



A Passion for Precision.

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New: iBeam smart – The Ultra Compact Diode Laser

TOPTICA's latest innovation in OEM diode lasers

TOPTICA Photonics announces the world's most advanced compact diode laser – the iBeam smart. TOPTICA's latest innovation will allow users to increase productivity and reliability in their applications, while at the same time optimizing the weight and size of their systems.

The iBeam smart represents the first true one-box solution in compact OEM diode laser modules. It measures only 100 x 40 x 40 mm³, and thus is perfectly capable of upgrading almost any existing diode laser application. This is made possible by a highly integrated, intelligent microprocessor based electronic setup in combination with an outstanding mechanic optical design.

Furthermore, the advanced integrated laser controller allows the iBeam smart not only to be the most compact solution, but the most powerful as well: e.g. impressive 150 mW single-mode operation at 660 nm is unmatched in industry!

Even complex and fast analog modulation procedures, can be performed with this new laser, and of course TOPTICA's TOP feature the Feedback Induced Noise Eraser (FINE), comes as a standard function with the iBeam smart. Together with its bigger brother (TOPTICA's iBeam), the iBeam smart is best in class in power stability, noise levels and beam quality - this makes the iBeam smart the superior choice for demanding applications such as flow cytometry or confocal microscopy.

"While creating the iBeam smart we kept our customers' needs and wishes in mind, all the way, without compromises. Now we ended up with the most advanced, powerful and compact OEM diode laser in the market" says Thomas Weber, president of TOPTICA Photonics.



iBeam smart – the ultra-compact diode laser.

Author:

Dr. Manfred Karlowatz, TOPTICA Photonics AG

Key specifications of iBeam smart:

- Highest power levels achievable with compact diode lasers (120 mW at 405 nm, 50 mW at 445 nm, 30 mW at 488 nm, 100 mW at 640 nm, 150 mW at 642 nm and 150 mW at 660 nm)
- True one-box solution – 100 x 40 x 40 mm³ with integrated laser controller
- Rock solid against optical feedback via FINE
- Beam diameter ~1.1mm $1/e^2$
- Excellent beam quality, i.e. wave front error < 0.05 λ , $M^2 < 1.2$
- Lowest intensity noise in industry (< 0.2 % < 10 MHz)
- Unmatched power stability of iBeam series (< 0.5 % drift in 48 hrs)

Easy and reliable control of all laser parameters and status reports are achieved by the RS 232 serial interface and a standard terminal software package (e.g. WindowsHyperTerminal[®]).

The iBeam smart will be available on request at all standard diode laser wavelengths from the UV to the IR.

Request your demonstration unit and see how TOPTICA lasers will increase your productivity and reliability today!

Typical applications for the iBeam and iPulse series include:

- Flow cytometry
- Confocal microscopy
- Micro lithography
- Retina scanning
- Fluorescein angiography
- Microplate readout

The iBeam smart will be displayed live at the LASER 2009 in Munich at the TOPTICA booth B1.115.

TOPTICA Photonics AG develops, manufactures, services and distributes technology-leading diode and fiber lasers and laser systems for scientific and industrial applications. Sales and service is offered worldwide through TOPTICA Germany and its subsidiary TOPTICA USA, as well as all through 14 distributors. A key point of the company philosophy is the close cooperation between development and research to meet our customers' demanding requirements for sophisticated customized system solutions and their subsequent commercialization.

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