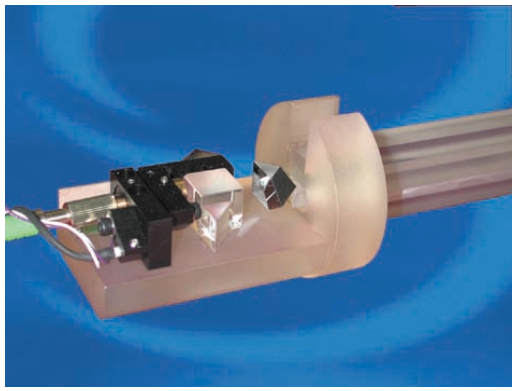
Newsletter
SCHOTT Optics for Devices

VOL. I NO. III OCTOBER 2006

Homogeneity of thermal expansion coefficient of ZERODUR® measured with improved accuracy

A new dilatometer setup with an improved accuracy has been installed at SCHOTT for the measurement of the thermal expansion coefficient of ZERODUR®. The measurement repeatability has been improved by a factor of four compared to the standard dilatometer setup allowing for the most accurate homogeneity measurements to date.
Using the new dilatometer, SCHOTT conducted the most extensive homogeneity measurement ever made on a single 1.5m diameter ZERODUR® disc. The measurement clearly showed the excellent homogeneity of the material and proves that ZERODUR® is ideally suited as mirror substrate for future extremely large telescopes.
Detailed information on the improved dilatometer setup and the results of the homogeneity measurement can be found in our updated technical information no. 37: "Thermal expansion of ZERODUR®" which can be downloaded from our internet page.



www.schott.com/optics_devices/english/download

SCHOTT
glass made of ideas

New high refractive index low Tg glass P-SF67 (n_d = 1.90680, ν_d = 21.40)

SCHOTT continues to expand the product range of lead and arsenic free high refractive index optical glasses by establishing P-SF67.
P-SF67 is an optical glass particularly suitable for the production of aspherical lenses using the precision molding process, due to the low glass transformation temperature.
P-SF67 addresses strong growing consumer markets in Asia as well as highly corrected optical systems of industrial optics in Europe and NAFTA.

BACK TO INDEX

SCHOTT upgrades optical post-processing facility in Penang/ Malaysia, enabling customers to purchase optical materials at different value levels

SCHOTT has upgraded its optical post-processing production facility in Penang, Malaysia, which was built in 2003. The upgrades include 2,500 new square meters of clean and grey room space as well as new optical glass sawing, polishing, coating and cleaning equipment.
The upgrades at the Penang production facility improve SCHOTT's ability to provide customers with basic and complex optical materials and components — ranging from unfinished optical glass to prisms, filter glass and wafers and other plane-parallel polished optical products — at the value-added level they require.
"By providing our Asian production facilities with prisms that have already been pre-fabricated to our exact specifications, SCHOTT helps us focus our production and dedicate more resources to new product development." said Francis Ang, Managing Director, Edmund Optics, Singapore.

The optical materials and components processed at the facility are used in high-resolution projectors, projection televisions, digital video and still cameras, and medical, security and industrial imaging products.
"We are pleased with SCHOTT Penang's upgraded facilities and ability to provide value-added products. Having switched to purchasing milled lenses from previous purchases of block glass, SCHOTT's improvements has helped us to lower our overheads and shorten lead times as compared to purchasing from other optics houses." - Mr. Donald Ng, Section Head, Optics, Leica Instruments, Singapore.

BACK TO INDEX

SCHOTT
glass made of ideas

Serving the Japanese market for 40 years with optical materials – SCHOTT Nippon's anniversary

(Photo from left to right) Mr. Airi Yukawa, President SCHOTT Nippon, Mr. Harumichi Sibata, Advisor, Sibata Scientific Technology Ltd., Dr. Udo Ungeheuer, Chairman of the Board of Management of SCHOTT AG and Dr. Ulrich Ackermann, President and CEO of SCHOTT Asia.

Forty years ago, SCHOTT Nippon was founded as the first of SCHOTT's sales offices in Asia. Since it was founded, the office has provided optical glass and other specialty glass products to the booming Japanese industry. Today, SCHOTT's various business units generate over 205 million Euros or around 29 billion Yen of business in Japan.
From the very beginning, SCHOTT Nippon has been a specialist partner offering a large variety of special glass including optical glass for electronics, laboratory, astronomical and optical applications. In the last four decades, the sales office has steadily formed close partnerships with Japanese manufacturers.

"We congratulate SCHOTT Nippon on the 40th anniversary. Our business with SCHOTT started in the 1970's with purchasing of glass blocks. With the growth of the demand of high refractive ophthalmic glass as well as chemical tempered glass in the 1980's, our business with SCHOTT increased rapidly. We created also a large optical glass warehouse with SCHOTT Nippon and our glass consumption became mostly SCHOTT's glass at that time. Thanks to the quality and the technology of SCHOTT, we could improve our technology. We hope to see our relationship with SCHOTT expand and wish you and your colleagues continued health, happiness and success." said Mr.

