

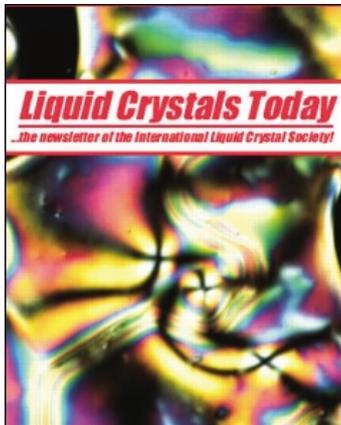
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## Product News

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# PRODUCT NEWS

## Video Input LCD monitor from CALIBRE

A new LCD video monitor available from Calibre UK Limited will be launched at the EID exhibition attached to EuroDisplay '96 held in Birmingham, UK. The new monitor employs a 10.4 inch TFT panel coupled with a video interface directly accepting interlaced PAL, NTSC and SECAM signals in either composite (CVBS) or YC/S-video format. It displays 640 x 480 pixels and up to 16.7 million colours on an 8 bit TFT panel. Line and pixel interpolation is implemented on the interface to accurately scale the image on the VGA display, and height and width adjustments to allow signals to be displayed full screen. The unit directly replaces a conventional CRT display, requires 12V DC supply (18W), and the flexible interface design allows a number of variants using brighter or larger TFT panels from a number of manufacturers.

Further information from:

**Craig Shearstone**  
**Calibre UK Limited**  
**Cornwall House**  
**Cornwall Terrace**  
**Bradford, BD8 7JS, UK**  
**Fax + 44 (0)1274 730960**

## Spatial LCD Photometers and Colorimeters from ELDIM

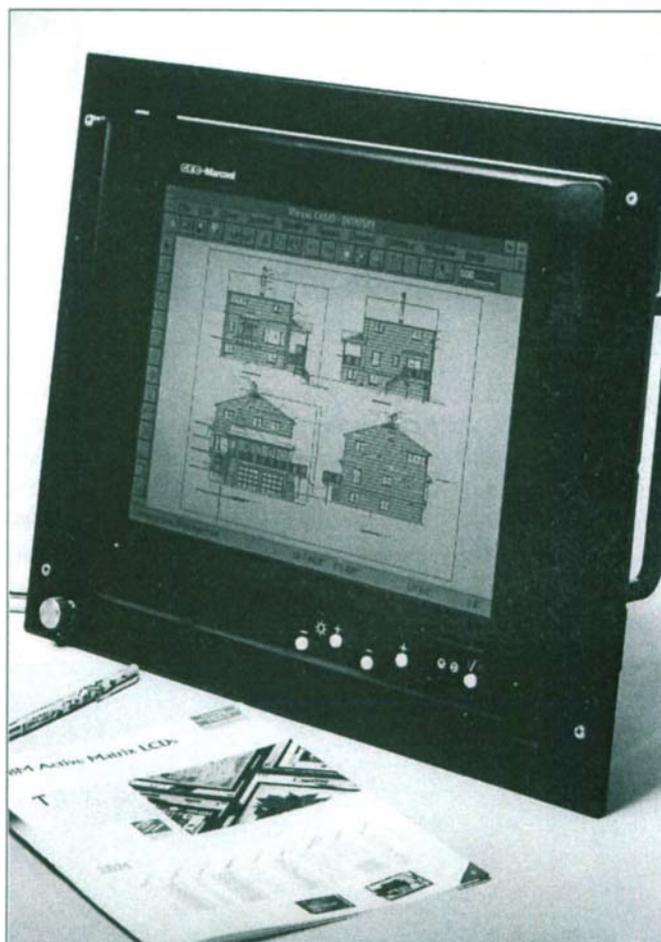
Improved angle of view and optical contrast are two key objectives being pursued by LCD manufacturers and techniques for quantitative evaluation of appropriate parameters are being developed. ELDIM (Electronics for Displays and Imaging Devices) have introduced improved photometers (EZ Contrast 120D) for testing the optical characteristics of liquid crystal displays. Measurements of luminance as a function of angle can be made over +/-60° or +/-80° in an enhanced version (EZ Contrast 160D) and there is also a colour option available. A variety of hardware and software options allow for both diffuse and parallel illumination, wide temperature range measurements (-40°C to +80°C) and determination of response times, tilt angle and retardation angles. Equipment will be on display at the EID Exhibition, Birmingham 1-3 October 1999.

Further information from:

**Jean-Noel Curt**  
**ELDIM**  
**4 rue Alfred Kastler**  
**14000 Caen, France**  
**E-mail: ELDIM@MSN.COM**  
**Fax: +33 31 47 37 77**

## TRIDENT DISPLAYS monitors come with touchscreen

Trident Microsystems will introduce a number of new displays at this year's EID exhibition 1-3 October. New 16-19 inch AMTFT panels from IBM have been incorporated into high resolution monitors as replacements for conventional 16-19 inch CRT monitors. Trident is offering these and other displays with LC Touch to give touchscreen capability to liquid crystal displays.



