SHAPING LIGHT.

HELPING ENGINEERS AND SCIENTISTS IN ADVANCING HOW THE WORLD COMMUNICATES, SENSES AND CONNECTS

TUNABLE LASER PRODUCT LINE
DATA SHEET

Subject to change without further notice
22.09.2025

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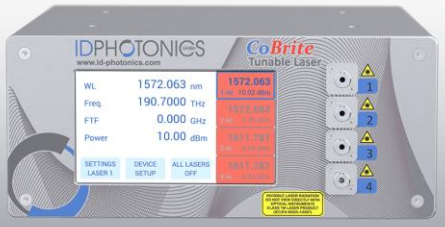
THE COBRITE ECOSYSTEM – TUNABLE LASER SOURCES FOR CUTTING EDGE RESEARCH

Introducing our CoBrite tunable narrow linewidth laser ecosystem. Designed with simplicity and versatility in mind, CoBrite offers multiple chassis options and laser variants, making it an essential tool for researchers in the lab and on the production floor. With tunability options in the C-band, L-band, C+L band or O-band, from a single source or in configurations of more than 100 ports, there's a CoBrite configuration to suit virtually every application. We keep expanding the CoBrite ecosystem to address new applications and market requirements when they arise.

COBRITE DX1

COBRITE DX2



COBRITE DX

COBRITE MX

KEY FEATURES

- Full tunability across entire specified range
- Extended C and L – Band, 1525nm to 1625nm
- O-Band for DX and DX2 available
- Up to 17.8 dBm Output power
- Laser Linewidth down to < 25kHz
- Polarization Maintaining Output
- Integrated Web Server for browser-based control
- 19" Rack mountable

TYPICAL APPLICATIONS

- Fiber-optic communications
- Coherent optical transceiver development
- Local Oscillator
- Silicon Photonics
- Versatile Light sources light sources for optics and physics labs

THIS IS WHAT DISTINGUISHES OUR PRODUCTS

COBRITE IS FLEXIBLE
Chose from hundreds of variants and configure the right product for your application.

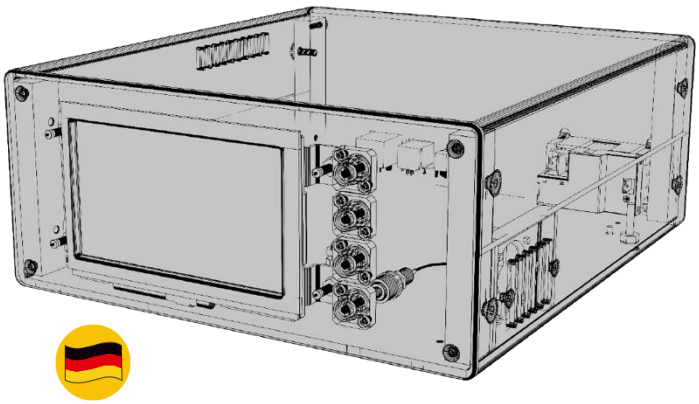
SIMPLE, INTUITIVE USABILITY
Use the installation-free WebGUI to control your CoBrite right out of the Internet Browser.

COBRITE IS SCALABLE
Chose your chassis from our CoBrite platform to support your application from 1 to 48 Laser ports in a single system.

ANY LASER IN ANY CHASSIS
This modular approach allows to fully customize your CoBrite by integrating any combination and number of lasers into one chassis

DESIGNED & MADE IN GERMANY

Blends innovation and precision to ensure success



DESIGNED & MADE IN GERMANY

German craftsmanship is renowned worldwide for its meticulous attention to detail and use of high-quality materials.

It signifies a commitment to exceptional quality and precision engineering.
At ID Photonics, our entire operations are based in Germany, ensuring top-notch craftsmanship. We handle everything from manufacturing and hardware design to software and circuit design. This comprehensive approach guarantees products that are reliable, durable, and innovative. By choosing ID Photonics, you invest in engineering excellence and timeless design, all crafted with meticulous attention to detail in Germany.

SIMPLE, INTUITIVE CONTROL OF YOUR LASER

Our laser system comes with an intuitive and easy-to-use graphical that requires no installation. It's designed to provide a seamless ex you to control and monitor the laser with ease.

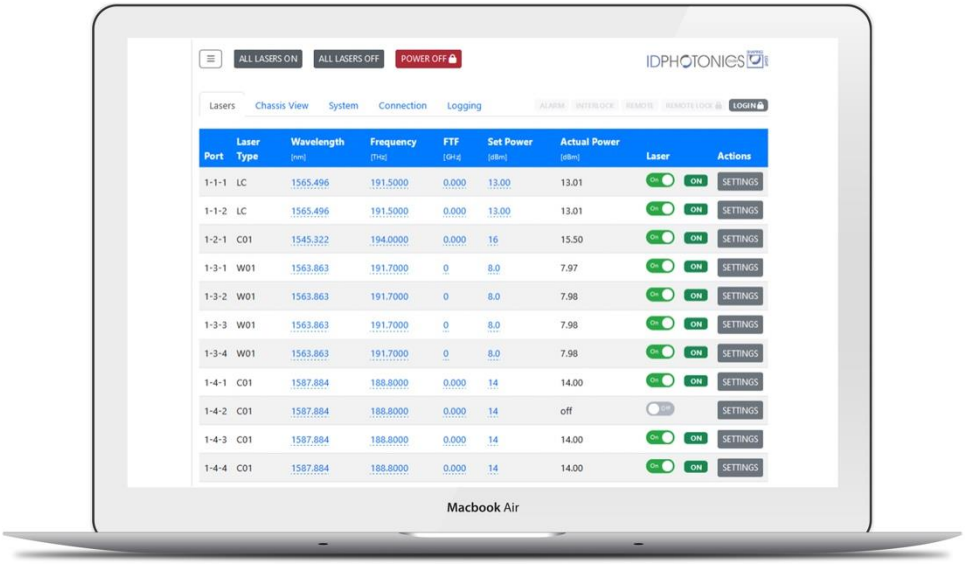
- **Simplicity at Its Best:** Say goodbye to complex installations and l control. Our laser system features an embedded graphical user i requires no additional software. Just connect, and you're ready t
- **Intuitive Design:** Navigate with ease through our clean and mod Monitor real-time performance, adjust settings, and ensure safe clicks.
- **Plug-and-Play Convenience:** Start using your laser system right out of the box. Connect via USB or Wi-Fi, open your web browser, and take control through the built-in interface.

