

AC PLASMA GAS SOURCE

HIGH POWER SOURCE FOR PRE/POST TREATMENT OR OXIDATION

Gencoa's high power plasma gas source is a solution for pre-treatment and radical assisted sputtering which delivers key benefits over traditional RF and microwave powered gas sources.

KEY FEATURES

- 0.2m-4m source length with no power or scaling issues
- Up to 40A of plasma electrode current/per m length
- Highly activated gas species with 70 eV plasma energy
- Plasma combines with kinetic energy of gas to aid layer oxidation & pre-cleaning
- Internal or external mounting
- Self-neutralized switching plasma potential delivering both positive and negative bombardment
- Lower cost than RF and microwave plasma generation devices

PLASMA SOURCE

Gencoa's high power gas plasma source is a solution for pre-treatment and radical assisted sputtering which delivers key benefits over traditional RF and microwave powered gas sources.

The gas source delivers a high current density (at the substrate of up to 10mA/cm²) for substrate treatment, and can be assembled with source lengths of up to 4m without any power scaling issues.

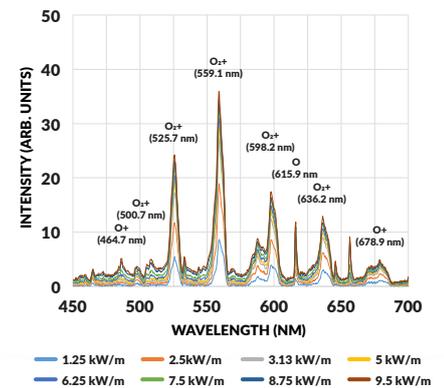
Power is switched between two water-cooled electrodes in the presence of oxygen gas, a magnetic field and active anode plasma energy. The resulting plasma ionizes the oxygen gas species and also provides an electron shower for neutralisation which avoids charge build-up on the substrates.

The double electrode switches from positive to negative and delivers a stable and highly uniform plasma. Shields are water cooled for low temperature processing, and the sources operate without coating or debris, which therefore eliminates any requirement for cleaning.

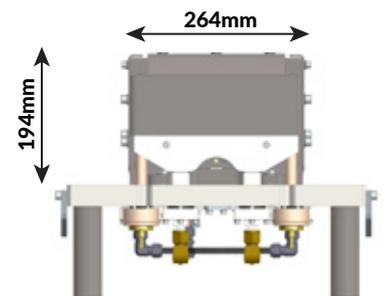
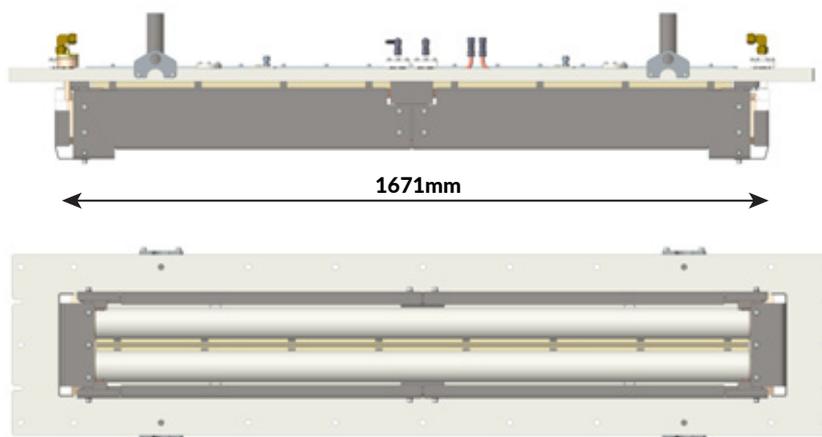


OPERATION PARAMETERS

Power Type	AC (20/40kHz)
Linear power density (kW/m)	Min: 1 Max: 20
Gas Type	Oxygen
Gas Consumption (sccm/kW)	20
Recommended Pressure	1x10 ⁻² - 4x10 ⁻⁴ mbar
Maintenance Interval	>96,000 kWhrs/m
Plasma density	10 ¹⁵ m ⁻³ (70eV)
Source to substrate distance	30-120mm



DIMENSIONS



Note: source length dimension is based on a target length of 1500mm. All other provided dimensions are standard for all source lengths.

FURTHER INFORMATION

Contact: sales@gencoa.com or visit www.gencoa.com/o2-plasma-source