SCHOTT
glass made of ideas

Nobuaki Ueda, Managing Director, Kohno Optical Lens Co., Ltd. When Mr. Yutaka Ashino joined SCHOTT Nippon in 1975, there were neither email nor fax in the office. International correspondence was done mainly by telex. *"You needed an approval by the president to make an international phone call."* said Mr. Ashino. Four employees including one for optics were responsible for the sales. Today a team of five employees work exclusively for the sale of optical products at SCHOTT NIPPON.

Mr. Toshiaki Kawakubo, Managing Director of Cosina expressed his congratulations : "*We have been good partners for many years and we are very happy with this long-lasting relationship with SCHOTT.*" As a matter of fact, the relationship between SCHOTT and Cosina began in 1976 and Cosina became the No. 9 sales account of SCHOTT Nippon in FY 1995. Since then Cosina is always one of the best customers of SCHOTT Nippon.

BACK TO INDEX

SCHOTT improves delivery times with new saws and ovens at Duryea, PA. Facility in North America

SCHOTT North America has installed two new custom-built four axis Computer Numerically Controlled (CNC) saws at its Duryea, PA. facility.

The new saws, combined with new ovens that expand the facility's annealing capacity by 50%, will reduce delivery times for customers ordering cut blanks, lens, prisms, and other optical products produced at the Duryea facility.

Customized by SCHOTT, the new saws have substantially more speed, capacity and precision than previous CNC models at the facility. In addition to improving

delivery times, the new saws will also enable SCHOTT to produce a wider range of optical products at the facility.

BACK TO INDEX

SCHOTT
glass made of ideas

New Optical Glass Warehouse in Asia: More than 120 tons of over 50 different types of optical glass available to customers

Responding to increasing Asian demand for optical glass, SCHOTT has opened a new optical glass warehouse in Penang, Malaysia. Currently, the *"ASIA OPTICAL WAREHOUSE"* holds more than 120 tons of more than 50 relevant glass types for repressing and further 30 different for cold processing.

SCHOTT can ship products from its new warehouse in Malaysia to customers in China, Japan, Korea, Taiwan and the rest of Asia 2 to 4 weeks faster than from its warehouses in Germany and the US. Thus, the new warehouse will significantly cut delivery times for customers in Asia.

Customers will be able to quickly learn details about the glass types stored at the warehouse. SCHOTT sales representatives and production facility employees will be able to secure instant online access (already available in Japan and Singapore, roll-out across Asia in progress) to current warehouse inventory levels via SCHOTT's worldwide SAP inventory management system, including batch level details such as nd/vd, annealing rate, formats, transmittance and color codes.

The types of glass stored at the new warehouse include 30 different types of fine annealed glass for cold cutting, including N-BK7, N-LAK types, N-LASF types, N-BAK4, N-KZFS types, and N-FK51A. With strong demand for these types of glass among industrial customers in Asia, the new warehouse will allow SCHOTT to ship samples to customers in as little as one week.

The new warehouse will also help ensure that SCHOTT always has significant amounts (500kg to 2000kg) of the most popular types of glass available for immediate delivery to customers.

BACK TO INDEX

SCHOTT
glass made of ideas

SCHOTT supplies mirror substrates for telescopes for over a century – Celebrating the 100th Anniversary of the State Observatory of the University of Heidelberg in Germany

Towards the end of the 19th century there was an open competition between astronomers building telescopes with lenses and those building telescopes with mirrors over which design would ultimately provide better images of outer space. In both cases, astronomers constantly tried to increase the diameters of the optics and to achieve a better resolution by longer focal lengths. By 1900 mirror telescopes ultimately won the race for a number of reasons.

The State Observatory of the University of Heidelberg began to plan a first mirror telescope around 1900. SCHOTT was commissioned to build the mirror substrate (made of glass) with a diameter of 720 millimeters and delivered it to Carl Zeiss in 1903 for final processing. The finished telescope went into operation on the Königsstuhl mountain near Heidelberg in autumn 1906.

The story continues. At present the largest optical telescope in Europe is under construction. The Gran Telescopio CANARIAS (GTC) is a high performance segmented

10.4 meter telescope, being installed at the Roque de los Muchachos Observatory (La Palma, Canary Islands, Spain). SCHOTT delivered 42 primary mirror substrates made from the glass ceramic material ZERODUR. First light is planned for the end of 2006.

http://www.gtc.iac.es/home.html

http://www.schott.com/optics_devices/grantecan

http://www.schott.com/optics_devices/telescope

BACK TO INDEX

UPCOMING SCHOTT EVENTS

Photonics West – January 23-25, 2007
San Jose, CA (USA)

BACK TO INDEX

SCHOTT
glass made of ideas