

## Ultrapure-50 Particle Counter

Particle Counting  
for Electronics  
Manufacturing

Take your DI water plant monitoring one step further—the Anatel Ultrapure-50 Liquid Particle Counter measures small particles in significantly low particle concentrations at an affordable price.

Particle monitoring, especially monitoring of ultrapure water (UPW), has remained a major hurdle for the semiconductor manufacturing industries. Advances in device design rules require ever decreasing particle levels in process fluids. Therefore, manufacturers need to measure not just small particle size but small particles at significantly low concentration levels.

Engineered to promote a low false count rate at an affordable price, Anatel's Ultrapure-50 provides a fully-integrated solution for 0.05 and 0.1 micron UPW monitoring. Whether your application involves troubleshooting at process point of use or simply monitoring critical locations within your facility's ultrapure water plant, the Ultrapure-50 excels in the lowest particle concentrations.

The Ultrapure-50 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 produces extremely fast clean up and recovery times with excellent flow regulation, even with dynamic inlet pressures.

Ultrapure-50 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-50 can be used as a standalone instrument and is compatible with a range of software packages.

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

- 0.05 and 0.1  $\mu\text{m}$  standard particle sizes
- 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
- Calibration fully traceable to NIST standards



Model Ultrapure-50

## PERFORMANCE SPECIFICATIONS

Size Channels ( $\mu\text{m}$ )	0.05, 0.1
System Flow Rate	>1 L/min
Sample Flow Rate	10 mL/min (regulated for inlet pressure between 30 and 100 psi)
Light Source	Laser Diode 830nm
Inlet Pressure	100 psig maximum (690 kPa) 7.0 psig minimum
Temperature Operating	15°C to 30°C
Sample	15°C to 30°C

## PHYSICAL SPECIFICATIONS

Power	100 to 250 VAC, 50/60 Hz
Power Consumption	90 VA maximum (0.8 A at 100 V)
I/O Connections	Analog Opto-isolated 4-20 mA output (2 channels) RS-232 Serial connection for set-up Electrical I/O connections are located on bottom of unit, with protective cover
Display	2 channels
Indicators	Power, Laser Condition, Cell Condition
Fluid Connections	SS 1/4" 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 1/4" Nylon Sample and Drain Tubing Power Cord Operator's Manual
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