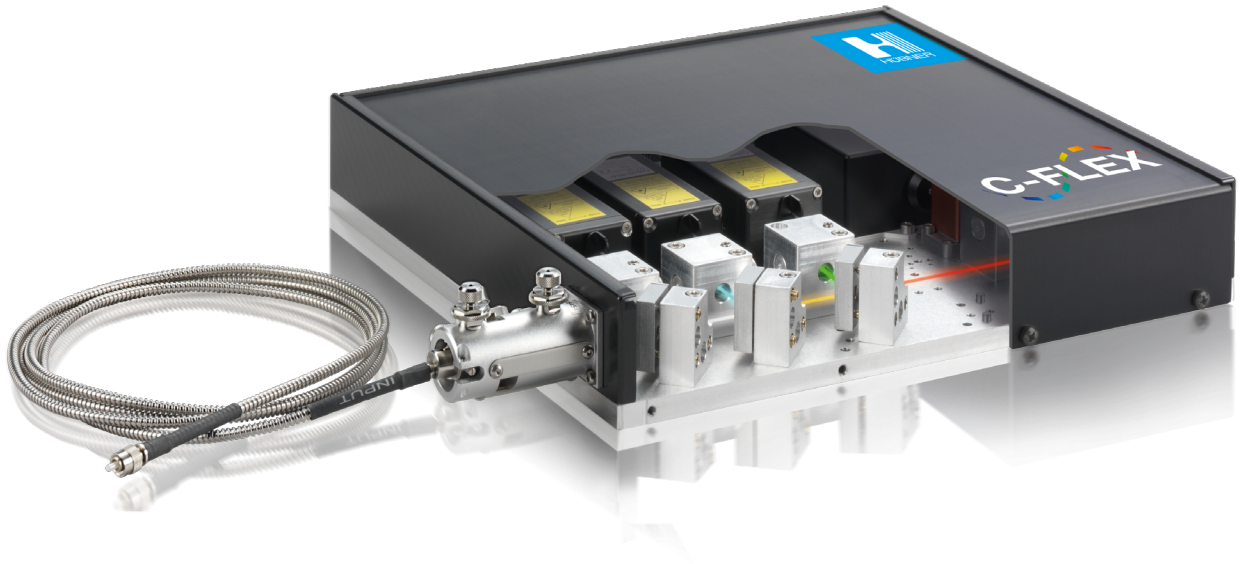
C-FLEX

Compact and Flexible | Laser combiner



- Combines up to 6 wavelengths
- Compatible with up to 15 different wavelengths
- Modulation capability available for all combined lasers
- Integrated AOM (acousto-optical modulator) option available
- Fiber coupled option available

Applications

Fluorescence Microscopy

Raman Spectroscopy

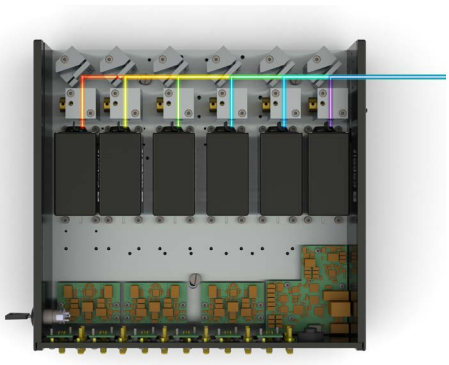
Holography

Flow Cytometry

Optogenetics

As a highly-flexible and extremely compact laser combiner, C-FLEX lets you combine up to 6 wavelengths out of 15 available wavelengths.

The lasers can be controlled either separately or via common USB port. C-FLEX is field-upgradeable and ready to mount Diode Pumped Lasers (DPLs) or Modulated Laser Diodes (MLDs) of the Cobolt 06-01 Series, the single frequency diode pumped lasers of the Cobolt 04-01 Series, and the narrow linewidth lasers of the Cobolt 08-01 Series. The flexible design enables integration of optional AOM modulators that allow fast modulation of DPSS lasers. Free space beam output or fiber coupling options are available.



C-FLEX features a common power supply and common interlock (key switch plus remote interlock) for all lasers. The compact and robust design of the C-FLEX provides excellent long-term stability and outstanding flexibility for your application. C-FLEX comprises countless options to integrate lasers with performance ideally suited for raman spectroscopy, fluorescence microscopy and holography applications.