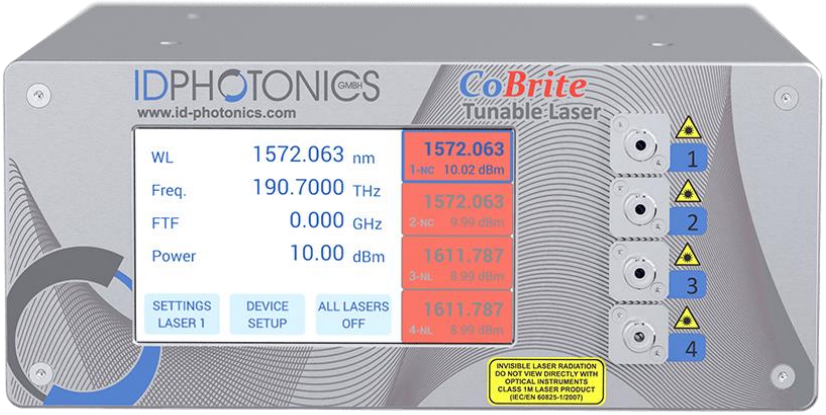
1

COBRITE MX - WEB GUI ON TABLET

2

COBRITE MX - WEB GUI ON DESKTOP





3

COBRITE DX - TOUCH GUI ON PRODUCT

TUNABLE LASER SPECIFICATION

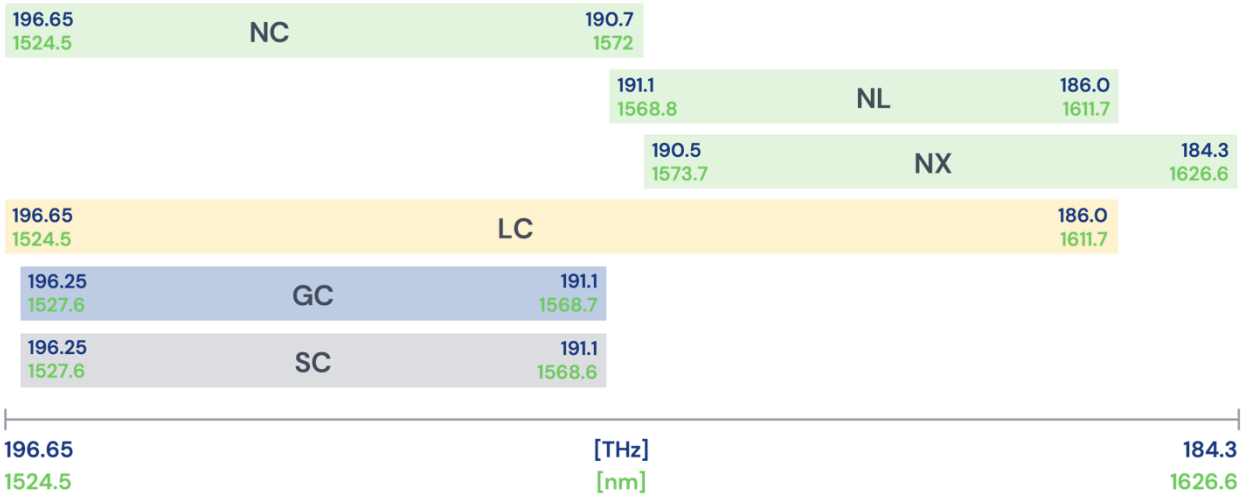
NEW

OPTICAL PARAMETER	LASER TYPE N	LASER TYPE SC	LASER TYPE GC	LASER TYPE DO	UNIT
FREQUENCY RANGE: **C – BAND** **L – BAND** **X – BAND** **C + L – BAND (LC)**	190.70 – 196.65 (1524.5 – 1572 nm) 186.00 – 191.1 (1568.8 – 1611.7 nm) 184.30 – 190.5 (1573.7 – 1626.65 nm) 186.00 – 196.65 (1524.5 – 1611.7 nm)	191.12 – 196.25 (1527.6 – 1568.6 nm) C – Band only	191.1 – 196.25 (1527.61 – 1568.77 nm) C – Band only	228.849 (1310 ± 5 nm) +/- 1 nm user tuning Via fine tuning method Typical tuning range: +/- 2nm O-Band only	THz
CHANNEL SPACING	Continuous	Continuous	Continuous	Continuous	THz
FREQUENCY FINE TUNE RESOLUTION	1	10	1	–	MHz
FREQUENCY FINE TUNE RANGE	+/- 6	+/- 10	+/- 6	–	GHz
OPTICAL POWER TUNING RANGE (FOR ANY FREQUENCY) **C - BAND** **L - BAND** **X - BAND** **C + L BAND**	 10.0 – 16.0 9.0 – 14.5 13 - 16 6.8 – 10.5	 8.8 – 17.8 (17.0 dBm EOL) – –	 9.5 – 15.5 - -	 13 – 16 (Typical: 10 – 17) – –	dBm
SPECTRAL LINE WIDTH; FWHM **INSTANTANEOUS, 3.5 µs**	< 100 25 typical	80 typical < 100 (Pout < 16 dBm) < 150	< 100 25 typical	200 150 typical	kHz
FREQUENCY ACCURACY OVER LIFETIME **IN 1 HOUR**	+/- 2.5 0.3	+/- 1.5 0.3	+/- 2.5 0.3	+/- 5 0.1	GHz
SMSR; SIDE MODE SUPPRESSION RATIO; MEASURED WITH 0.1NM RBW	> 40 55 typical	> 40	> 40 55 typical	> 45 55 typical	dB
AVERAGE RIN	-145 (10 MHz to 22 GHz, 11 dBm)	-140 (100 kHz – 20 MHz) -150 (20 MHz – 1 GHz)	-145 (10 MHz to 22 GHz, 11 dBm)	-135 (10 MHz to 7 GHz)	dB/Hz
POWER ACCURACY OVER TUNING RANGE	+/- 0.5	+/- 0.5	+/- 0.5	+/- 1.0	dB
TUNING SPEED (MAX/TYPICAL)	15 / 10	2 / 1.0	15 / 10	15 / 3.0	s
OUTPUT CONNECTOR	FC/APC, FC/PC or SC/PC				
OUTPUT POWER ACCURACY OVER LIFETIME **OUTPUT POWER STABILITY** **OVER 1 HOUR** **OVER 24 HOURS**	± 1 +/- 0.03 (typ., at stable temperature) +/- 0.05 (typ. , at stable temperature)				dB
OUTPUT POWER SETTING RESOLUTION	0.01	0.1	0.01	0.05	dB
OPTICAL FIBER	Polarization-maintaining PANDA type Fiber, PER > 18 dB, 25 typ.				

