TCG Incorporated

Technology Connections™

Introducing… the N-2

NanoSpec performance upgrade by… Foothill Instruments, LLC

Old NanoSpec®
Film Thickness System

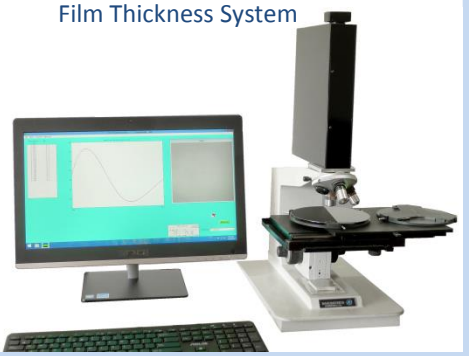
N-2 *UPGRADE PACKAGE*

Add 21st Century Technology and Performance to your Obsolete NanoSpec®!

from this ***to this***

- Measure 8X Faster
- Real Accuracy & Precision
- Reduce Fatigue & Eye Strain
- Measure More Films & Stacks
- Not Obsolete, Get Real Support

Superior Performing **N-2**
Film Thickness System



Description

The original equipment manufacturer *no longer supports* its older **NanoSpecs** leaving customers searching for third party service when failures occur. In addition, these mechanical spectrophotometers with their simplistic *film-approximations* are not suited for today's manufacturing tolerances. An *upgrade path is now available* for these under-performing and unsupported film thickness measurement systems.

Breathe new life into your *obsolete* **NanoSpec 0174, 0180, 0181, 200 or 210** with the **N-2** conversion. The old mechanical spectrophotometer is replaced with a modern solid-state version, integrated long-life illumination system and a digital imaging system. A Windows 8 PC equipped with sophisticated film metrology algorithms and software replaces the 1970's computer-architecture and firmware. The **N-2** conversion transforms the dying **NanoSpec** into a useful asset that will provide additional years of service with performance beyond the OEM's original intent.

Additional Features & Benefits

- Affordability allows funding from maintenance budgets.
- Classic NanoSpec gross measurement errors (a.k.a. order jumping) are eliminated with modern technology.
- Digital imaging displays measurement site on FPD eliminating eye-strain commonly associated with the old NanoSpec monocular.
- Sophisticated algorithms expand film/stack library.
- Eliminating classic NanoSpec gain-pot and wavelength adjustments improves performance and simplifies operation.
- Reflectance vs wavelength is graphically displayed with data modelling fit curve.
- FPD simultaneously displays active measurements, spectral curves, video image of measurement target and statistics.

Specifications

• Thickness Range with 10X Lens:	30nm to 25 µm
• Thickness Range with optional 4X Lens:	30nm to 70 µm
• Measurement Time:	< 1 second
• Measurement Spot Size Using 10X:	10 µm
• Short-Term Repeatability[1]:	1 nm
• Long-Term Repeatability[2]:	1 nm
• Lamp Life:	5,000 hours
• Wavelength Range:	450 to 850 nm

Notes: oxide on silicon material stack used to establish measurement specifications. 1) 1 sigma for 20 fixed-point, consecutive measurements of 10 µm oxide on Si. 2) 1 sigma of daily average of short term repeatability over 30 days.

The Cernera Group, Inc.
P.O. Box 1668, Discovery Bay, CA 94505 Phone (925) 240-5210 Fax (925) 240-5212
Manufacturing & Service Location: 4047 First Street, Suite #111 Livermore, CA 94551