D0540-C | DECEMBER 2019 | WWW.HUBNER-PHOTONICS.COM

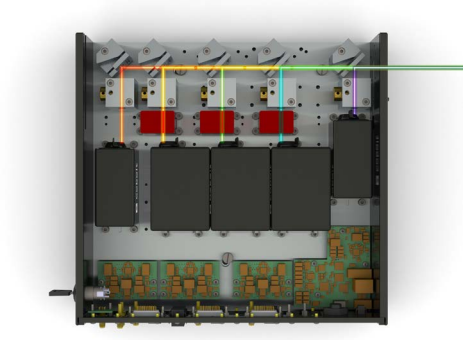
HÜBNER Photonics | Coherence Matters.

HÜBNER

C-FLEX

Available Wavelengths

405 nm	300 mW	●
445 nm	100 mW	●
457 nm	50 mW	●
473 nm	300 mW	●
488 nm	200 mW	●
491 nm	100 mW	●
515 nm	150 mW	●
532 nm	400 mW	●
553 nm	50 mW	●
561 nm	200 mW	●
594 nm	100 mW	●
633 nm	80 mW	●
638 nm	180 mW	●
647 nm	130 mW	●
660 nm	100 mW	●



Combiner Optical Specifications

Output power losses per beam diverter	< 10 %
Fiber coupled power stability (8 hrs, ± 3 °C)	± 10 %
Achievable fiber coupling efficiency	> 50 %
Temperature dependant pointing stability per laser (10-40 °C)	< 20 µrad / °C
Static beam pointing stability per laser (8 hrs, ± 3 °C)	< 50 µrad
Achievable beam position overlap at exit	< 50 µm
Achievable beam-to-beam angle deviation	< 150 µrad

Configuration

Maximum number of lasers	6
Maximum number of Cobolt 04-01 Lasers	3
Maximum number of AOMs	3
Minimum wavelength separation	15 nm

Modulation Capabilities

	Cobolt 04-01	Cobolt 06-01		Cobolt 08-01
Integrated in laser head	--	06-MLD	06-DPL	--
AOM available	473 - 660 nm	--		473 - 660 nm
Max. Modulation frequency	3 MHz	150 MHz	Up to 50 kHz	3 MHz

Fiber coupling options

Wavelength Range	405 - 660 nm
Fiber Type	SM / PM
FIber Output Options	Collimated FC / APC

Operational Environment

Power supply Requirement	15 V / 7 A
Communication protocol	USB
Maximum baseplate temperature	50 °C
Warm-up time to system thermal stability	15 min
Intended use environment	Laboratory
Storage temperature	10 - 40 °C
Humidity (non-condensing)	0-90% RH
Ambient air pressure	950-1050 mbar
Heat sink thermal impedance at 30 °C	< 0.2 K/W
Power consumption	< 100 W

This device is sensitive to Elecrostatic Discharge (ESD). Always handle diode lasers with extreme care to prevent electrostatic discharge, the primary cause of unexpected diode failure.

WARNING VISIBLE AND INVISIBLE LASER RADIATION
Avoid eye or skin exposure to direct or scattered radiation.