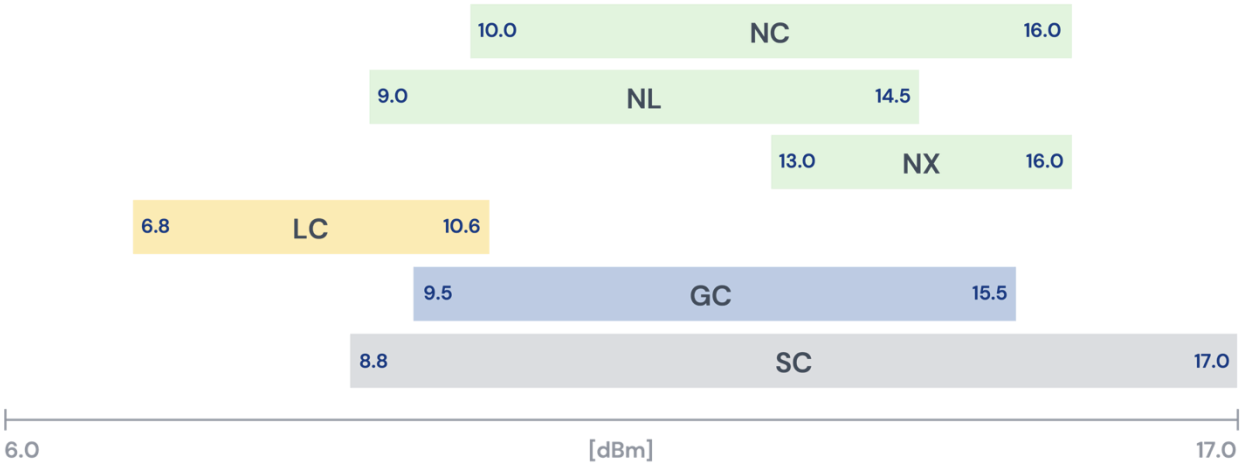
INQUIRE FOR CUSTOMIZED PARAMETERS

COMPARISON OF LASER PARAMETER

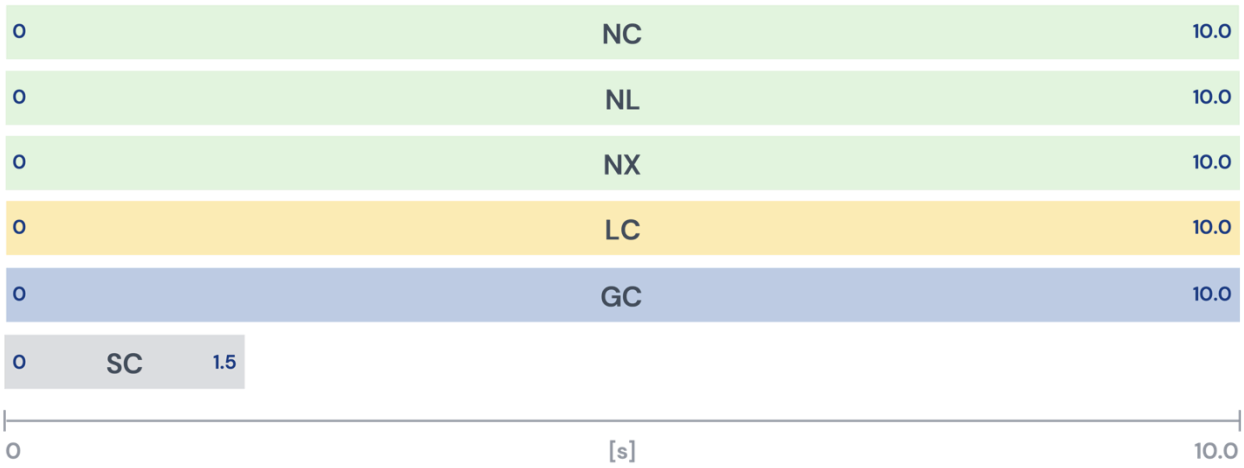
FREQUENCY/WAVELENGTH



POWER TUNING RANGE

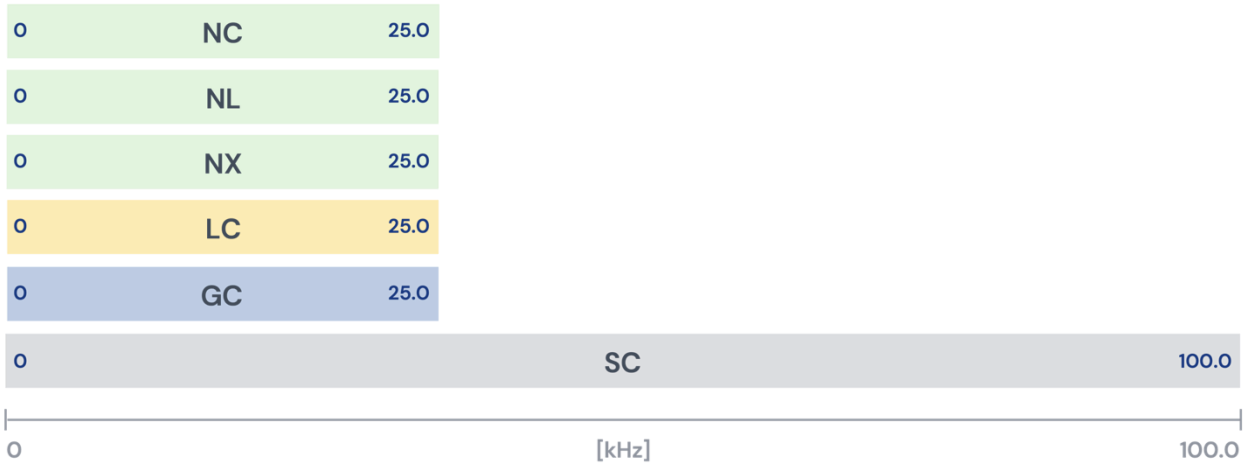


TYPICAL TUNING TIME

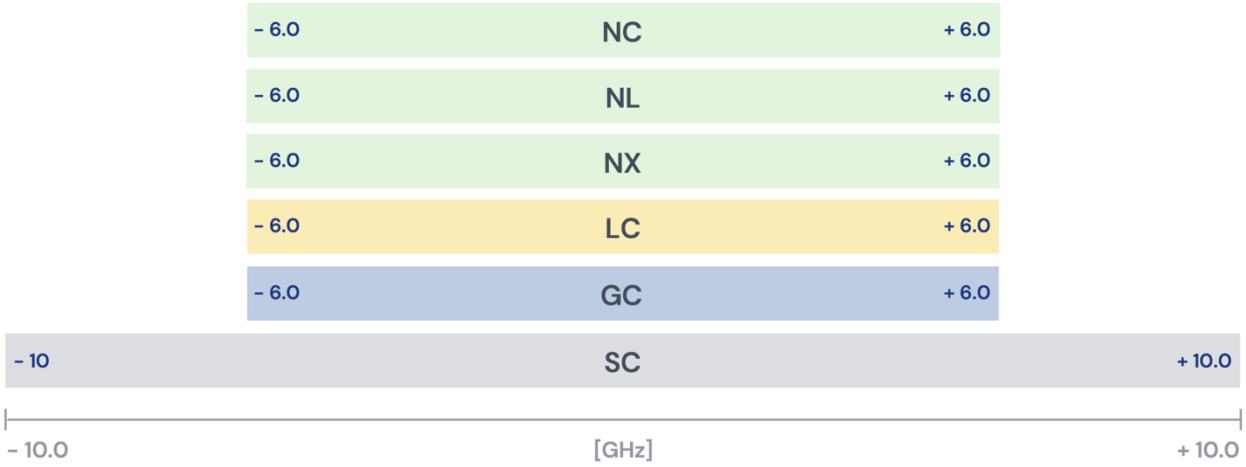


COMPARISON OF LASER PARAMETER

TYPICAL LASER LINE WIDTH



FINE TUNING RANGE



