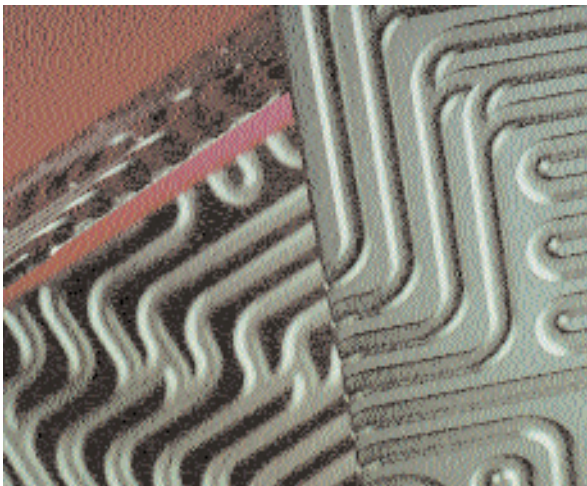


## Anodes and Cathodes

**P**hotofabrication Engineering's new line of custom-made, photochemically etched anodes and cathodes have broad applications in the aerospace, automotive,



biotechnology, medical, appliance, power, and electrical-electronic industries. Their uses include fuel cells, heat exchangers, and oxygen and hydrogen generators. Using a proprietary process, the company can photoetch pure titanium, titanium alloys, zirconium, and zirconium alloys and such standard materials as aluminum, stainless steel, copper, and brass. This range of materials enables the creation of anodes and cathodes that are resistant to corrosion and high heat and that can be friction-bonded, brazed, or welded. Parts can be etched in thicknesses from 0.0005 in. (0.0127 mm) to 0.090 in. (2.286 mm).

**Photofabrication Engineering, Inc.**

500 Fortune Boulevard  
Milford, MA 01757

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### Micropositioning System

Polytec's new M-840 HexaLight is a compact, parallel-kinematics micropositioning and alignment system that provides six degrees of freedom and micrometer-range precision. The high-precision M-840 has positioning speeds of 50 mm/s and 300 mrad/s and a load rating of 20 kg. Polytec also markets positioning and alignment systems with load ratings up to 200 kg. The M-840's versatility is based on its

virtual-pivot-point capability, which allows rotations around any point in space. The system is well suited for multi-axis alignment or positioning tasks required in optics, flat panels, satellite antennas, wind-tunnel testing, medical robots, and handling systems.

**Polytec PI, Inc.**

16 Albert Street  
Auburn, MA 01501  
Circle No. 181 on Reader  
Service Card

### Ultrabright LEDs

Gilway's new series of ultrabright green, blue, and white light-emitting

diodes (LEDs) provide solid-state reliability and extremely bright and uniform light. The gallium nitride LEDs have 17,000-millicandela luminous intensity at 20 mA and operate at 3.4 V and 3.5 V dc, depending on the device's color and

version. They come in water-clear resin or ultraviolet-light-resistant epoxy packages, depending on the color, and in sizes T-1 (3-mm diameter) and T-1 $\frac{3}{4}$  (5-mm diameter). Gilway's LEDs can replace subminiature incandescent lamps in a variety of applications, including as indicator lights, electronic displays, signs, and automotive and outdoor lighting.

**Gilway Technical Lamp**

55 Commerce Way  
Woburn, MA 01801-1005  
Circle No. 182 on  
Reader Service Card

### Tube Collimators

Optical Surfaces has expanded its range of tube collimators based on its off-axis paraboloids



and zero-expansion glass ceramics to ensure long-term stability. The aluminum tubes have matte-black internal walls; prealigned, stress-free mounts; and a combined optical performance of better than  $\lambda/5$

peak to valley at 633-nm wavefront in the field center. The collimators are coated with aluminum and magnesium fluoride and provide achromatic performance at any wavelength from ultraviolet through the visible into the infrared. Alternative coatings are available, including gold and silver. Unlike other collimators, the devices maintain alignment when moved from site to site.

