SCHOTT Offers a New ‘Eye-Safe’ Laser Glass, 
LG-910, for Laser Range Finding and Bio-Medical 
Applications

A novel laser glass lasing at 1.5µm, now available for laser 
range finding and medical applications

April 6, 2010 (at the Defense, Security and Sensing Conference in Orlando, FL) – Today, SCHOTT (booth 717) announced it now 
offers laser glass products for operation at 1.5 µm. The product 
offering includes fully finished laser components fabricated to 
custom specifications (e.g. rods, slabs and discs) with high laser 
damage threshold dielectric coatings.

The LG-910 products lase at 1.5 µm, a wavelength that is less 
damaging to the eye. SCHOTT’s development brings more 
opportunity for defense applications where eye-safety is of 
significant concern. Modern defense systems increasingly employ 
lasers at 1.5µm for ranging and targeting on handheld, ground, 
fixed-wing and rotary platforms for which LG-910 is ideally suited. 
In addition, this light emission has been shown to have promising 
cosmetic applications, such as skin rejuvenation and scar removal.

The LG-910 is an Erbium – Ytterbium – Chromium doped 
phosphate based laser glass that can be made into rods, slabs and 
discs, which are used primarily in flashlamp and diode pumped 
solid-state laser systems. Phosphate glasses generally offer higher 
solubility of rare earth dopants, thus the amount of active ions can 
be significantly increased, resulting in higher performance over 
competing technologies in pulsed applications.

"Starting with careful control of the purity of our raw materials that 
go into our composition, and then optimizing the melting and 
finishing processes, we have developed a superior product that 
meets the most demanding specifications in defense systems," 
explains Dr. Eric Urruti, Director of Research and Technology 
Development, SCHOTT North America.

Custom laser glasses with rare-earth dopants
Standard SCHOTT laser glasses like the new LG-910 and the existing LG and APG laser glasses are typically doped with Neodymium (Nd) or Erbium (Er) as active ions. However, SCHOTT has successfully manufactured laser glasses with all rare earth ions and combinations thereof. Dopants are added to the existing base compositions of any standard laser glasses, and tailored to customer requirements and applications.

**Fully finished components**

SCHOTT supplies LG-910 components fully finished and coated to customer specifications, as polishing and coating can have a strong impact on laser performance. High laser damage thresholds have been achieved to meet the requirements of demanding applications.

*SCHOTT (booth 717) will present a technical paper for Eye Safe Laser Glass on Tuesday, April 6th at 5:10 p.m. and a product demo on Eye Safe Laser Glass on Wednesday, April 7th at 4:30 p.m.*

**About SCHOTT**

SCHOTT is a technology-driven, international group that sees its core purpose as the lasting improvement of living and working conditions through special materials and high-tech solutions. Its main areas of focus are defense, household appliance industry, pharmaceutical packaging, optics and opto-electronics, information technology, consumer electronics, lighting, automotive engineering and solar energy.

SCHOTT has a presence in close proximity to its customers through highly efficient production and sales companies in all of its major markets. The company has approximately 17,000 employees producing worldwide sales of approximately $3 billion. In North America, SCHOTT’s holding company SCHOTT Corporation and its subsidiary SCHOTT North America, Inc. and their affiliates employ about 3,000 people in 14 production operations with 6 sales offices.

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