

## Scanning Threshold Particle Counter (STPC)

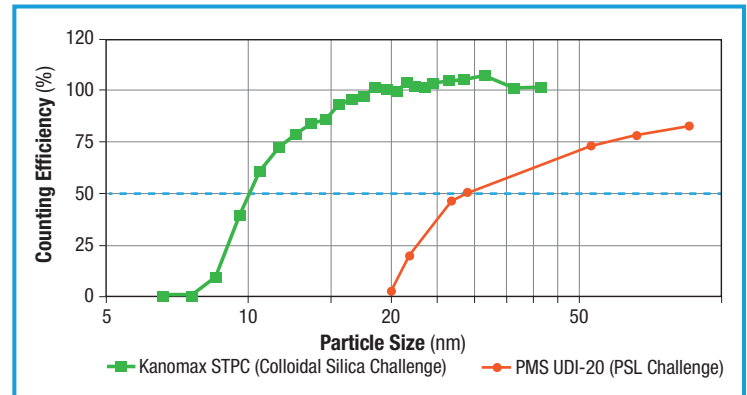
Model 9010

## Monitor UPW System Health and Stability

- 50% detection efficiency at 10 nm
- Real-time, on-line nano particle monitor
- Counts particles of any shape, any refractive index, any composition
- Great for monitoring organics, colloidal silica, resin beds, and other yield killers in UPW that traditional OPC's miss



### Counting Efficiency Comparison

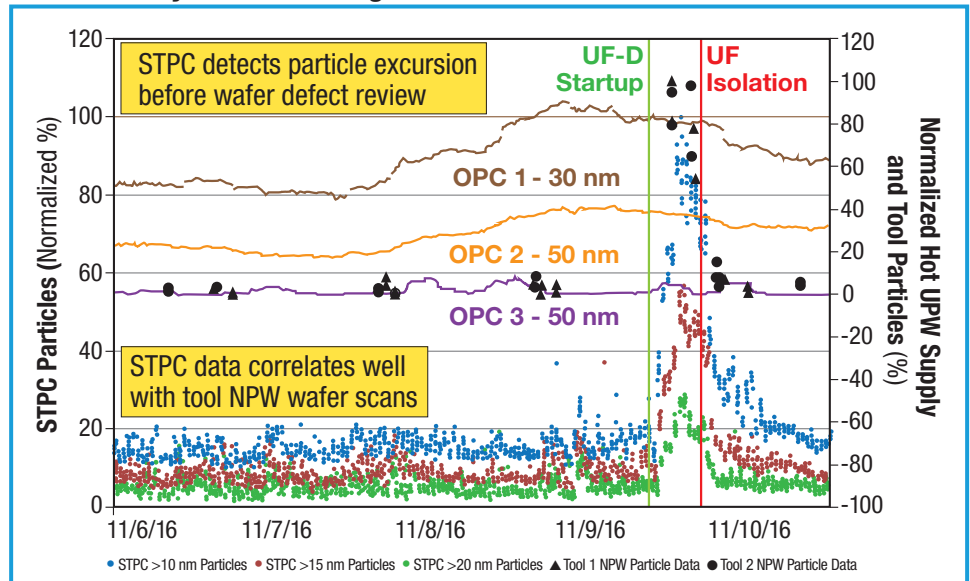


PMS data from the PMS Publication "Monitoring of ultrapure water (UPW) systems using the Ultra DI® 20 Liquid Particle Counter, Rev 5, 06.16.2015"

### Industry Recognition

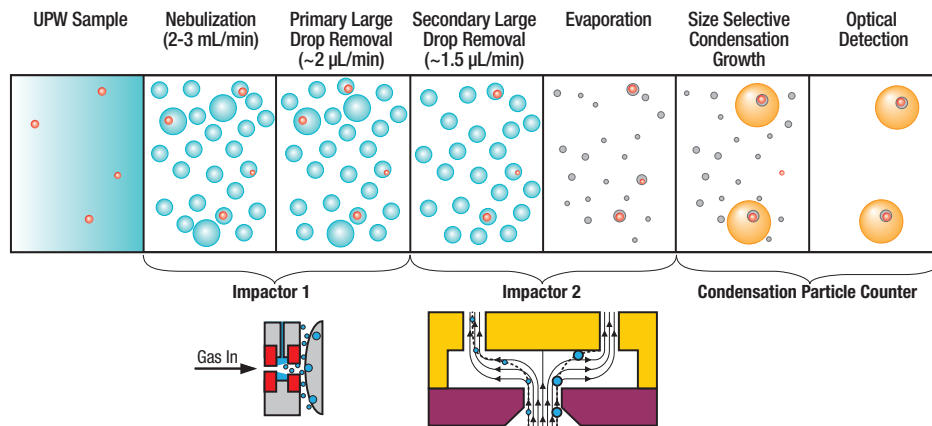
- The STPC is used for compliance with SEMI C79 "Guide to Evaluate the Efficacy of Sub-15 nm Filters used in Ultrapure Water (UPW) Distribution Systems."
- The STPC is used for compliance with the SEMI C93 "Guide for Determining the Quality of Ion Exchanged Resin used in Polish Applications of Ultrapure Water (UPW) Systems."

