

## Flame Detector

**D**et-Tronics has introduced its PM-5MP Dual Spectrum infrared flame detector for use by the semiconductor fabrication and



processing industry, where faulty or misused electrical equipment can ignite solvents or plastic components. The company says the PM-5MP's 1-s response rate is 5 times faster than that of competing products and that it has an extremely low rate of false alarms. The detector operates at two wavelengths—2 to 3  $\mu\text{m}$  and 5 to 7  $\mu\text{m}$ —and can be configured to sound an alarm or set off a fire-suppression system. Its chemical-resistant polypropylene housing allows the detector to be used in both solvent and chemical-etch wet benches. The PM-5MP can operate from 32 to 158° F and from 0 to 100% humidity. The complete unit measures 3.1  $\times$  3.1  $\times$  1.5 in. and has a built-in mounting bracket. Its entire cable has a chemical-resistant sheath.

### Det-Tronics

6901 West 110th Street  
Minneapolis, MN 55438

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## Thermocouple

Daytronic's new model AA14-4F010 Thermocouple Conditioner Card, designed for use with any Daytronic System 10, SPS6000, or SPS8000 signal processing system, accepts

temperature signals from E, J, K, N, R, S, and T thermocouples. The four-channel conditioner card produces linear analog output accurate to  $\pm 0.05\%$  over the full range of thermocouple operating ranges and does so without the need for additional output processing. Although all four channels of a given card must be dedicated to the same type of thermocouple, separate cards devoted to other types can be included in the data-acquisition system. The AA14-4F010 features galvanic isolation and has a simple calibration procedure that allows users to quickly set up each thermocouple-based data channel. Typical applications include measurement of oven-temperature profiles and monitoring of generator temperatures in hydroelectric plants.

### Daytronic Corp.

2211 Arbor Boulevard  
Dayton, OH 45439-1521

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## Gold-Clad Wire

Anomet Products offers a variety of gold-clad wires for applications that require high conductivity and superior contact resistance and corrosion resistance. Anomet's wires feature 10 to 24K gold over copper-copper alloy, nickel-based alloys, and such cores as titanium and niobium. The wires are metallurgically bonded to make them more ductile and more easily formed.

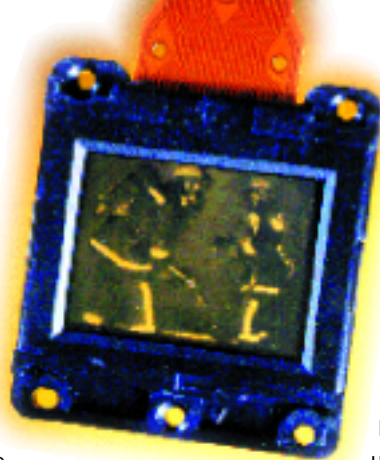


They can be drawn thinner than gold-filled wire and thicker than plated wire. The wires are available in sizes from 0.005 to 0.125 in. outside diameter and can be shipped on spools or cut to length.

### Anomet Products, Inc.

830 Boston Tumpike  
Shrewsbury, MA 01545

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## Miniature Displays

Central Research Laboratories has added a new model to its Liquid Sun line of "plug and play" miniature display devices. The monochrome XGA1 offers extremely high resolution for demanding applications in such areas as holography and image processing. The XGA1 comes in diagonal screen sizes of 0.9, 1.3, and 1.8 in. with a resolution of 1,024  $\times$  768 pixels. It is available with or without an input polarizer and comes with an XGA interface that allows direct connection to a personal computer.

### Central Research Laboratories Ltd.

Dawley Road Hayes  
Middlesex, UB3 1HH, England

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## Enhanced Surface Profilers

Veeco Metrology Group has introduced its Dektak 3 series of enhanced surface profilers with extended capabilities for measuring step heights, roughness, and planarity. Applications of the stylus-based metrology systems include profiling surface features of semiconductor wafers, microelectromechanical-systems devices, hybrid circuits, sur-

f a c e - m o u n t devices, electrical contacts, thin films, and paints and coatings. They are also useful for measuring the roughness and topography of substrates, polymers, optical lenses, and advanced materials. The three Dektak 3 models satisfy a variety of sample-size and measurement needs. All models include a Y2K-compliant, high-speed Pentium computer, operate under a Microsoft Windows 98 graphical-user interface, and have a color-video microscope that allows surface viewing and precise positioning of samples.