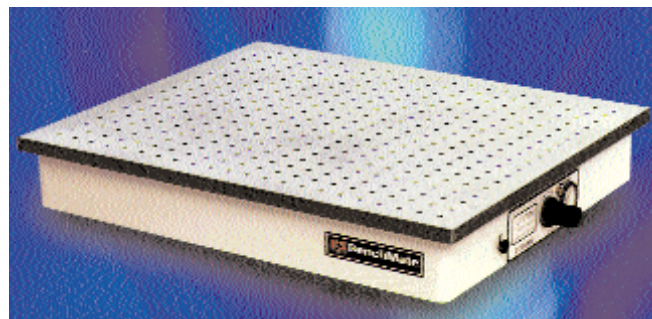
**Optical Surfaces Ltd.**

Godstone Road, Kenley  
Surrey, England CR8 5AA  
Circle No. 183 on Reader  
Service Card

### Vibration-Free Platform

Kinetic Systems' new Model 2212 vibration-free platform is designed to enhance the performance of atomic force microscopes, microhardness testers, profilometers, balances, audio

components, and other precision tabletop equipment. The self-leveling 2212 has an ultraflat tabletop with a guaranteed flatness of  $\pm 0.004$  in. over a  $24 \times 24$  in. surface, and it provides excellent vertical vibration control and low natural frequency. The platform is available in four table sizes up to  $24 \times 36$  in., with load capacities up to 450 lb. It is Class



## New Products

100 clean-room compatible, and Class 10 compatibility is available as an option. The 2212 weighs 130 to 160 lb, which allows workers to move it from one location to another as needed.

Kinetic Systems, Inc.  
20 Arboretum Road  
Boston, MA 02131

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## Strain Gauge Conditioner

Daytronic has introduced its new Model 5D70 signal-conditioner module, a single-input, dual-output, software-programmable unit for input of pressure, force, torque, weight, and other variables measured by conventional dc-excited strain gauge transducers. It can be used as an in-line signal conditioner or reside in a host device. The



5D70's advanced analog design provides signal stability and accuracy over a wide range of sensor inputs. The conditioner also features remotely sensed, user-selectable excitation, 0.02% accuracy, and low-pass

active filtering, which can be independently selected for each output, and external shunt calibration connections.

Daytronic Corp.  
2211 Arbor Boulevard  
Dayton, OH 45439-1521

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## Gas Analyzer

Pfeiffer Vacuum's Prisma RGA residual gas analyzer and leak detector monitors gases in vacuum systems to ensure the correct operating conditions and improve product consistency and yield. Industrial coating applications include machine tools, architectural glass, optics, food packing, and semiconductors. The Prisma RGA uses 32-bit Microsoft Windows operating software and connects by RS232 or Arcnet fiber-optic cable for communication. It features integrated total-pressure measure-



ments for longer service life. A space-hardened version of the Prisma RGA will be used aboard the International Space Station to monitor krypton and dangerous gas leakage from sealed cartridges before and during vacuum metallurgy experiments.

Pfeiffer Vacuum, Inc.  
24 Trafalgar Square  
Nashua, NH 03063-1988

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## Stylus Profilometer

Ambios Technology's new high-performance, easy-to-use stylus profilometer provides precision measurements of step height, thin-film stress, film thickness, and surface roughness. The XP-1 Surface Profiler incorporates an extremely low force stylus mechanism that is well suited for measurements of soft or delicate films without risk of surface damage. It also features an intuitive Windows XP user interface for simple and reproducible program navigation, 50,000 data-



point data collection, and a total Z range of 100  $\mu\text{m}$  for surface measurements from nanometers to micrometers. The XP-1 accom-

modates a variety of samples that include semiconductors, glass substrates, thin-film magnetic heads and disks, precision-machined surfaces, polymers, and micro-electromechanical devices.

Ambios Technology, Inc.  
303 Potrero Street, Suite 42-303  
Santa Cruz, CA 95060  
Circle No. 187 on Reader Service Card

## Sputtering Targets

Goodfellow Corp. provides sputtering targets of 62 different metals and alloys,



and compounds that include borides, carbides, fluorides, nitrides, oxides, selenides, silicides, sulfides, and tellurides. Goodfellow can also custom heat-treat, remelt, or alloy surfaces of flat sheet up to 80  $\times$  400 mm using a continuous thermal process, and melt thin layers of metals or oxides onto the surface. This process is well suited for the creation of double-layer sheets and foils, ceramic superconductors on metallic or ceramic substrates, and thin layers of solder on metals. Goodfellow generally makes sputtering targets to order, but it holds a number of them in stock.

Goodfellow Corp.  
800 Lancaster Avenue  
Berwyn, PA 19312-1780  
Circle No. 188 on Reader Service Card

**The New Products section is based on information supplied by the manufacturers. The Industrial Physicist can assume no responsibility for its accuracy. To facilitate inquiries, a Reader Service Card is attached between pages 30 and 31. Only a few new product press releases can be selected for each issue. High-quality color art is taken into account in the selection process, as well as newsworthiness and relevance to physicists in industry. Mail releases to New Products, The Industrial Physicist, One Physics Ellipse, College Park, MD 20740.**