### Online UPW System Monitoring

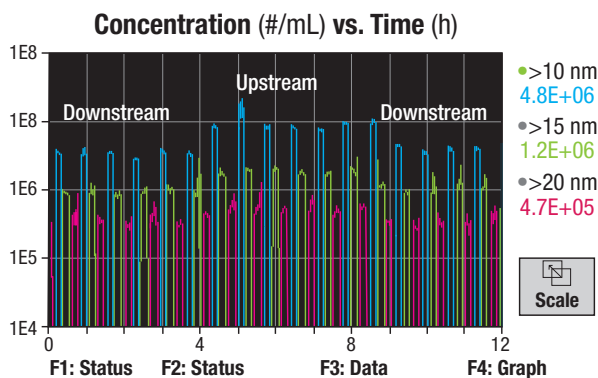


Lee et. al, UPW Micro 2017 Conference, Portland, OR.

## Principle of Operation



## Real-time Data Display



## Patent Protected

- Patent numbers 8,272,253 and 8,573,034 have been issued to CTA and licensed by Kanomax FMT.
- Kanomax has applied for additional domestic and international patents for technology contained within the ScanningTPC.
- Patent number 7,852,465 has been issued to Kanomax FMT.

## Specifications

**Measurement range:** 1E3 to 1E10 particles/mL  
**Inspection volume rate:** 1-5 µL/min  
**Threshold sizes:** 10-20 nm user selectable in 5 nm increments (50% detection efficiency)  
**Number of size channels:** 1-3 (user configurable)  
**Dead time between channel adjustment:** 2-5 minutes  
**Total flow rate:** 50-280 mL/min  
**Response time to concentration change:** <30 seconds  
**Inlet water pressure (online):** 200-500 kPa (30-70 psig)  
**Compressed air/nitrogen flow rate/pressure:** 2.5 std L/min CDA or Nitrogen, 340-410 kPa (50-60 psi) ANSI ISO8573-1:2010 Class 2 for compressed air  
**Maximum UPW nonvolatile residue:** 200 ppt at 10 nm threshold, 1 ppb at 20 nm  
**Wetted surface materials before nebulization:** PFA, PTFE, PEEK, sapphire  
**Detector working fluid:** Reagent-grade n-Butyl alcohol  
**Working fluid consumption rate:** Approximately 150 mL/day (bottle lasts for one week)  
**Ambient temperature range:** 15-35°C (59-95°F)  
**Ambient relative humidity range:** 0-85% non condensing  
**Maximum water temperature:** 50°C (122°F)  
**Dimensions (W × D × H):** 42 × 43 × 27 (43 with bottle) cms, 16.7 × 16.8 × 10.5 (16.8 with bottle) inches  
**Weight:** 16.1 Kg (35.5 lbs)  
**Power (Nebulizer):** Universal 100-240 VAC, 50/60 Hz, 90 W max  
**Power (CPC):** Universal 100-240 VAC, 50/60 Hz, 210 W max  
**Output:** RJ-45 for Modbus, USB FlashDrive  
**Internal storage:** Micro SD  
**Ultrapure water inlet:** ¼ inch PFA Flaretek®  
**Waste outlet:** ¼ inch SS Swagelok®  
**Compressed air inlet:** ¼ inch SS Swagelok®  
**Detector vacuum:** ¼ inch SS Swagelok® Port  
**Display:** 7 inch TFT Color, touch panel  
**Shipping drain:** Colder brand quick disconnect

The STPC was developed in collaboration with CT Associates, Inc.

Specifications subject to change without notice.

**Kanomax FMT and the Kanomax Group have unique aerosol expertise and can deliver powerful solutions to your nanoparticle measurement challenges. Let's get started - connect with us today!**

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