



A Passion for Precision.

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Press Release

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New: TOPTICA presents ultra-stable pigtailed OEM diode laser

Highest powers and unmatched long-term stability

The iBeam smart PT is a compact, permanently fiber coupled (“pigtailed”) diode laser. This high-performance, ultra-reliable diode laser is designed for straight-forward OEM integration. It includes TOPTICA’s patent pending COOL^{DC} technology, which guarantees ultimate long-term power stability and thus ensures true drop-shipment capability. These features make the iBeam smart PT the ideal choice for fiber-based applications in biophotonics such as microscopy or cytometry.

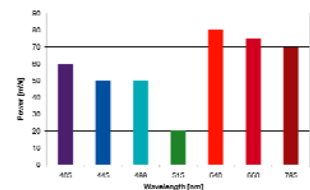
The standard wavelengths are 405 nm (60 mW), 445 nm (50 mW), 488 nm (50 mW), 515 nm (20 mW), 640 nm (80 mW), 660 nm (75 mW) and 785 nm (70 mW) – all powers are given after the single-mode polarization maintaining fiber delivery. Other wavelengths are available on request.

The iBeam smart PT features the COOL^{DC} technology – which ensures a Dura Calibrated Constant Optical Output Level. TOPTICA’s novel concept for high power single-mode permanently fiber coupled lasers does not use any micro-mechanical adjustable parts. These are normally the first to shift due to varying ambient conditions, for example temperature changes or vibrations. All major optical components are solidly mounted, thus optical alignment is immune to mechanical and thermal distortions or translations.

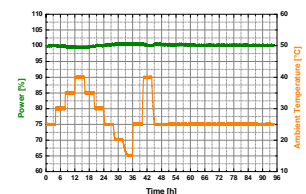
The incorporated microprocessor control and optional features such as high speed digital modulation and feedback-induced noise suppression by FINE technology make the iBeam smart PT the perfect solution for flexible OEM integration.



The iBeam smart PT – pigtailed OEM diode laser



Highest output powers after single-mode fiber delivery



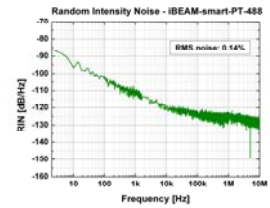
Fiber coupled power stability (< 0.5 % over 24 h) even under changing ambient temperature

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Key Features:

- Highest power single-mode pigtailed diode laser
- Ultimate long-term power stability via patent pending COOL^{DC}
- Unsusceptible to thermal fluctuations between 15 and 40 °C
- Unsusceptible to extensive mechanical disturbances
- Drop shipment warranty: Laser in spec after unpacking
- High performance, low noise laser diode driver incorporating μ -processor and RS 232 control
- FINE: Feedback Induced Noise Eraser - Immunization to optical feedback
- Optional digital modulation with up to 250 MHz
- True one-box OEM package



Lowest noise at any frequency –
RMS noise < 0.2 %

Typical applications include:

- Flow cytometry
- Confocal microscopy
- Live-cell imaging
- TIRF
- FRAP
- High throughput screening
- Genome analyzers

The iBeam smart PT will be live demonstrated at BIOS and Photonics West 2011 in San Francisco at the TOPTICA booth #8(8)17.

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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