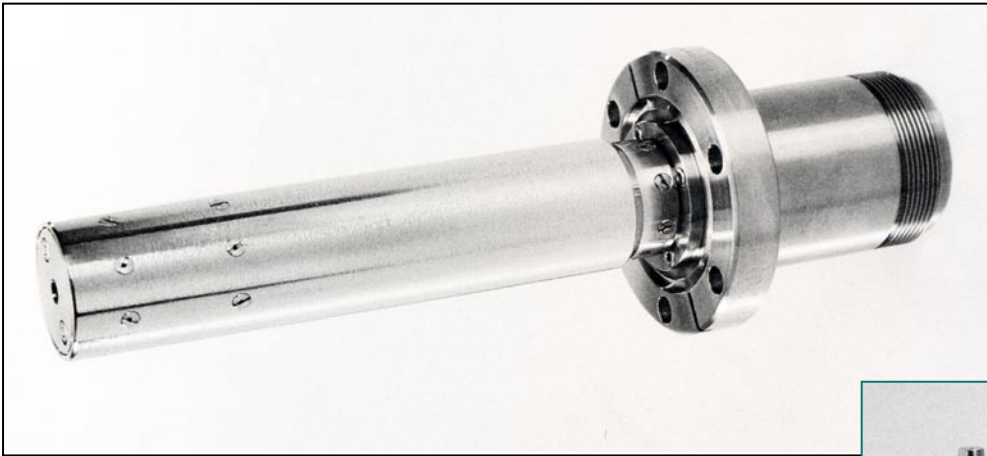


Model EG3000

Electron Gun and Control Electronics



Performance Features

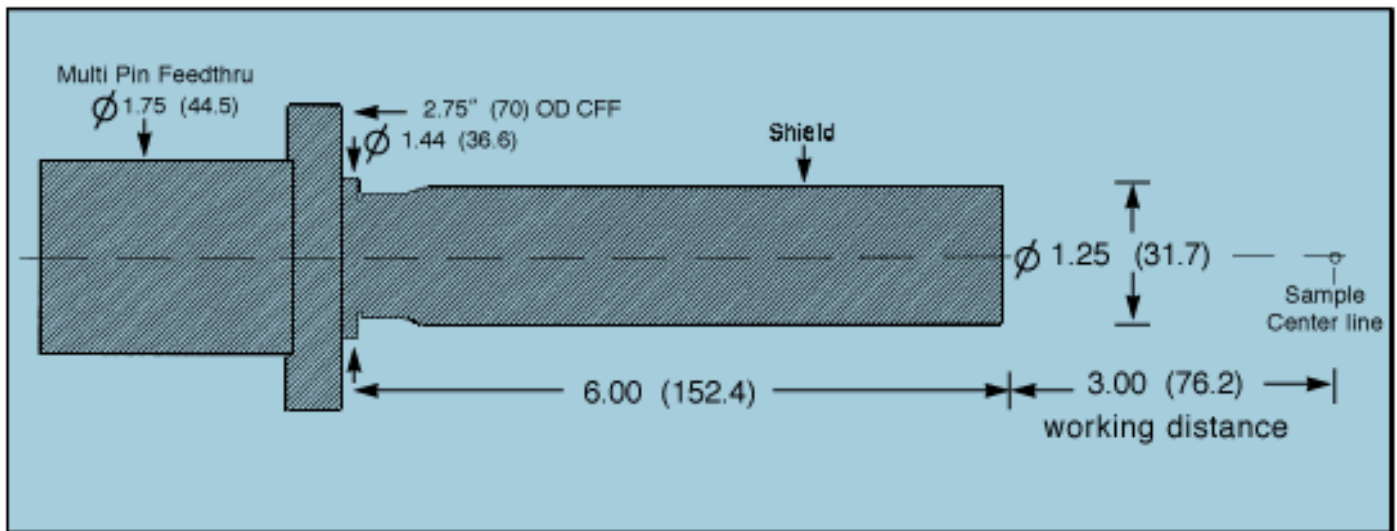
- ▶ operation from 100-3000eV
- ▶ compatible with AES, charge neutralization and other surface analysis applications
- ▶ auto focus mode for small spot applications
- ▶ defocus mode for broad beam applications
- ▶ fully UHV compatible and bakeable
- ▶ integral magnetic shielding

The LK Technologies Model EG3000 Electron Gun with matching control electronics is suitable for a variety of surface analysis applications such as Auger electron spectroscopy, electron scattering and diffraction experiments, and charge neutralization. The electron beam energy can be continuously varied from 0.1-3 keV. The beam current is adjustable from 10 μA to greater than 100 μA . With the standard refractory metal cathode, the gun provides a minimum spot size of approximately 1mm at a working distance of 75mm.

The control electronics features an "autofocus" mode which maintains minimum spot size focus with beam energy variation as well as a "defocus" mode which allows operator adjustment to uniformly defocus electron beams up to 10mm in diameter (or greater, depending on working distance). The electron gun is fully UHV compatible, employs integral magnetic shielding and can be baked to 200°C. All electron guns are tested under UHV conditions prior to shipment. For special applications involving smaller spot sizes, cathode variations or other custom requirements, please consult LK Technologies.



Manufacturer of precision instrumentation for surface analysis including electron spectrometers, ion and electron guns, and LEED/Auger systems.



Specifications

- ▶ beam voltage: 0.1-3 kV, continuously adjustable
- ▶ cathode: refractory metal (optional LaB₆), field replaceable
- ▶ beam current: adjustable to 100 μA at 3 kV
- ▶ spot size: nominal 1 mm with standard cathode, defocus control to 8-10mm
- ▶ working distance: nominal 3.00 in. (76 mm)
- ▶ gun length: 6.00 in. (152mm)
- ▶ shielding: grounded magnetic shield
- ▶ feedthrough: multiple pin brazed ceramic with shielded connector
- ▶ mounting: 2.75 in. (70mm) O.D. CFF with 1.50 in. (38.1 mm) I.D. (specify adaptor flange for 1.38 in. (34.9mm) I.D. tubing)
- ▶ bakeout temperature: 200°C, maximum
- ▶ control electronics: rack mounted, front panel control and digital readout of beam voltage, filament current and lens voltages; control of spot size with switch selectable autofocus or defocus modes



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