Class 4 Laser Product

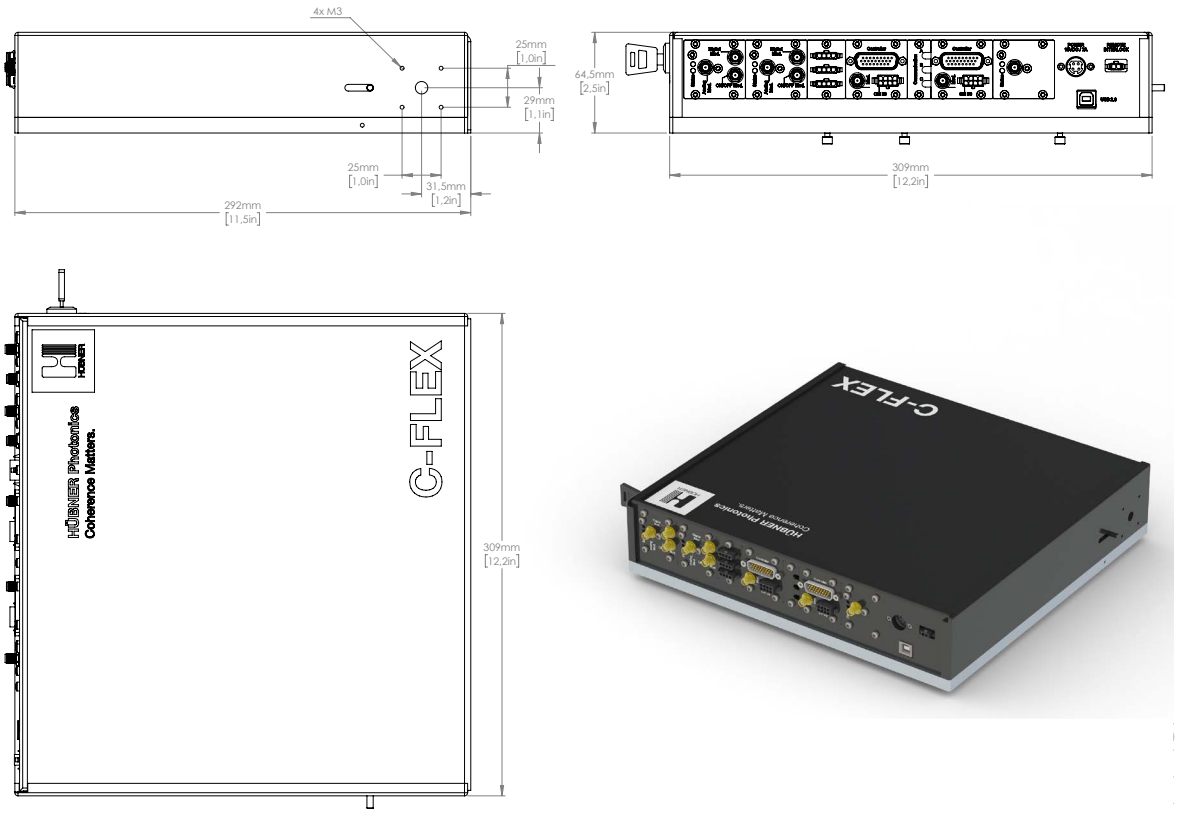
Classified per IEC 60825-1:2014

CE

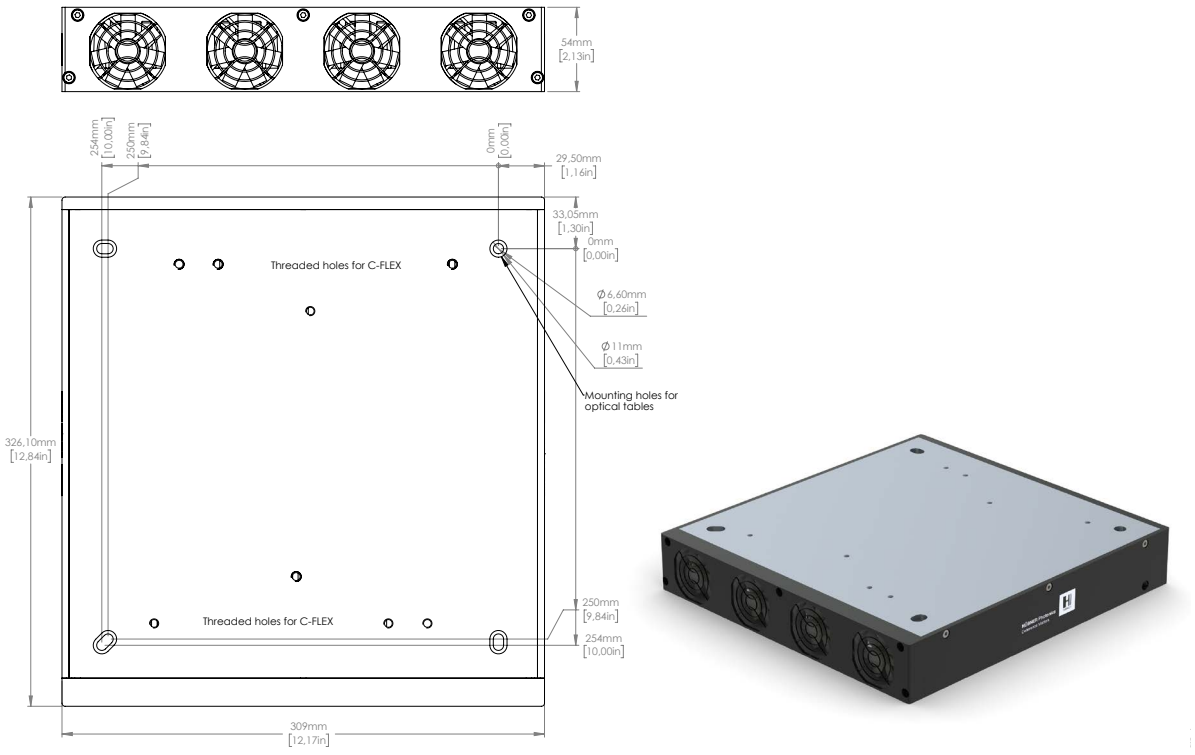
C-FLEX

Mechanical Dimensions

Laser combiner (up to 6 lines)	290 x 305 x 55 mm
Heat sink	309 x 326 x 54 mm
Weight, combiner without lasers or heatsink	< 5 kg



C-FLEX Laser Combiner



Heat sink for C-FLEX Laser Combiner

C-FLEX

Compatible Laser Products

Cobolt 04-01 Series

Powerful, single frequency CW diode pumped lasers:

457 nm – 660 nm up to 400 mW

https://www.coboltlasers.com/lasers/dpss-lasers/

Cobolt 06-01 Series

Plug & play modulatable lasers:

405 nm – 660 nm up to 300 mW

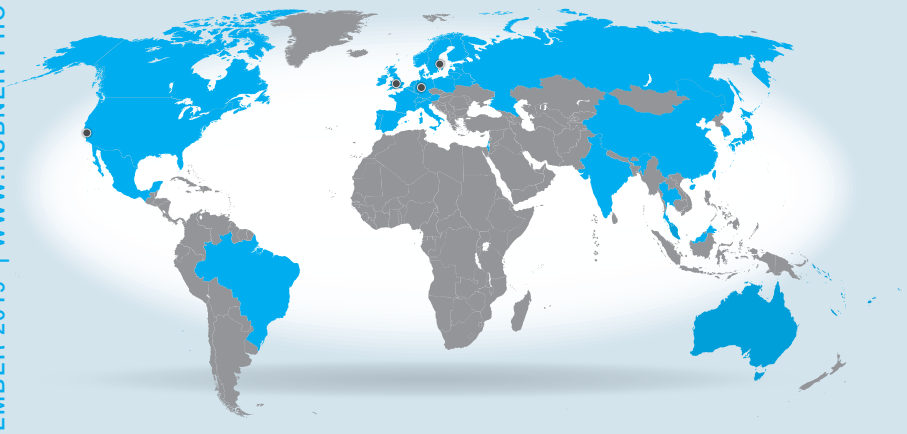
https://www.coboltlasers.com/lasers/diode-lasers/

Cobolt 08-01 Series

Compact narrow linewidth lasers:

405 nm – 660 nm up to 200mW

https://www.coboltlasers.com/lasers/narrow-linewidth-lasers/



D0540-C | DECEMBER 2019 | WWW.HUBNER-PHOTONICS.COM

Headquarters

Cobolt AB
(Sales in Norway, Sweden, Finland and Denmark)
