

Saintech Ion Beam Systems - Ion Current Monitor (ICM)

REAL TIME Monitoring of Ion Flux throughout Ion-based Deposition Processes Available as a stand-alone instrument or fully integrated into Ion Beam Power Supply

The Ion Current Monitor has been developed to provide essential deposition information for any ion-based process. The ICM monitors the flux of positive ions and outputs the beam current in units of amps per square centimetre. Three amplifier ranges are provided to adequately cover the flux density output from a wide range of commercially available ion beam systems. An adjustable bias voltage is provided to reject negatively charged particles (electrons).

The Sensor Head

The sensor head incorporates a revolutionary patented design that allows for the continuous monitoring of the ion beam flux **even during the evaporation of dielectric materials**.

The sensor head is designed to be ultra-low maintenance and is constructed from materials to be compatible with UHV applications. The head can safely operate at temperatures compatible with deposition processes to a max. 350 deg. C.



Auto-ranging of the Output Signal

Three auto-ranging ion anode current ranges provided:

10 μ A/volt - 100 μ A/volt - 1000 μ A/volt

The output signal is displayed in any of the following formats:

- A front panel Digital LCD panel displays the RMS digital ion current signal complete with appropriate units of either microamps or milliamps.
- A bar graph display provides visual representation of the RMS ion current signal.
- The digital RMS signal is available through a connector on the rear panel. The signal can be viewed on a remote voltmeter or signal logging facility.
- The real-time AC signal can also be output to a cathode-ray oscilloscope (CRO) using a front-panel BNC socket.



Stand-alone Instrument

US Patent Nos. 6645301, 6734434 and 6849854 apply - Other patents Pending