                      | na                        |
| Peak wavelengths                            | -                                                                                                                                    | 147.0              | -                    | NM                        |
| Full Spectral Range                         | -                                                                                                                                    | 129 to 7,000       | -                    | NM                        |
| VUV Intensity                               | $5 \times 10^{15}$                                                                                                                   | $9 \times 10^{15}$ | $1.3 \times 10^{16}$ | Photons/sec/stv<br>radian |
| Full angle output cone                      | 30                                                                                                                                   | 45                 | 65                   | Degrees                   |
| Window Material                             |                                                                                                                                      | MgF <sub>2</sub>   |                      | na                        |
| Clear Aperture of window                    |                                                                                                                                      | 0.9                |                      | CM.                       |
| Pulse                                       | Modulation to 1 kz available as option                                                                                               |                    |                      |                           |
| Certification                               | Calibration of Irradiance in Vacuum                                                                                                  |                    |                      |                           |
| Plasma diameter                             | 0.8                                                                                                                                  | 0.9                | 1.0                  | CM.                       |
| Plasma length                               | 2                                                                                                                                    | 2.5                | 3.0                  | CM.                       |
| Input Power                                 | 20                                                                                                                                   | 25                 | 30                   | Watts                     |
| Input voltage                               | 95                                                                                                                                   | 115                | 260                  | VAC                       |
| Input Line Frequency                        | 50                                                                                                                                   | 60                 | 65                   | Hz                        |
| Mounting flange                             | 2.75 inch Conflat is standard, lamp can be sealed to 10 <sup>-7</sup> torr system                                                    |                    |                      |                           |
| Cooling                                     | Air cooling                                                                                                                          |                    |                      |                           |
| Intensity monitor                           | Intensity monitor available as an option                                                                                             |                    |                      |                           |
| Thermal control                             | na                                                                                                                                   |                    |                      |                           |
| System                                      | Complete system includes AC to DC power supply, RF power supply, EMI shielded enclosure, Vacuum flange, case, manual and calibration |                    |                      |                           |

## Xe VUV Line Spectrum



## Mechanical Specifications

### CF Flange



|                                                                                                                         |                                                 |               |                                    |                                        |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------|------------------------------------|----------------------------------------|
| <b>RESONANCE LTD.</b><br>143 Ferndale Drive North<br>Barrie, ON L4M 4S4<br>PHONE: (705) 733-3633<br>FAX: (705) 733-1388 | Resonance Line Sources<br>Control Specification |               | DRAWN: R. WILKES<br>DATE: 06-10-29 | SCALE: FULL<br>Dwg. No.:<br>02A-100937 |
|                                                                                                                         | MTL                                             | No. RD-05-001 | REVISION:                          | control.dwg                            |

| Materials/misc. specs. |                          |
|------------------------|--------------------------|
| Window                 | Magnesium Fluoride       |
| Body                   | Aluminum                 |
| Mass                   | <1 kg. incl. pwr. supply |
| Vacuum Adapter         | Stainless Steel          |
| Power Supply           | 2 x 2.5 x 6 in           |

### Light source showing magnesium fluoride window (vacuum adapter removed)