Solna, Sweden
Phone: +46 8 545 912 30
Fax: +46 8 545 912 31
E-mail: info@coboltlasers.com

www.coboltlasers.com

HÜBNER GmbH & Co. KG
(Sales in Germany, Switzerland and Austria)
Kassel, Germany
Phone: +49 6251 770 6686
Fax: +49 6251 860 9917
E-mail: photonics@hubner-germany.com

www.hubner-photonics.com

Direct Sales Offices

HÜBNER Photonics Inc.
(Sales in USA, Canada and Mexico)
2635 North First Street, Suite 228
San Jose, California, USA
Phone: +1 (408) 708 4351
Fax: +1 (408) 490 2774
E-mail: info.usa@hubner-photonics.com

HÜBNER Photonics UK
(Sales in UK & Ireland)
Royal Mail House, Terminus Terrace
Southampton, Hampshire SO14 3FD
United Kingdom
Phone: +44 2380 438701
E-mail: info.uk@hubner-photonics.com

Find local sales representatives at www.coboltlasers.com/contact-us

Austrailia, Benelux, Brazil, China, Estonia, Latvia, Lithuania, France, India, Israel, Italy, Japan, Poland, Russia, Belarus, Singapore, Malaysia, Thailand, South Korea, Spain and Portugal, Taiwan