16.1 inch AMTFT monitor from Trident Displays

Further information from:

**Jane Atterbury**  
**Trident Microsystems**  
**Perrywood Business Park**  
**Honeycrock Lane**  
**Salfords**  
**Redhill, RH1 5JQ, UK**  
**Fax + 44 (0)1737 771908**

# PRODUCT NEWS

## Custom Liquid Crystal Synthesis

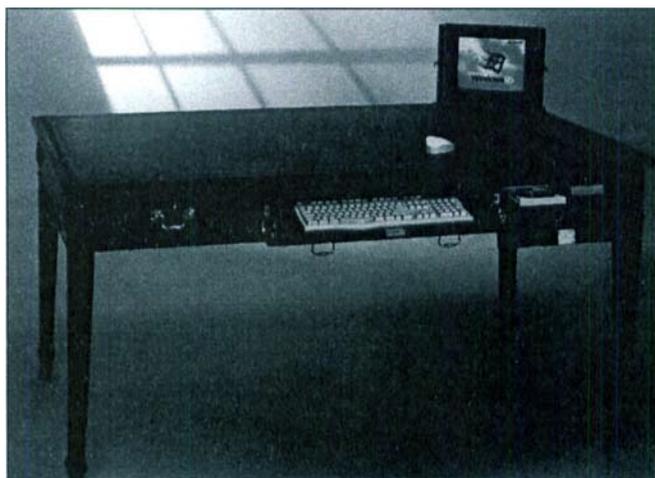
A new company has been formed in Germany, which offers custom synthesis of high tech speciality chemicals on scales of 1 g to 10 kg. MLS Ltd, stands for Materialien für Lichtwandlungen und Lichtsteuersysteme or Materials for Light Controlling Systems. The company's expertise is in liquid crystals and liquid crystal polymers and composites for large area light controlling systems, and a speciality area is the development of optimized procedures for oriented LC-polymer dispersions.

Further information from:

Prof Dr Horst Zschke,  
**MLS GmbH, Am Haupttor,**  
**06236 Leuna,**  
**Germany.**  
**Fax: + 49-3461-436429.**

## Sunrise set with NEC display showstopper at EID

Sunrise Electronics and NEC caused a few visitors to stop in their tracks at the EID displays show this autumn (1-3 October). Featured on the stand was a giant 20 inch colour LCD flat screen monitor based on an NEC TFT module being shown for the first time in Europe. Also featured on the stand was a Powerdesk II—a flame mahogany writing table with built-in Pentium-based PC integrating a classic furniture style with NEC's 12.1 inch flat screen technology for the display (see photo).



Sunrise Electronics has just announced a new resolution 13 inch colour LCD from NEC aimed specifically at the CAD and desktop workstation markets as it provides a full colour high brightness display in resolutions up to 1280 × 1024 pixels.

The NL128102AC20-07 is an active matrix colour TFT display

module with an actual display area of 257.3 × 205.8 mm (33 cm diagonal), and providing a full colour image (greater than 16 million colours) from standard analogue RGB signals. It has built-in backlighting and inverter and gives a bright, clear display with good contrast ratio and a wide viewing angle. Its high resolution of 1280 × 1024 pixels makes it suitable for desktop workstations and high performance portable computing applications.

As the display is driven from an analogue RGB interface, high resolution full colour images can be displayed, ideal for presentations involving photographic or 3D CAD images and multimedia. The display features vertical screen expansion mode, also known as multiscan, allowing images of different resolutions to fill the display area.

For further information contact:

**Nick Evans,**  
**Sunrise Electronics Limited,**  
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## Merck gives executives a lighter laptop load

Today, executives equipped with laptop computers will breathe a sigh of relief as a British-developed optical film is launched to lighten their load.

