



Quantus[®] LP100+

Gas Analyzer



Real-Time Gas Analysis and Endpoint Control for Critical Manufacturing Processes

As technology pushes processes to the limit, even trace contamination can have a significant impact, making precise monitoring and control more critical than ever. The INFICON Quantus LP100+ gas analyzer provides real-time leak and endpoint detection and instantly reacts to small changes in critical process environments so scrap is minimized and yields are improved.

ADVANTAGES AT A GLANCE

- ✓ Field-replaceable plasma cell
- ✓ Easy installation using a standard KF25 connection
- ✓ Low maintenance
- ✓ Detection limits down to low ppm levels
- ✓ Operating range of 10 mTorr to 1 Torr
- ✓ Long-term reliability; no pumps required
- ✓ Fast sampling (10 Hz maximum)
- ✓ Small footprint

High-Pressure Gas Analysis Without Pumps

The primary advantage of a plasma-assisted optical emission gas analyzer is it does not require expensive pumping systems to provide gas analysis at higher operating pressures. With its operating range of 10 mTorr to 1 Torr, Quantus LP100+ is compatible with most processes on either the process chamber or chamber pump line. Its gas analysis techniques provide high-sensitivity contamination, leak, and endpoint detection (down to the low ppm range) for critical processes.

Real-Time Endpoint Control

The Quantus LP100+ is engineered to withstand corrosive etch environments. To precisely determine endpoint conditions, it can analyze process gas chemistries and utilize unique univariate and multivariate algorithms. At endpoint, it can then create local alarms, send a signal to a higher-level control system, or communicate directly with the process tool. Additionally, Quantus LP100+ generates its own plasma, which allows it to operate in processes that are not plasma-assisted.

Real-Time Leak Detection

Quantus LP100+ can provide real-time contamination control and leak detection for critical process environments. The planar plasma cell design provides high reliability and detection limits down to low ppm levels for these analyses, while requiring minimal maintenance and a low cost of ownership.

Easy Installation

Quantus LP100+ easily connects to the system using a standard KF25 port. Depending upon pressure characteristics, the sensor can be installed on either a process chamber or in a pumping line. With its small footprint of only (H x W x L) 87 x 150 x 241 mm (3.4 x 5.9 x 9.5 in.), Quantus LP100+ will not interfere with day-to-day operations that occur in and around a process tool.

SPECIFICATIONS

PERFORMANCE

Technology	Optical Emission Spectroscopy using proprietary and integrated ICP microplasma, spectrometer, and RF power supply
Spectrometer performance	200–850 nm wavelengths (UV-VIS) 16-bit full-scale resolution, 3648 pixels
Exposure time	Minimum of 1 ms
Sampling frequency	Maximum of 10 Hz
Detection limit	To low ppm levels (application dependent)

GAS SAMPLING INTERFACE

Operating pressure ¹⁾	10 mTorr to 1 Torr (application dependent)
Vacuum fitting	KF25
Maximum flange temperature	80°C
Serviceability	Sensor cell is field replaceable

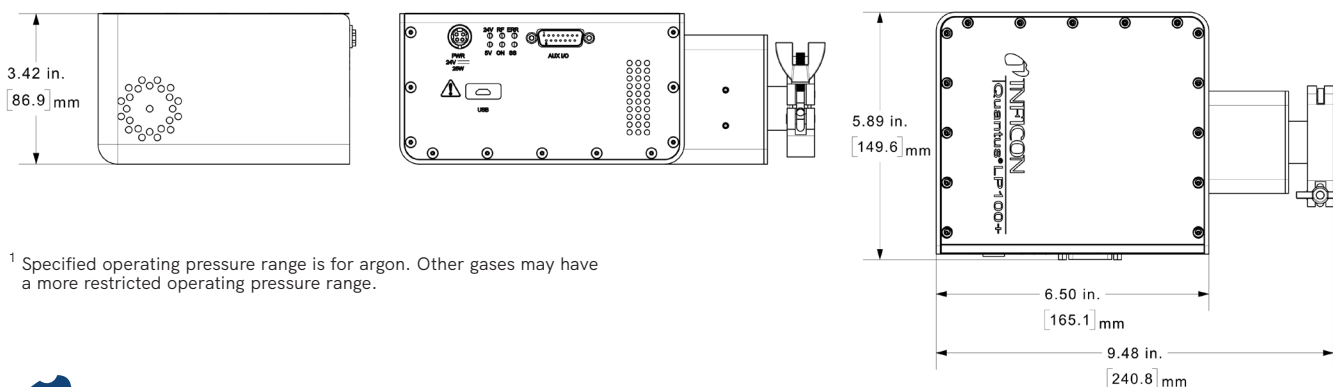
FACILITIES

Operating temperature range	0–50°C (non-condensing, sensor cell 80°C)
Power requirements	24 V (DC) @ 2.5 A (AC/DC converter available)
Isolation valve	Optional

APPROXIMATE DIMENSIONS AND WEIGHT

Dimensions (H x W x L)	87 x 150 x 241 mm (3.4 x 5.9 x 9.5 in.)
Weight	2.7 kg (5.9 lb.)

DIMENSIONS



¹⁾ Specified operating pressure range is for argon. Other gases may have a more restricted operating pressure range.