**Veeco Metrology Group**  
**112 Robin Hill Road**  
**Santa Barbara, CA 93117**  
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## Acid-Resistant Optics

Meller Optics offers a line of sapphire optics for use in harsh operating environments. These domes, lenses, and windows are impervious to most acids, alkalis, and harsh chemicals at temperatures up to about 350° C. They are capable of transmitting from the ultraviolet to the infrared (270 nm to 4.7 μm) and will provide up to 85%

transmission uncoated and up to 99% transmission with antireflective coatings on two sides. Meller will custom-fabricate these abrasion-resistant products to specifications. Sapphire domes and lenses are made with diameters of 1 to 4 in. and win-



dows with diameters of 0.5 to 9.5 in. Lenses and windows have focal lengths of 10 to 100 mm at 633 nm.

**Meller Optics, Inc.**  
**120 Corliss Street, P.O. Box 6001**  
**Providence, RI 02940**  
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## Material Testing Systems

MTS Systems has released Alliance RT, a new family of testing systems that are intended for the mechanical testing needed to characterize and qualify materials and products during basic research, product development, manufacturing process development, and quality control. The systems combine state-of-the-art electronics; MTS's TestWorks 4 software, which provides ease of use and flexibility in controlling the machines; and key innovations in load-frame technology that include a high-precision



movement and guidance system. Other features include integrated pneumatic connections, an ac brushless servomotor, and non-contacting detectors to limit movement. The Alliance RT digital-control technology yields highly consistent test results.

**MTS Systems Corp.**  
**14000 Technology Drive**  
**Eden Prairie, MN 55344-2290**  
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## IC/Computer Videos

Ruth Carranza Productions offers a series of videos for high-tech educational and training uses. The two-part "Silicon Run Series" provides a detailed overview of integrated circuit and computer manufacturing, including such topics as clean-room design, mask making, multilayer fabrication, packaging, system assembly, computer structure, and signal integrity. It guides viewers through industrial operations and helps them bridge the gap between academic theory and application. "Silicon Run Lite" is a condensed version of the two-part series that gives a more simplified look at the technology. "Silicon Run Deposition" explores in detail the four basic techniques used in thin-film deposition. The videos were produced in collaboration with Stanford University's Center for Integrated Systems and Nanofabrication.

**Ruth Carranza Productions**  
**P.O. Box 391025**  
**Mountain View, CA 94039**  
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## Video Inspection Tool

Moritex Europe has brought to market the MS-500B Micro-Scopeman, a high-resolution video probe designed for real-time inspection and quality assurance. The hand-held instrument displays a magnified image of an object

on a TV or video monitor, which eliminates the eyestrain that often accompanies the use of optical microscopes. Applications include shop-floor inspections, forensic analyses, customs inspection, and on-site inspection of plant and processing equipment. The MS-500B incorporates a charge-coupled device camera head with 752 × 582 pixel resolution and fiber-optic lighting for simple, rapid image acquisition. A range of interchangeable, fixed-magnification and zoom lenses (5¥ to 1,000¥) suitable for most contact and contact microinspection applications is available.

**Moritex Europe Ltd.**  
**14 Signet Court, Swanns Road**  
**Cambridge, CB5 8LA, England**  
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## Titanium Parts

Photofabrication Engineering uses photochemical etching to custom-fabricate titanium parts that are difficult to manufacture by machining and stamping. Components can be made in sizes from 0.5 to 15 in.<sup>2</sup>, with a thickness of 0.00039 to 0.125 in. and tolerances to within 10% of the material thickness. The etching process yields burr-free parts without the stresses that result from machining and stamping. It also provides high uniformity because etching does not require tooling that can degrade; and permanent markings can be inscribed during fabrication.

**Photofabrication Engineering, Inc.**  
**500 Fortune Boulevard**  
**Milford, MA 01757**  
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This section is based on information supplied by the manufacturers and in some cases by independent sources. *The Industrial Physicist* can assume no responsibility for its accuracy. To facilitate inquiries, a Reader Service Card is attached between pages 40 and 41.