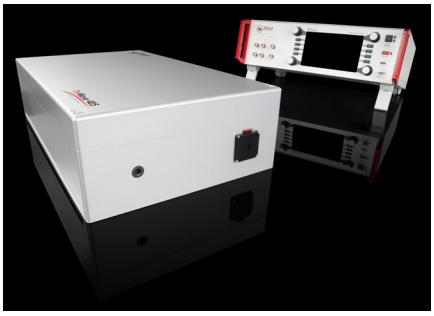
Press Release

May 2, 2021

Cost-efficient and easy gas laser replacement with 1 Watt @ 405 nm

With the new TopWave 405 TOPTICA presents a cost-efficient, gas laser replacement for easy, hands-off and remote operation in lithography and holography applications.

TOPTICA's new TopWave 405 is the ideal replacement for the bulky and power hungry Krypton ion (406.7 nm and 413.1 nm) gas lasers commonly used in lithographic and holographic applications. The TopWave 405 provides 1 W output power at 405 nm combined with an excellent beam quality. Beam diameter and M^2 (typ. 1.15) are designed to match the established gas laser parameters, hence allow for an easy integration without significant changes to the optical system. The significantly higher coherence length (> 100 m) results in a clear advantage with regard to stable pattern generation in interference lithography or holography.



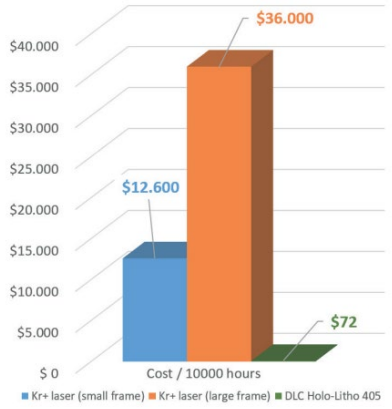
Cost-efficient and easy gas laser replacement with 1 Watt @ 405 nm: TOPTICA's TopWave 405 is the ideal replacement for the bulky and power hungry Krypton ion gas lasers commonly used in lithographic and holographic applications.

Key Applications:

- Lithography
- Laser Direct Imaging
- Mask writing
- Holography
- Nanofabrication

Highest Efficiency – low cost of ownership

While gas lasers require several kilowatts of electrical power and cumbersome water-cooling, the "all-semiconductor" TopWave 405 draws less than 100W and does not require water-cooling to produce similar optical output power. This alone results in a significant reduction in cost of ownership. In addition, the user also benefits from longer service intervals and lower refurbishment costs. Trained personnel can easily perform on-site replacements of the individual semiconductor field replaceable units, reducing downtime and increasing profitability.



Electricity cost per 10,000 hours based on 0.09 cent/kWh.

Ease of use

The system includes a fully automated, push-button optimization of the opto-mechanics, as well as output power stabilization. This allows an easy, hands-off and remote operation of the system via the included graphical user interface or by integrating it into the customer's control software. For details and help on different configurations please get in touch: **www.toptica.com/efficient**

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TOPTICA has been developing and manufacturing high-end laser systems for scientific and industrial applications for 20 years. Our portfolio includes diode lasers, ultrafast fiber lasers, terahertz systems and frequency combs. The systems are used for demanding applications in biophotonics, industrial metrology and quantum technology. TOPTICA is renowned for providing the widest wavelength coverage of diode lasers on the market, providing high-power lasers even at exotic wavelengths.
Today, TOPTICA employs 340 people worldwide in six business units (TOPTICA Photonics AG, TOPTICA eagleyard, TOPTICA Projects GmbH, TOPTICA Photonics Inc. USA, TOPTICA Photonics K.K. Japan, and TOPTICA Photonics China) with a consolidated group turnover of € 76 million.