

ATOMIC HYDROGEN SOURCE HCL



The CreaTec atomic hydrogen source HCL is used as a thermal cracker of hydrogen. Atomic hydrogen allows cleaning of substrates like GaAs, InP, etc. at low temperatures and is used for surfactant growth.

The hydrogen gas (H₂) flows through a molybdenum tube to a hot tungsten filament which is located at the end of this tube. It can be heated to a temperature of up to 2500 °C to achieve an excellent cracking efficiency of the hydrogen gas.

By using a precision valve, hydrogen pressure can be directly adjusted. With a mass flow controller, mounted between the hydrogen bottle and the leak valve, the pressure control can be made extremely accurate.

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Title: Uniform multiatomic step arrays formed by atomic hydrogen assisted molecular beam epitaxy on GaAs (331) substrates.

Technical Data

Standard :

Type	HLC
Heating system	Radiation heating
Temperature range	200 °C - 2500 °C
Temperature stability	≤ 1 K depending on the PID controller
Max. outgas temp	2500 °C
Max. power	280 W
Max. current	25 A
Water cooling	Integrated
Bakeout temperature	250°C
Conditioning	Heated to maximum temperature with and without crucible
Shipping	Stainless steel container with valve

Custom :

Flange size	CF 40 / CF 63
Max outer diameter	38 mm
Length	As specified
Thermocouple type	Type C / WRe 5%-26%

Options :

Other dimensions	As specified
Molybdenum version	Optional
Wolfram version	Optional

