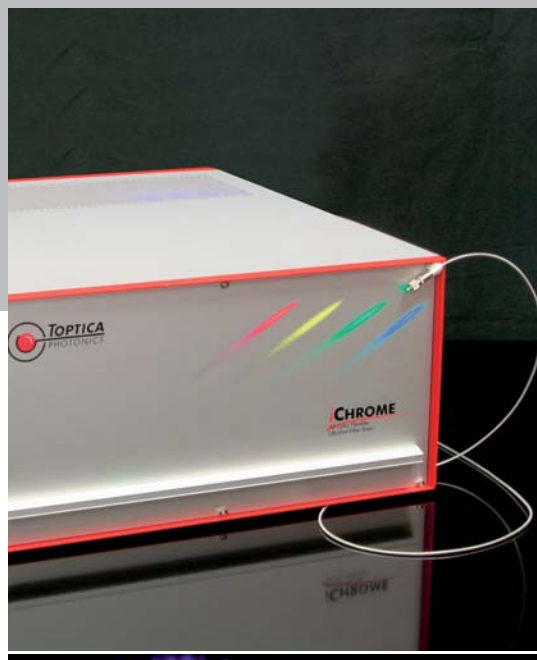
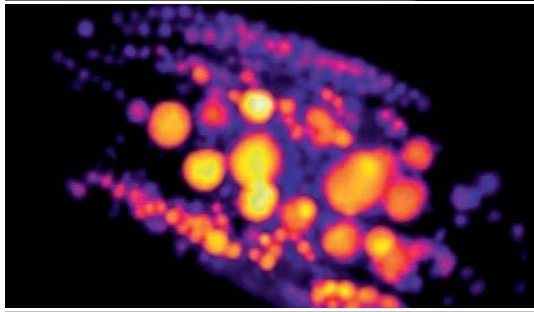
INDUSTRY

iChrome





iChrome™

All-Color Flexible Ultrafast Fiber Lasers

Flexible Fiber Laser

The newly introduced iChrome is a fiber laser with the flexibility to set automatically the laser output to any wavelength in the visible – from 488 nm to 640 nm. In contrast to conventional white light sources, the narrow bandwidth laser pulses are not filtered out from an intrinsically noisy supercontinuum. Moreover, even the coherence of the fundamental laser is preserved during the frequency conversion processes. This ensures that the visible light exhibits the best intensity noise performance. Additionally all optical components are polarization maintaining. This results in a stable linear polarization of the output beam.

Fiber Coupled Output

The laser output of the iChrome is delivered by a single-mode and polarization maintaining fiber. Independent from the chosen wavelength the fiber output exhibits a smooth TEM_{00} profile, an excellent beam product with $M^2 < 1.1$ and a linear polarization with a PER > 1:100. The fiber makes the connection between the high quality light source and the experiment as simple as possible. Pointing stability is guaranteed and all colors are delivered by the same fiber.

Fully Automated Operation

The entire laser system is extremely user friendly: No alignment procedures of any optical components distract the user from her main task – to produce results. Besides the fiber delivery also the full automation of the premium light source helps to avoid wasting time. The built-in power PC controls all necessary parameters to ensure smooth operation every minute, hour, day, week and month. The power PC also hosts a webserver and is equipped with an ethernet connection. Therefore, all user commands can be sent from an ordinary web browser to the laser system.

Applications

- Pump probe spectroscopy
- Fluorescence lifetime measurement
- Excitation spectra measurement
- Confocal microscopy

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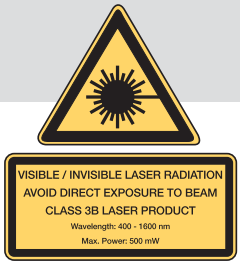
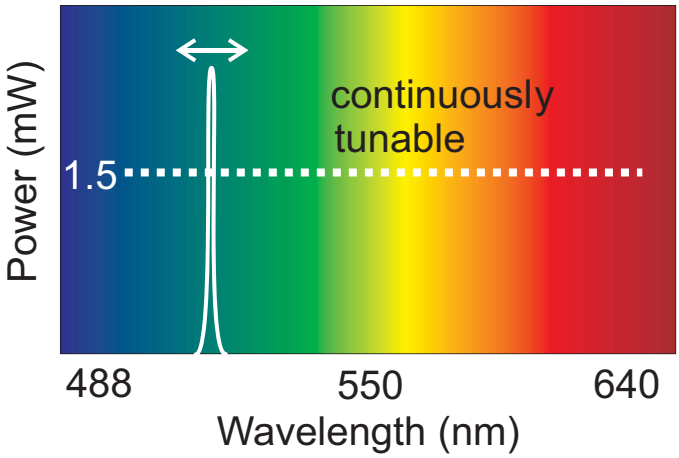


Laser Specifications	
Wavelength range	488 – 640 nm
Average fiber output power	> 1.5 mW
Repetition rate	40 MHz ± 1 MHz
Bandwidth (FWHM)	< 3 nm
Pulse width	3.5 ps ± 1 ps
Polarization	Linear, 100:1
Trigger output	Typ. -300 mV, 1 ns
Spatial mode	TEM_{00}
Fiber delivery	PM SM fiber, 2 m length, MFD 4 µm @ 480 nm
Wavelength Setting	
Accuracy	± 1 nm
Speed	≥ 50 nm/s
Line-up time	≤ 500 ms
General and Environmental Specifications	
Warm-up time	2 h
Operating temperature	22°C ± 3°C
Air humidity	< 70 % non condensing
Power consumption	< 75 W
Dimensions (L x W x H)	570 x 450 x 230 mm^3
Weight	21.5 kg



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LGA InterCert Certified Quality System ISO 9001:2000

CE

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