



LINEAR ION SOURCE

Genco linear ion sources are available in lengths of 200-4700mm, and offer a robust means of modifying or pre-cleaning large area polymer and glass substrates prior to thin film deposition. This treatment improves adhesion and layer properties, and reduces variance.

KEY FEATURES

1. Low maintenance, with carbon plasma-facing components to enhance parts life and minimise substrate contamination
2. Self-neutralised beam to avoid substrate charging and defects
3. Activates surfaces to enhance adhesion of deposited film
4. 10^{-3} mbar high operating pressure range
5. Dedicated power supply package with automatic gas regulation for easy beam control

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ION SOURCE

APPLICATIONS

- Astronomical telescopes
- Display and optical coaters
- Functional coating on glass, plastic and ceramics
- DLC from the gas phase
- Tempering of coated glass

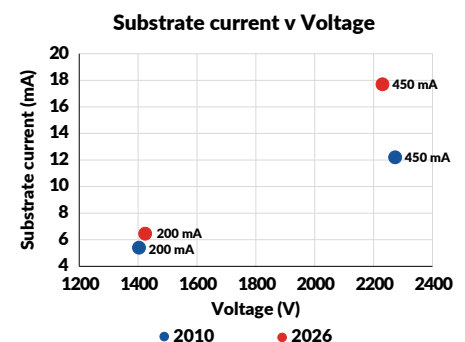
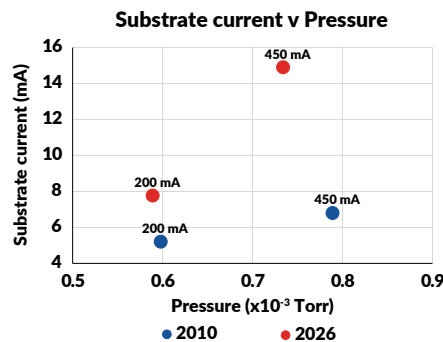


Based on the inverted magnetron principle, Gencoa linear ion sources produce a collimated plasma beam that lightly etches the substrate, burning off hydrocarbons and activating the surface to promote adhesion of the deposited film.

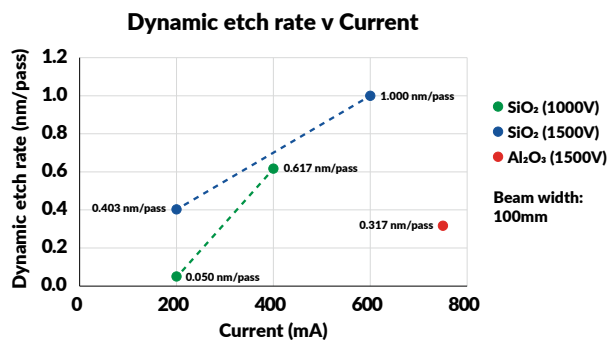
Gencoa's ion sources are assembled with a graphite anode and cathode, protecting the substrate from contamination and preventing erosion of source. Contamination is further reduced by operating with Ar and O₂ gas mixtures. Sources are indirectly cooled, minimizing maintenance of the source.

To optimize the performance of the sources, Gencoa's dedicated voltage regulated power supply with integral gas flow control can be supplied as part of a package.

The gas adjustment feedback loop control maintains the same current at all times – ensuring no variation in beam output. An optional reactive gas injection arrangement to the side of the beam allows hydrocarbon gas injection without contaminating the inside of the source.



Measurements by Langmuir probe show higher substrate currents using 2026 design, demonstrating greater etching of substrate.



Experimentally-measured etch rates for SiO₂ and Al₂O₃, using IM900 source Rates assuming a linear web speed of 1m/min

FURTHER INFORMATION

Contact: sales@gencoa.com or visit www.gencoa.com/ion-source