COBRITE LASER TUNING METHODS

1

COARSE TUNING

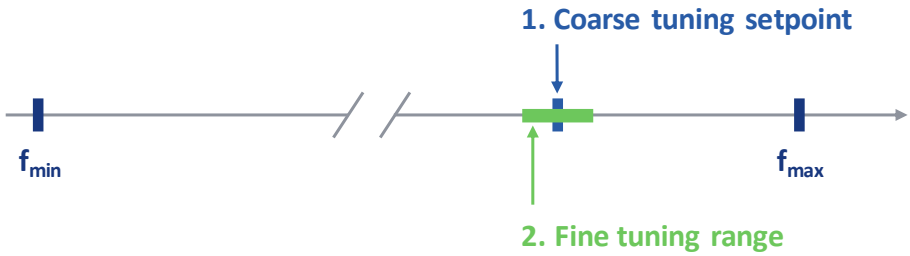
Access the full specified tuning range and tune to any desired frequency.

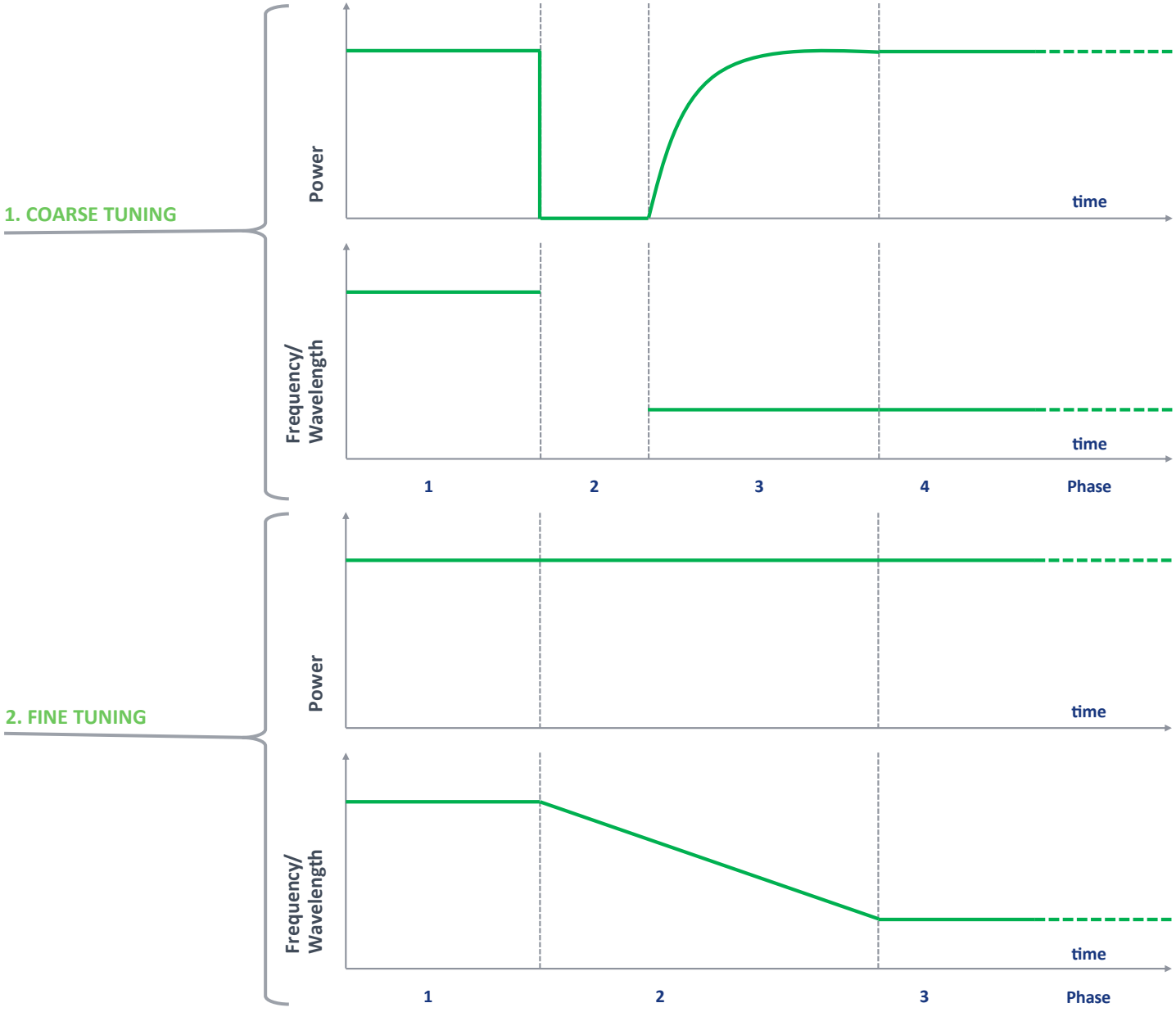
2

FINE TUNING

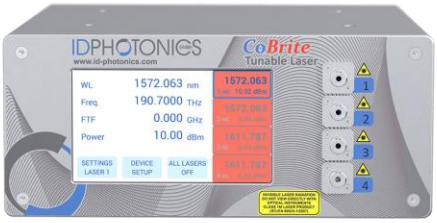
Enables precise frequency adjustment by offsetting the coarse tuning set point within a small range.

