

Intlvac

T H I N F I L M

Mark I+ Ion Source

Precision Ion Beam Processing for Advanced Thin Film Applications



- Gridless design eliminates fragile grids and reduces erosion
- Radiative cooling removes the need for water cooling
- High current density with 50–180 eV ion energy
- Self-neutralizing beam minimizes substrate charging
- Compact and lightweight design enables flexible mounting and easy integration

TECHNICAL SPECIFICATIONS

Anode Voltage	50–300 V (Ar)
	100–300 V (O ₂)
Anode Current	0.2 – 1.0 A
Continuous Power	200 W
Peak Power	300 W (≤60 min duty cycle)
Operating Pressure	0.1 – 1.0 mTorr
	100–300 V (O ₂)
Base Pressure	≤ 1 × 10 ⁻⁴ Torr
Gas Flow	2 – 20 sccm
Gases	Ar, O ₂ , N ₂ , inert gases
Cooling	Radiative
Cathode	0.015" Tungsten Filament
Dimensions	68 mm × 70 mm
Weight	0.9 kg
Gas Inlet	1/8" Swagelok
Mounting	10-32 UNF

Mark I+ Gridless Ion Source

The Intlvac Thin Film Mark I+ Ion Source is a compact, radiatively cooled, gridless end-Hall ion source designed to deliver stable, high-current ion beams for demanding vacuum thin film applications. Optimized for reliability and ease of integration, the Mark I+ provides exceptional beam stability, low ion energy operation, and reduced maintenance — making it ideal for industrial and R&D thin film systems.

Mark I+ Mounting Configurations

Internal Mount

