

3D Mini BA Hot Cathode Ionization Sensor

Range: 1×10^{-2} to 2×10^{-10} Torr

PRODUCT FEATURES

- Wide Measurement Range
- Small compact size and can be used in any orientation
- Extended life with dual Yttria coated and supported filaments
- Rugged all stainless steel construction ideal for most industrial applications
- Exceptionally low X-Ray limit of less than 1×10^{-10} Torr
- Turn on at high pressure without degrading filament



PRODUCT DESCRIPTION

The Televac model 3D Mini BA Hot Cathode Ionization sensor maximizes performance with proven accuracy and unmatched durability in high vacuums.

The miniature sensor all metal rugged construction is ideal for most applications, with the primary enclosure and many of the internal elements fabricated of 304 stainless steel. The dual filaments are Yttria coated Iridium and are individually supported to provide uniform output over variations in temperature and age and exhibit less calibration error. Coated Iridium filaments tend to withstand pressure bursts with a robustness not possible with lesser materials. The typical user should experience a filament lifetime of 10,000 hours. The precision ion collector is 0.004" diameter, decreasing the x-ray limit of the sensor.

PRODUCT APPLICATIONS

- Analytical Instruments
- Decorative Coating
- Cryogenics
- Electron Microscopy
- Environmental Simulation
- High Energy Physics
- Illumination Product Mfg.
- Magnetic Media Mfg.
- Molecular Beam Epitaxy
- Optical & Functional Coating
- Physical Vapor Deposition
- Semiconductor Device Mfg.
- Surface Science
- Thermal Processing
- Thin Film Deposition

3D Mini BA Hot Cathode Ionization Sensor

PRODUCT SPECIFICATIONS

Measurement Range	1 x 10 ⁻² to 1 x 10 ⁻¹⁰ Torr
Sensitivity for Nitrogen	10/Torr
Bakeout Temperature	200 C
Operating Temp:	0 to 40C
X-Ray Limit:	<1 x 10 ⁻¹⁰ Torr
Filament Type	Dual Yttria Coated Iridium
Filament Emission Current	.01, 0.1, 1.0 mA or Auto
Filament Bias Potential	+30 Volts +/- 0.3%
Grid Potential	+180 Volts +/- 0.3%
Filament Heating Voltage	1.5 Volts (2.5 V Max.)
Filament Heating Current	2 Amps (3 A Max.)
Mounting Orientation	Any
Degas Power	5 Watts e-beam

ORDERING INFORMATION

Sensors:

3D Mini BA Hot Cathode with 1" tube
Part # 3452-8306-05

3D Mini BA Hot Cathode with NW25K
Part# 3451-8305-35

3D Mini BA Hot Cathode with 2.75" Conflat
Part# 3451-8305-25

Controllers & Gauge:

MM200 Part # 2-7900-20 (base unit)
2-6200-291 (3D Mini BA module)

MC300 Part # 2-4502-305 (2A with 3D Mini BA Combo)
2-4502-306 (4A with 3D Mini BA Combo)

MP3DR Vacuum Gauge - Part# Series 2-7990-XXX

Cables:

Standard cables for use with MM200 or MC300 Instruments

10 ft - Part #: 2-9854-010

20 ft - Part #: 2-9854-020

35 ft - Part #: 2-9854-035

50 ft - Part #: 2-9854-050

CONTROLLERS AND GAUGES for use with 3D Mini BA Hot Cathode Sensor



MM200 Controller



MP3DR Vacuum Gauge



MC300 Controller

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3D Mini BA Hot Cathode Ionization Sensor Spec Sheet rev A