

Ultrapure-100 Particle Counter

Particle Counting
for Electronics
Manufacturing

Complementing industry standard TOC analysis technology with particle counting to provide a total solution for DI water plant monitoring and cleaning processes for electronic manufacturing

Particle monitoring and control of ultrapure water (UPW) plants, as well as aqueous cleaning systems, are becoming more and more critical to a growing array of manufacturing industries. For example, advances in precision manufacturing technologies such as flat panel display (FPD) and hard disk drive (HDD) components require that contaminant particles in process fluids be measured to as small as 0.1 μm .

Anatel's Ultrapure-100 provides a fully integrated solution to 0.1 μm particle monitoring in DI water applications. Whether your requirement is troubleshooting, monitoring, or qualifying aqueous cleaning systems or simply the monitoring of critical locations within your facility's ultrapure water plant, you will find Ultrapure-100 an effective and affordable addition to your online process analytics.

The Ultrapure-100 combines robust opto-mechanics, counting and communication electronics, and a unique flow control system all within one instrument to provide unparalleled performance. In high-pressure applications, such as DI water plant monitoring, the total system flow rate is in excess of 1.0 L/min. This results in extremely fast clean up and recovery times and excellent flow regulation, even with dynamic inlet pressures.

Ultrapure-100 is a complete system that is extremely easy to install and integrate with your existing facility monitoring system (FMS) or building management system (BMS). Alternatively, Ultrapure-100 can be used as a standalone instrument and is compatible with a range of software packages.

Ultrapure-100 is supplied with an easy to use Windows®-based configuration utility which makes installation and integration quick and easy. Parameters such as number of channels, sampling interval, and 4–20 mA analog output scaling can be quickly tailored to specific requirements. Real time system diagnostics ensure that data integrity is never compromised. Calibration is fully traceable to NIST standards.

Particle counting often complements Total Organic Carbon (TOC) measurement and Anatel is the industry standard for TOC monitoring in the semiconductor and flat panel display industries. Anatel's TOC Analysis Systems is a family of modular components that can be custom-combined for any water system. Now, with the addition of particle counting, Anatel takes instrumentation one step further to ensure increased efficiency and yield in your high purity water distribution system.

KEY FEATURES

- 0.1 and 0.2 μm standard particle sizes
- Customizable within a range of 0.1 to 5.0 μm
- 4–20 mA analog output connection
- High flow rate—ultra fast clean up time
- Integrated solution with low maintenance
- Superior flow regulation—“set and forget”
- Laser power diagnostic
- Particle counting software available



Model A-1000

Model Ultrapure-100

PERFORMANCE SPECIFICATIONS

Size Channels (μm)	0.1, 0.2
System Flow Rate	>1 L/min
Sample Flow Rate	100 mL/min (regulated for inlet pressure between 30 and 100 psi)
Light Source	Laser Diode
Inlet Pressure	100 psig maximum (690 kPa) 7.0 psig minimum
Temperature	Operating 7°C to 70°C Sample 7°C to 70°C

PHYSICAL SPECIFICATIONS

Power	90 to 260 VAC, 50/60 Hz
Power Consumption	80 VA maximum (0.8 A at 100 V)
I/O Connections	Analog Opto-isolated 4-20 mA output (2 channels standard, 4 channels optional) RS-232 Serial connection for set-up Electrical I/O connections are located on bottom of unit, with protective cover.
Display	2 channels or 4 channels of particle count data (user selectable)
Indicators	Power, Laser Condition, Leak Status
Fluid Connections	SS ¼" Swagelok (inlet and outlet) External flowmeter
Enclosure	Aluminum alodine with painted external finish
Size	305 L x 203 W x 190.5 mm D (12" x 8" x 7.5")
Relative Humidity	90% maximum, non-condensing

ACCESSORIES

Included	Power Supply Unit, Software Setup Utility, ¼" Nylon Sample and Drain Tubing Power Cord, Operator's Manual
Optional	Wall Mounting Brackets, Data Trending Software (call your representative for details)

