

Advanced Langmuir-Style Probe with Pulsed Plasma Characterization

The ESPION Langmuir-style probe from Hiden Analytical is believed to be the most versatile commercial electrostatic probe currently available. The probe automatically reports the critical plasma characteristics of electron density and energy distribution, electron temperature, ion density, plasma potential and floating potential, providing the rapid accurate feedback essential for plasma-based process analysis and control.

Pulsed plasma can offer benefits over continuous wave plasma for tailoring of film growth and film properties. Fast on-board software controlled timing circuitry with acquisition trigger resolution of 62.5 nanoseconds enables ESPION to provide high-resolution segmented temporal analyses through a plasma pulse at pulse frequencies as high as 3MHz. Other features include forced-air cooling of the probe tip, a programmable self-cleaning cycle for automatic probe tip decontamination, a very high RF blocking impedance for optimum data integrity, and an integral reference probe compensation electrode for cancellation of fluctuations due to low frequency drifting of the plasma potential.

Probes may be operated in both static and dynamic modes, with fully-programmable UHV-compatible linear motion drives offering linear travel ranges to 900mm. Systems are backed by over 20 years continuous manufacturing experience in the field of plasma measurement together with a worldwide support network of engineers and scientists with expert knowledge of plasma diagnostics and processing.

For further information on this or other Hiden Analytical products contact Hiden Analytical Inc. at info@hideninc.com or visit the main website at www.HidenInc.com



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