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Come visit EOT at BiOS & Photonics West 2017

NEW: ET-3600, 22GHz InGaAs Photodetector

COMING SOON: Pavos Ultra - >100W
BiOS & Photonics West 2017
Come visit EOT in San Francisco, CA
January 28 - February 2

Every year, EOT exhibits at several laser industry trade shows. We will again be attending SPIE Photonics West this year, January 31 - February 2, and invite you to Booth 2601 to view our latest technologies, meet with our representatives, and learn more about our products.

We are also very excited to be exhibiting at SPIE BiOS again this year as well, January 28-29. Come visit us at Booth 8916!

Introducing: ET-3600
New 22GHz InGaAs Photodetector

EOT is pleased to announce the release of our new 22GHz InGaAs photodetector, the ET-3600. The ET-3600 contains a PIN photodiode that utilizes the photovoltaic effect to convert optical power into an electrical current. They can be used to monitor the output of ultrafast and mode-locked lasers, with high-frequency, heterodyne applications, and time domain and frequency response measurements. Both free space and fiber versions are available. For more information on this product, contact sales@eotech.com or visit our website, www.eotech.com.
Micromachining market demands are requiring faster processing speeds and the ability to write finer and finer features from ultrafast laser systems. Manufacturers of ultrafast lasers are continuously increasing power levels while simultaneously working to maintain or improve beam quality to meet these demands. Additionally, peak powers are now reaching intensities where nonlinear effects can become problematic. The combination of higher powers, improved beam quality, and resistance to nonlinear effects is stressing the ability of optical components to meet the increasingly demanding market requirements.

Historically optical isolators using Terbium Gallium Garnet (TGG) have served the market well due to their relatively compact size, high transmission, high isolation, and high pulsed damage threshold. At power levels <100W, TGG-based isolators exhibited little thermal lens focal shift, minimal M² degradation, minimal reduction in isolation or transmission, and power levels weren’t sufficient to induce nonlinear effects. However as power levels start to climb above 100W, residual absorption in TGG is resulting in deleterious effects including thermally induced birefringence which reduces isolation, stronger thermal lens focal shift which contributes degradation of M² values, and in extreme cases nonlinear effects due to its nonlinear refractive index.
To address the deleterious effects exhibited by TGG at >100W, EOT will be releasing its Pavos Ultra Optical Isolator. The Pavos Ultra has almost 1/10th the level of thermal lens focal shift and significantly higher isolation at powers >100W than does a TGG isolator. It also exhibits much greater resistance to nonlinear effects due to a nonlinear refractive index approximately ten times less than that of TGG. From a practical standpoint, the Pavos Ultra will result in significantly less variation in thermal lens focal shift values due to changes in power levels, reduce the need for compensating optics, at higher power levels reduce the need for two-stage isolators to compensate for reductions in isolation, and have a significantly reduced impact on a lasers B integral budget.
The significant improvement in performance of the Pavos Ultra at >100W will become an enabling tool for laser manufacturers and users as they continue to ramp up power levels and peak intensities.

For more information on the availability or performance of the Pavos Ultra isolator, please contact sales@eotech.com or call +1-231-935-4044.