

PRODUCT GUIDE

Organic Light Emitting Diode (OLED)

Problem

- Long deposition run times, particularly with in-line systems, are not possible due to limited crystal life
- Crystals fail at or around 10 hours

Solution

- Elevated crystal sensor operation temperatures, up to 90°C, minimize crystal noise and extend crystal life
- Temperature-controlled sensor heads and instrumentation

Recommended Products

- RC™ or High Temperature (HT™) quartz crystals
- Tempe™ self-cleaning sensor head
- Eon™ monitor

Problem

- Noisy crystal behavior (rate noise +/- 50% of set point signal) leads to inaccurate thickness measurement and early crystal failure
- Deposition rate is difficult to measure because the crystal reading has excessive rate noise

Solution

- Colnatec's superior finish AT-cut quartz crystals are designed to ensure low noise operation due to special surface treatment
- Specialty-cut quartz crystals reduce noise as a result of their insensitivity to stress and radiant heat
- Temperature-controlled sensor heads and instrumentation

Recommended Products

- Colnatec's superior finish AT-cut crystals, High Temperature (HT™) or RC™ quartz crystals
- Tempe™ self-cleaning sensor head
- Eon™ monitor

Problem

- Measurement of thin (<100 angstrom) layers is error-prone due to thermal shock of the sensor crystal upon exposure to the deposition source
- When the shutter on the deposition source is opened, the crystal rate spikes then settles, causing the rate reading to be obscured

Solution

- Specialty cut and high temperature crystals are impervious to thermal shock and result in high accuracy

Recommended Products

- RC™ and HT™ quartz crystals
- Eon™ monitor