TUNING MODES





SELECT THE RIGHT PRODUCT FOR YOUR APPLICATION:



1

COBRITE DX

The CoBrite DX Series offers a versatile, full-feature stand-alone solution, with a touchscreen user interface for intuitive operation in a chassis for up to 4 laser sources.

2

COBRITE DX2

The CoBrite DX2 Series offers a compact, full-feature chassis for 1 or 2 laser sources and an installation-free web GUI.

3

COBRITE DX1

The CoBrite DX1 Series, with its single laser source housed in a benchtop chassis, is the simplest and most cost-efficient solution within the CoBrite family.

4

COBRITE MX

The CoBrite MX series is a 19-inch compatible chassis offering the highest laser source density on the market, with up to 48 field installable laser ports. All laser ports are easily controlled from a single controller.

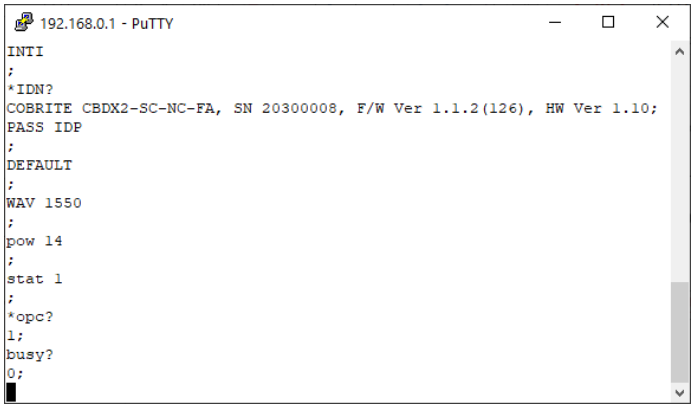
CHASSIS FEATURE COMPARISON

LASER TYPE	DX1	DX2	DX	MX
CHASSIS				
NUMBER OF LASER PORTS N, SC, GC TYPE	☐ 1	☑ 1 or 2	☑ 1, 2 or 4	☑ 4 per Card
NUMBER OF LASER PORTS N TYPE C+L BAND	☐	☑ 1	☑ 1 or 2	☑ 2 per Card
Tuning Trigger Ports Via SMA Connector	☐	☑	☑	☑
USB PORT	☑	☑	☑	☑
LOCAL LASER ON/OFF BUTTON	☑	☑	☑	☑
ETHERNET PORT	☐	☑	☑	☑
SCPI REMOTE CONTROL	☑	☑	☑	☑
INSTALLATION-FREE BROWSER-BASED GUI	☐ GUI S/W provided	☑	☑	☑
MULTIPLE PARALLEL USER CONNECTIONS	☐	☑	☑	☑
TOUCH PANEL DISPLAY	☐	☐	☑	☐
INSTALLATION OF LASER PORTS BY USER	☐	☐	☐	☑
AC POWER SUPPLY PROVIDED	☑ External	☑ External	☑ Integrated	☑ Integrated
19 INCH RACK MOUNTABLE	☐	☑ 1U, half width	☑ 2U, half width	☑ 3U
LINK TO MANUAL	DOWNLOAD		DOWNLOAD	

COBRITE AUTOMATION FEATURES

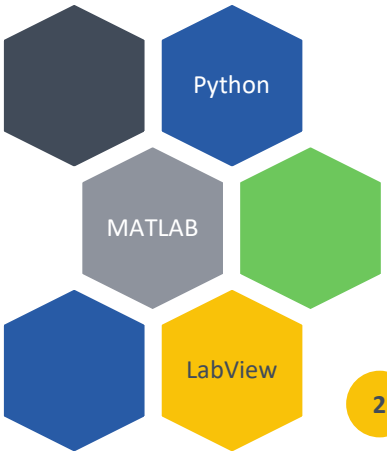
COBRITE LASERS PROVIDE EXTENSIVE INTERFACES TO AUTOMATE YOUR SETUPS

CoBrite supports SCPI (Standard Commands for Programmable Instruments) based programming. It is based on standardized, ASCII based commands that are easy to understand and to implement.
For example, "`WAV?`" queries the current wavelength while `WAV 1550` sets the wavelength of a laser port.
Its intuitive syntax and clear structure mean you can quickly learn to control and automate your devices without extensive programming knowledge.



1

SCPI COMMANDS



2

API REFERENCES PROVIDED

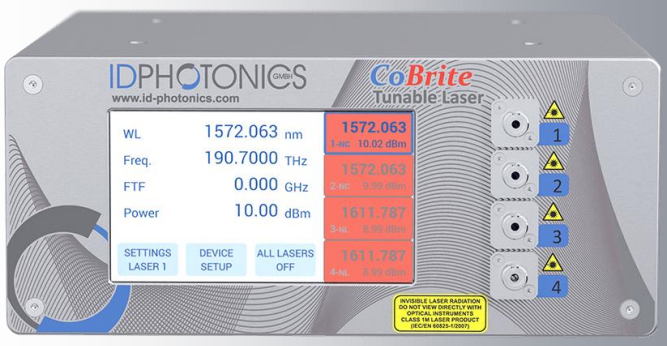
The CoBrite software package provides comprehensive reference implementations for popular automation languages such as Python, MATLAB, and LabView. These implementations are designed to help you quickly and efficiently integrate SCPI commands into your programming environment. By offering these ready-to-use examples, CoBrite ensures that you can start automating your tasks with minimal setup time, allowing you to focus on your core applications.

You can effortlessly issue SCPI commands using the HTTP protocol, making the process as simple as entering a URL in the address bar of a web browser. This method allows for straightforward and intuitive interaction with your instruments, eliminating the need for complex software installations or specialized interfaces. By leveraging the familiar and widely-used HTTP protocol, you can quickly send commands and receive responses, streamlining the process of instrument control and automation. This ease of use ensures that even those with minimal technical expertise can effectively manage and operate their devices, enhancing overall productivity and efficiency.

Example: http://cobrite.local/scpi/wav? Queries the wavelength setting of a CoBrite Laser port (not applicable to DX1)

3

SCPI QUERIES VIA HHTP



TUNABLE LASER SOURCES

COBRITE DX

CoBrite DX is a versatile tunable Laser light instrument that allows standalone operation by an intuitive local touch display. The chassis can be equipped with 1, 2 or 4 tunable lasers and 6 laser variants covering 1310 nm up to 1625 nm to meet your specific needs. Mixing of Laser types is possible. Remote operation via an integrated web server allows control using any browser-based device such as smartphones eliminating the need for complex software installations.