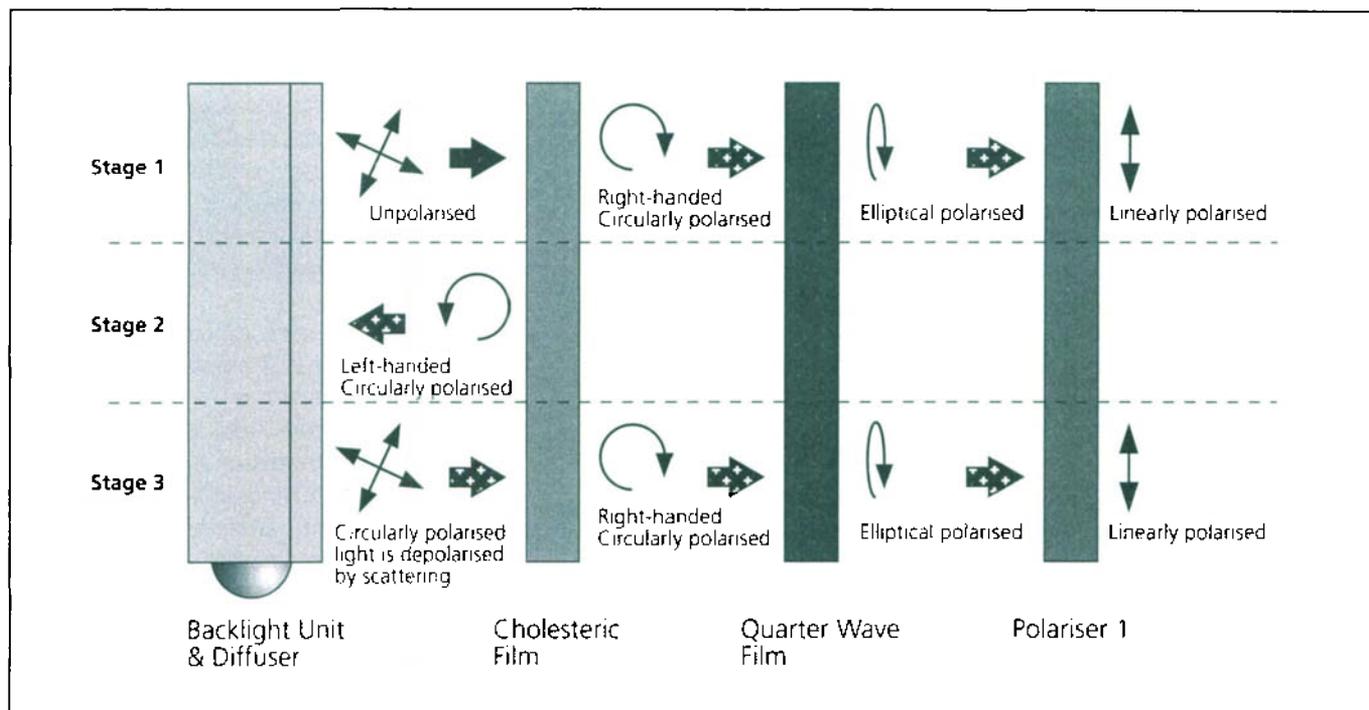
The Transmax™ optical film has been developed by Merck Ltd to create a brighter laptop liquid crystal display (LCD) screen which will allow manufacturers to use smaller, lighter batteries with significant weight implications. It is also expected that Transmax™ will have a significant effect in the emergence of desktop LCD monitors for personal computers.

Indeed, Transmax™ will actually afford LCD manufacturers with a series of new benefits. For example, they will be able to:

- use smaller batteries for the same lifetime but housed in lighter, more portable equipment,
- use lower power lamps that will increase battery lifetimes, and
- increase the brightness of display modules using the same power, leading to many new application areas, e.g. desktop LCD monitors, avionics and automotive markets.

Traditional dichroic polarizers typically only transmit about 35-45% of incident light. Transmax™ is a reflective polarizer and can increase this to 70% (a 70% increase) by the repeated reflectance and depolarization of the light for maximum transmittance. Transmax™ combines a wide band cholesteric film with a quarter wave film and both are positioned together in an LCD module.

# PRODUCT NEWS



The Transmax™ mode of operation is simple and relies on the repeated reflectance and depolarization of light to ensure maximum transmittance.

**Stage 1:** Light from the backlight is incident on the cholesteric film which transmits 50% of the light while at the same time circularly polarizing it in a right-handed sense.

**Stage 2:** The remaining 50% is reflected back towards the backlight and is circularly polarized in a left-handed sense.

**Stage 3:** When this light re-enters the backlight it is scattered and at the same time depolarized. It returns to cholesteric film and again 50% is transmitted.

This process is repeated many times until most of the light from the backlight has been transmitted by the cholesteric film. The resulting light is circularly polarized in a right-handed sense.

The right-handed circularly polarized light coming from the cholesteric film then reaches a quarter wave film. This converts the light into an elliptically polarized state, ready for transmission by polarizer 1 into the LCD display.

For further information contact:

**Joanna Sale,  
Merck Ltd,  
Merck House,  
Poole,  
Dorset BH15 1TD, UK.**

# PRODUCT NEWS

## Japanese Association of Liquid Crystal Scientists

After two years the JALCS is now firmly established as a forum for liquid crystal scientists in Japan. Its activities are reported in JALCS News, and events include an Annual Symposium which focuses on the latest developments in

liquid crystal technology, an Annual Summer School which provides courses for young researchers to learn about liquid crystals, and new for 1996, JALCS Workshops on specialized topics. The first such workshop was held in April 1996, and was concerned with 'Seeking a New Breakthrough for AM-LCD Technologies'. There were contributions from scientists working in companies as well as

academic scientists, and the lectures covered such important developments as new flat panel displays, wide-angle viewing LCDs, grey-scale response and reflective LCDs. Details of these and other activities of the JALCS are accessible through the WWW at <http://kndo-www.ch.kagu.sut.ac.jp>, and further information can be obtained from the Chairman of JALCS: Dr Hirikazu Toriumi.