## CryoSpectra brings cryogenic cooling into the vacuum chamber

**CryoSpectra** deliver the simplest way to bring cryogenic temperatures into a vacuum chamber through their uniquely designed cryorefrigeration systems. Now available from Elliot Scientific in the UK and Ireland, these high cooling capacity systems are easily the best way to cool laser crystals via a very small cold head, to cryogenic temperatures.

The CryoSpectra K Series of low acoustic noise cryorefrigerators are especially designed for work in the lab. The closed-loop cooling system ensures maintenance-free operation, while the ultra-compact cold head guarantees an absolutely vibration-free chilled surface for inside the vacuum chambers of high power laser systems.

CryoSpectra®
Cryogenics is our passion.

**Features**

- High cooling capacity
- Cool-down time 20 minutes
- Compact cold head
- Vibration-free
- Maintenance-free
- Quiet operation

**Applications**

- Laser crystal cooling
- High power laser amplifiers
- CEP stabilised laser systems
- Ti:Sapphire amplifier systems
- Quantum Cascade Lasers
- Cryopumping

Over a dozen models delivering between 90 and 170 Kelvin are available, with each cryorefrigerator offering a particular cooling capacity dependent on compressor size and whether it is air or water-cooled.

The 38 or 50 mm diameter gold-plated and polished cold heads are available with CFF or KF flanges for easy attachment, eliminating the need for costly custom vacuum chambers. The unique, compact design also allows for a reduction in chamber size, leading to better vacuum conditions and the benefit of reduced pump down times. For more information, please **contact us**.

## Lake Shore release new Probe Station catalogue... featuring Elliot Scientific

**Lake Shore** have released their latest Probe Station catalogue that details how their systems provide precisely controlled environments for the non-destructive measurement of the electrical properties of materials and prototype electronic devices.

Researchers are enabled in their fundamental science work by Lake Shore equipment's ability to deliver consistently accurate and repeatable measurements in an easy and convenient way. Probe stations are versatile platforms that are often used as a multi-use community asset in many academic settings, or for dedicated materials research at semiconductor foundries.


Elliot Scientific feature in this publication, as Lake Shore thank us for the work we recently carried out in developing what was a unique integration of **Lake Shore CRX** micro-manipulated probe station, an InGaS Spectrophotometer from **CRAIC Technologies**, and a Zeiss microscope head for Southampton University's Centre for Photonic Metamaterials.

Probe stations are typically used for material studies that include sampling IV and CV curves over a range of temperatures, microwave and electro-optical property responses, magneto-transport characterisation, Hall effect measurements, and so on.

Lake Shore offer six cryogen and four cryogen-free probe stations with various capabilities. For more information, **contact us** for a printed catalogue, or download a **PDF version** here.

**This month, meet Elliot Scientific at...**

**Quantum UK 2015**
September 28th to 30th: Oxford

## Photonex will soon be upon us... Elliot Scientific looks forward to next month's expo!

**Photonex** takes place next month and Elliot Scientific will be on **Stand B10**, ready to discuss how we can bring solutions to your science applications. Visitors to the exhibition will be able to experience our wares first-hand, with such products as:

- Cryorefrigerators & Cold Heads from **CryoSpectra**
- Flexure Stages & Slides from **Elliot|Martock**
- Plasma-based Light Sources from **Energetiq**
- Spatial Light Modulators from **HOLOEYE**
- Circuit/Material Characterisation Systems from **Kryoz**
- Nanopositioners from **Mad City Labs**
- Powerful LEDs for Optogenetics from **Prizmatix**
- Electro-optic, Waveguide, and Laser Technologies from **Vescent**

These are just a sample of the products we will be showing or demonstrating at Photonex, so do come and visit **Stand B10** to discover more of what we offer for science and industry.

**Photonex | 14th-15th October | Ricoh Arena Coventry**

## International Year of Light: Events to end of October

INTERNATIONAL YEAR OF LIGHT 2015

### The Aston Year of Light 2015 Conference
Birmingham: October 6th to 7th

### Photonex 2015
Coventry: October 14th to 15th

### Asian-European Symposium on Organic Optoelectronics Light
Edinburgh: October 27th to 29th

## Capacitance is the basis of versatile measurement; as envisioned by Andeen-Hagerling

**Andeen-Hagerling** have manufactured capacitance and capacitance/loss bridge test equipment for use in the lab and field for over thirty years. Their products enable measurement of pressure, cryogenic temperature, and fluid levels, are used in material characterisation; and displacement and strain testing. The company offers a range of instrumentation that includes:

**Capacitance and Loss Meters**: The Andeen-Hagerling AH 2550A series measures capacitance and loss in medium and high impedance ranges.

**Capacitance Standards**: The Andeen-Hagerling AH 1100 capacitance standard frame contains up to four AH 11A fused-silica capacitance standards, and provides reference capacitors of unexcelled stability.

**Multi-frequency Capacitance/Loss Bridges**: The AH 2700 series offers unparalleled stability, resolution, linearity and accuracy in a multi-frequency capacitance/loss bridge.

For more information about these products and their applications, **contact us now**.