An integrated AC power supply makes this solution ultra portable while it is compatible with the 19” rackmount standard utilizing a 2U slot. Automated remote control is achieved via USB or Ethernet by SCPI command control.

Weight

3 kg
6.6 lbs.

Size of device

89 x 206 x 235 mm
3.51 x 8.12 x 9.06 inch
2U – 19 inch rackmount
standard, half width

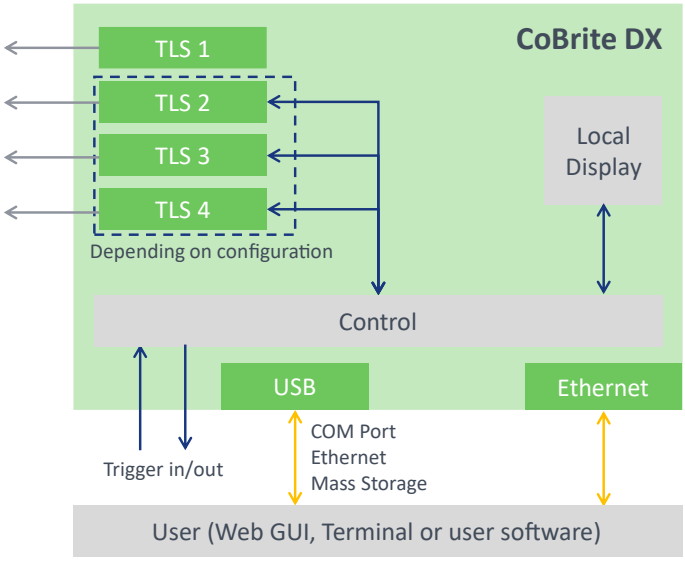
Operating Temperature

0 to 40 °C

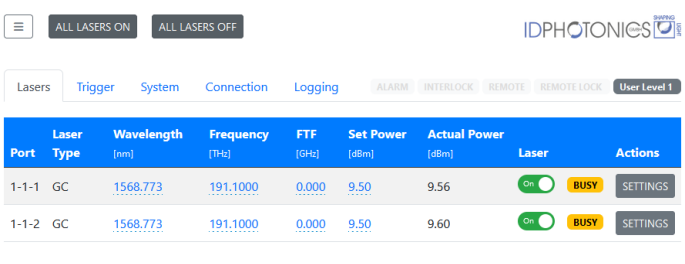
Our standards

RoHS-compliant
CE-conform
Class 1M Laser Product
EN 60825-1: IEC 60825-1

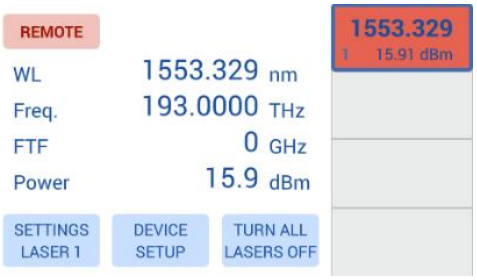
BLOCK DIAGRAM



WEB GUI



TOUCH GUI



TUNABLE LASER SOURCES

COBRITE DX2

The CoBrite DX2 can host either one or two CoBrite tunable laser light sources, making it a versatile solution for various applications like coherent transmitters and local oscillators. It features a plug-and-play setup, an installation-free, web-based graphical user interface (GUI) and compact size. With a wide range of laser options available, from budget-friendly multipurpose models to high-end narrow linewidth sources, there is a CoBrite DX2 tailored to meet your requirements. CoBrite DX2 is compatible to the 19" rackmount standard utilizing and utilizes a half width 1U slot.

Weight

1.3 kg
2.9 lbs.

Size of device

45 x 136 x 179 mm
1.77 x 5.35 x 7.04 inch
1U, half width

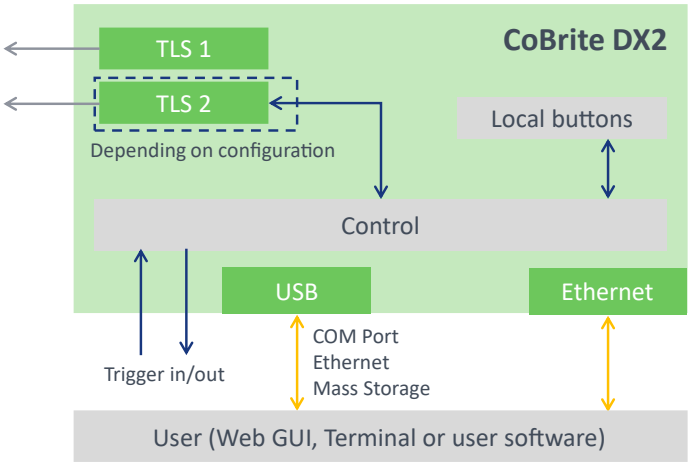
Operating Temperature

0 to 40 °C

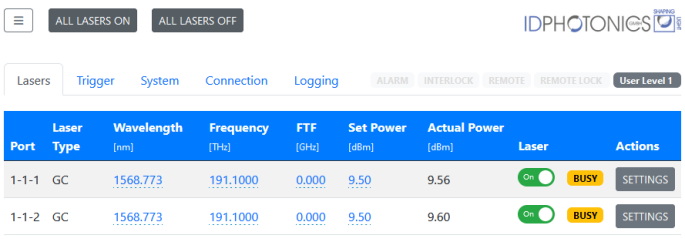
Our standards

RoHS-compliant
CE-conform
Class 1M Laser Product
EN 60825-1: IEC 60825-1

BLOCK DIAGRAM



WEB GUI



TUNABLE LASER SOURCES

COBRITE DX1

The CoBrite DX1 hosts one CoBrite tunable laser source, suitable for various applications like coherent transmitters or local oscillators. It features simple setup and compactness, while being the most cost-effective CoBrite option. With a selection of laser variants available, spanning from budget-friendly multipurpose models to high-end narrow linewidth sources, there is a CoBrite DX1 tailored to suit your needs.

Weight

0.5 kg
1.1 lbs.

