

inspect.

Adding precision to your metrology



TopMode

Single-Frequency, Narrow-Linewidth Diode Laser
for Raman Spectroscopy and Digital Holography

- TopSeller: 100 mW at 405 nm
- Customized wavelengths 375 - 515 nm
- Enables repeatable, high-resolution measurements
- Easy OEM integration

learn more...



www.toptica.com/TopMode

TopMode 405

Customized wavelengths
375 .. 515 nm on request



WARNING – VISIBLE AND INVISIBLE LASER RADIATION, AVOID EXPOSURE TO BEAM, CLASS 3B LASER PRODUCT, EN60825-1:2014+A11:2021 IEC 60825-1:2014

Specifications	
Model	TopMode 405
Operation	cw, single (fixed) frequency
Wavelength	405 nm
Wavelength tolerance	± 2 nm
Wavelength selection	upon request, accuracy +/- 0.25 nm
Wavelength tuning	No
Wavelength stability*	< 1 pm/h (< 0.5 pm/h typ.), peak-peak
Linewidth	< 5 MHz (< 0.01 pm)
Coherence length	> 25 m
ASE suppression	40 dB typ.
Output power, free-space	50 mW, (100 mW**)
Output power, fiber-coupled	25 mW, (50 mW**)
CHARM	Active coherence stabilization included
Power stability *	Typ. < 0.5% (STD/mean) / h
Intensity noise (RMS)	≤ 0.1% @ 10 Hz - 10 MHz
Polarization	Linear, > 100 : 1, 90° (free-space version)
Beam shape	Collimated, circular, typ. diameter 1 mm (FWHM), 1.7 mm (1/e ²), ellipticity < 10% ***
Spatial mode	M ² < 1.5 (< 1.2 typ.)
Optical isolation	Built-in, > 30 dB
Fiber coupling	Optional, typ. 50% in SM fiber
Electronics	TopMode CHARM Control
Warm-up time	< 10 min from standby
Dimensions laser head (H x W x D)	Free-beam: 192 x 80 x 60 mm ³ , fiber-coupled: 218 x 80 x 60 mm ³
Weight laser head	1.5 kg
Dimensions control unit (H x W x D)	45 mm x 480 mm x 290 mm
Weight control unit	4 kg
Power supply	100 .. 120 V / 220 .. 240 V AC, 50 .. 60 Hz (auto detect)
Power consumption	typ. < 70 W, max. 150 W (incl. CHARM control)
PC interface	Ethernet, USB
Environment temperature	15 - 30 °C, stability ± 3 °C (operating), 0 - 40 °C (storage and transport)
Environment humidity	Non-condensing

* With CHARM activated, open loop ** Optional high-power version, *** In the far field, i.e. 2 m after the source.