ColnaTec
Film Thickness Measurement Solutions

Colnatec Eon™ PC-Based Film Thickness Monitor

World's Only Temperature Controlling Film Thickness Monitor

The world is changing to one where networks can connect everything. Why not your film thickness monitor? To achieve this goal, others have developed simple, modified oscillators that attach to the crystal feed through and supply digital data to a personal computer. Colnatec takes a much different approach and offers a unit that is superior to even the best stand alone crystal monitors. Our groundbreaking Eon™ does everything a standard film thickness monitor can and more: real-time temperature measurement, heater control, real time frequency vs temperature correction, and crystal resistance. By adding temperature control capability, our software can correct for crystal heating via a pre-loaded frequency vs. temperature curve, ensuring the ultimate in film thickness accuracy. Combined with our RC™ cut, a major contributor to erratic crystal performance, crystal stress, is eliminated. This leads to the highest accuracy, most stable, and longest life thin film thickness sensor ever created.

Real time crystal resistance measurement puts the Eon™ in a class by itself. Instead of a derived measurement of the crystal "health" we measure the current that drives the crystal during oscillation. As the current decreases, the potential for crystal failure increases, but in a non linear fashion. Since failure is specific to materials and coating conditions, the Eon allows users to create their own predictive algorithms for crystal lifetime and crystal change out.

Features

- World's first real-time frequency vs. temperature correction capability
- Temperature measuring and controlling quartz crystal oscillator capable of driving a single quartz crystal sensor
- PID emulated programmable temperature control
- Shutter on/off support
- Heater status indicator on unit and in software
- Compatible with 500°C Tempe™ and Oasis™ temperature controlled crystal
- Communicates with user designed or Colnatec LabView™ software
- Infinitely expandable system: hundreds of Eons™ can be networked
- All connecting cables, software and an instruction manual included

Specifications

1) Drives crystals from 1-10 MHz, 1 to 200 Ω, any type (Quartz, SuperQuartz™
2) One type K thermocouple input; accurate to +/-0.25°C
3) One sensor head input, accurate to +/-1Hz
4) One 24 volt 3A DC heater output
5) Operates off PC cable power without heater, 24 volt power with heater (sup
6) Industry standard RS232 communication protocol
7) 4.5" X 2.5" X 1.5"

The key to perfect coatings.

Development funds provided by U.S. Department of Education
and Arizona Governor's Office of Economic Recovery

+1 480.634.1449 | tel
+1 480.634.4339 | fax
sales@colnatec.com
www.colnatec.com