Size of device

32 x 82 x 150 mm
1.3 x 3 x 6 inch

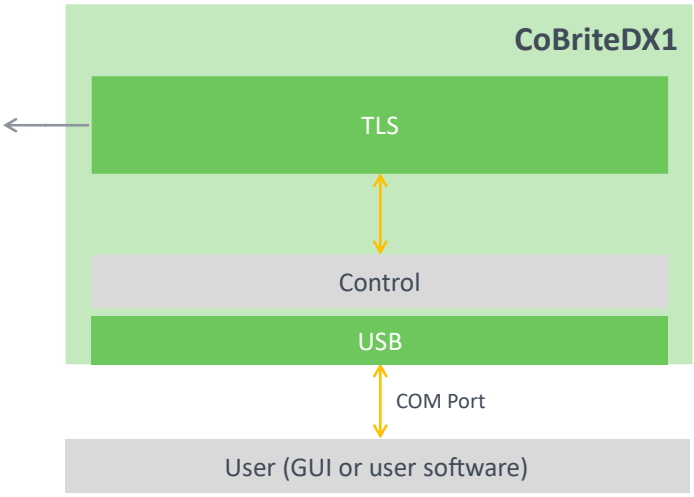
Operating Temperature

0 to 40 °C

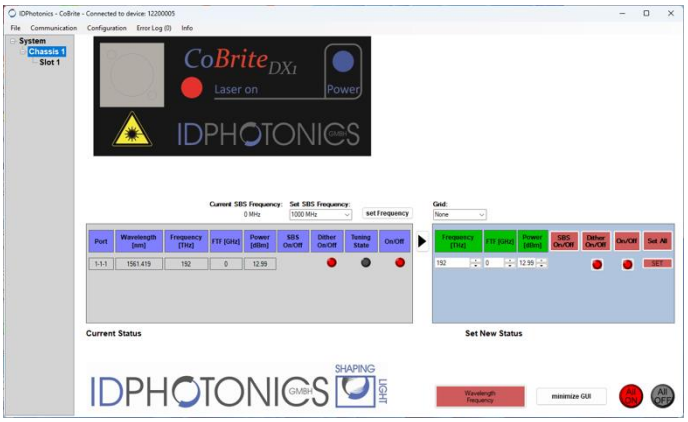
Our standards

RoHS-compliant
CE-conform
Class 1M Laser Product
EN 60825-1: IEC 60825-1

BLOCK DIAGRAM



WEB GUI



CoBrite MX CBMA 48

TUNABLE LASER SOURCES

COBRITE MX

The CoBrite MX series is a 19-inch mainframe-based system that uses slide-in cards, each housing up to 4 CoBrite lasers. This setup offers flexibility to the user to adjust to any required channel count in the field. Scalable in the field, from 2 lasers to up to 48 lasers within a single platform, the CoBrite MX provides a solution for various needs – from low channel count testing to full DWDM channel grid emulation applications. Two chassis variants available with 24 or 48 laser port capacity.

Weight

CBMA 24: 4 kg / 8.8 lbs.
CBMA 48: 8kg / 17.6 lbs.

Size of device

345 x 152 x 380 mm
13 x 6 x 15 inch
482 x 152 x 540 mm
19 x 6 x 21 inch
3U – 19 inch
rackmount standard

Operating Temperature

0 to 40 °C

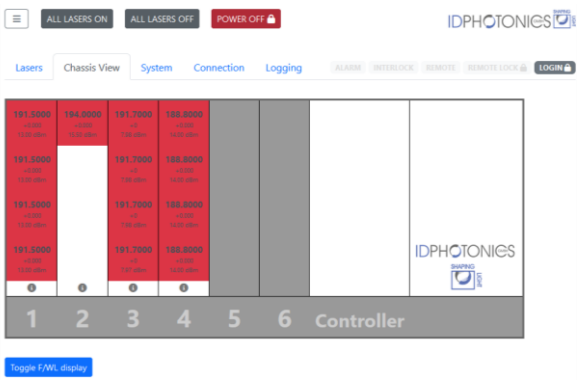
Our standards

RoHS-compliant
CE-conform
Class 1M Laser Product
EN 60825-1: IEC 60825-1

CBMA24
This mainframe is designed for low to medium channel counts and hosts up to 6 cards that allows to for up to 24 lasers in a compact chassis.

CBMA48
Is the core mainframe for demanding applications as it hosts up to 12 cards with 48 lasers. For applications requiring more than 48 laser ports, extensions via multiple CBMA48 chassis is possible.

WEB GUI



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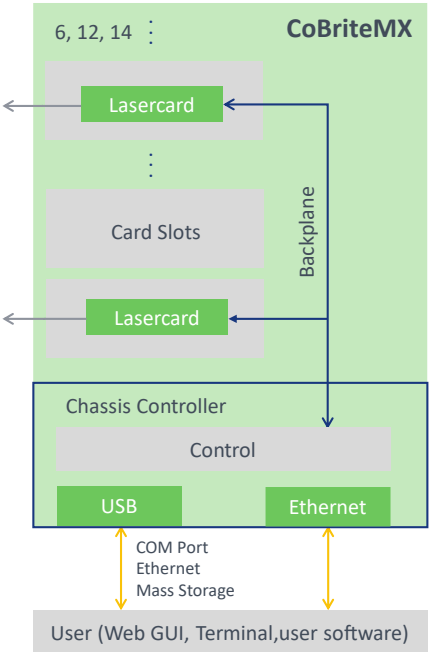
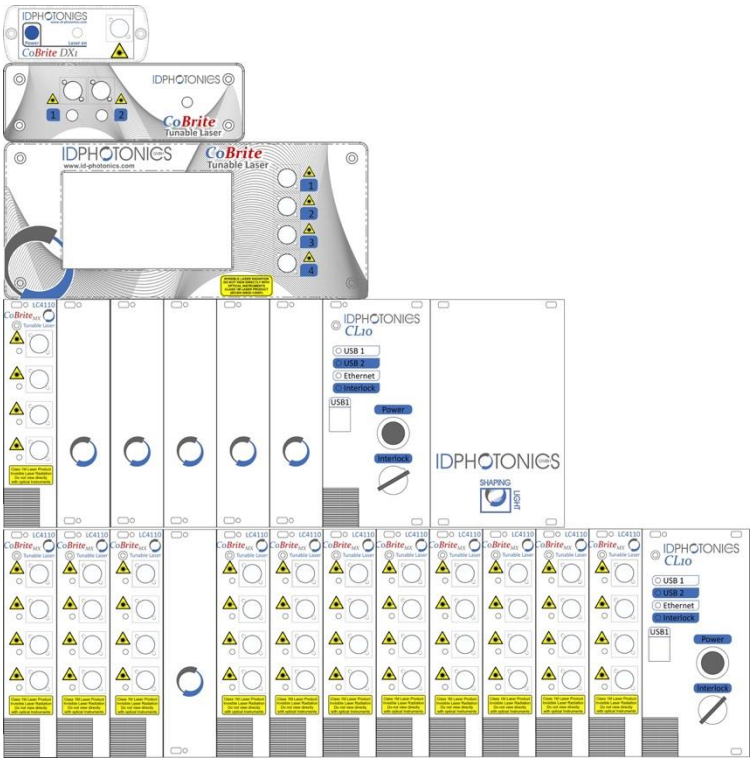


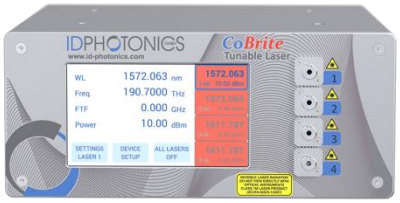
DEVICE PARAMETER

DEVICE PARAMETER	DX1	DX2	DX	MX (CBMA24)	MX (CBMA48)
OPERATING TEMPERATURE	0 to 40 °C non-condensing				
STORAGE TEMPERATURE	-20 °C to 60 °C non-condensing				
SIZE OF DEVICE (H X W X D) 19 INCH RACKMOUNT	32 x 82 x 150 mm (1.3 x 3 x 6 inch) -	45 x 136 x 179 mm (1.77 x 5.35 x 7.04 inch) 1U, half width	89 x 206 x 235 mm (3.51 x 8.12 x 9.06 inch) 2U, half width	345 x 152 x 380 mm, (13 x 6 x 15 inch) 3U	482 x 152 x 540 mm, (19 x 6 x 21 inch) 3U
WEIGHT	0.5 kg (1.1 lbs.)	1.3 kg (2.9 lbs.)	3 kg (6.6 lbs.)	4 kg (8.8 lbs.)	8kg (17.6 lbs.)
POWER SUPPLY	External, included 100 - 240 VAC, 500 mA, 50/60 Hz, 12 VDC, 1.5 A input at unit			100-240 VAC, 50/60 Hz, 10 A, 150 W (CBMA24) – 300 W (CBMA48)	
CARD CAPACITY	-	-	-	6 slide-in cards	12 slide-in cards
LASER PORT CAPACITY	1	1, 2	1, 2, 4	2 to 24	2 to 48
PORTS	USB	USB, Ethernet		1x Ethernet back, 1x Ethernet front, 1x USB front	
CONTROL	Installer GUI provided	Installation free, browser based pictographic GUI, SCPI style remote control commands			
AUTOMATION	SCPI style remote control commands				
LASER SAFETY INTERLOCK	Interlock located at rear, Software based interlock			Key located in front, Software based interlock	

COMPARISON OF DIMENSIONS



CONFIGURE COBRITE DX



NUMBER OF LASERTYPE PORTS

1, 2 or 4

ORDER CODE KEY

CBDX- □ - □ - □ - □ - □

LASERTYPE PORTS
NC: Narrow Linewidth, C-Band, extended Band
NL: Narrow Linewidth, L-Band
NX: Narrow Linewidth, extended L-Band
GC: Narrow Linewidth, C-Band, standard-Band
SC: Standard Linewidth, C-Band
LC: Narrow Linewidth C+L-Band, max. 2 ports per unit
DO: Narrow Linewidth, O-Band
NN: Not Equipped

CONNECTOR TYPE
FA: FC/APC
FP: FC/PC
SP: SP/PC

19 INCH RACKMOUNT ACCESSORY KIT

CBDX-ACC-RM- □

NUMBER OF CHASSIS
1: 1 CHASSIS @ 2U
2: 2 CHASSIS @ 2U

CONFIGURE COBRITE DX2

NUMBER OF LASERTYPE PORTS

1 or 2

ORDER CODE KEY

CBDX2- □ - □ - □

LASERTYPE PORTS
NC: Narrow Linewidth, C-Band, extended Band
NL: Narrow Linewidth, L-Band
NX: Narrow Linewidth, extended L-Band
GC: Narrow Linewidth, C-Band, standard-Band
SC: Standard Linewidth, C-Band
LC: Narrow Linewidth C+L-Band, max. 1 port per unit
DO: Narrow Linewidth, O-Band
NN: Not Equipped

CONNECTOR TYPE
FA: FC/APC
FP: FC/PC
SP: SP/PC

19 INCH RACKMOUNT ACCESSORY KIT

CBDX2-ACC-RM- □

NUMBER OF CHASSIS
1: 1 CHASSIS @ 1U
2: 2 CHASSIS @ 1U

CONFIGURE COBRITE DX1

NUMBER OF LASERTYPE PORTS

1

ORDER CODE KEY

CBDX1-1- □ - □

LASERTYPE PORTS
NC: Narrow Linewidth, C-Band, extended Band
NL: Narrow Linewidth, L-Band
GC: Narrow Linewidth, C-Band, standard-Band
SC: Standard Linewidth, C-Band

CONNECTOR TYPE
FA: FC/APC
FP: FC/PC

CONFIGURE COBRITE MX

CBMA24

CBMA48

1

CHASSIS

Choose the right chassis for your application to match your requirement for features and supported laser types.

2

LASER CARDS

Select the laser source you need for your application.
For products supporting multiple ports, mix variants as required.

ORDER CODE KEY: 2 OR 4 LASER PORTS PER CARD

CBMX- ☐ - ☐ - ☐ - ☐ - ☐

LASERTYPE PORTS
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NL: Narrow Linewidth, L-Band
NX: Narrow Linewidth, extended L-Band
GC: Narrow Linewidth, C-Band, standard-Band
SC: Standard Linewidth, C-Band
LC: Narrow Linewidth, C+L-Band, max. 2 ports per card
NN: Not Equipped

CONNECTOR TYPE
FA: FC/APC
FP: FC/PC
SP: SP/PC

19 INCH RACKMOUNT ACCESSORY KIT FOR CBMA24

CBMA24-ACC-RM

CONTACT
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FURTHER RESOURCES
DOWNLOAD MANUAL
DOWNLOAD MANUAL DX1
APPLICATION NOTES
DOWNLOAD CENTER

CONFIGURE ONLINE
Utilize our online configuration tool to customize your CoBrite for your specific application and easily request a quotation.
Get started now to tailor your solution and receive a personalized quote!

SCAN ME

SHAPING LIGHT.

HELPING ENGINEERS AND SCIENTISTS IN ADVANCING HOW THE WORLD COMMUNICATES, SENSES AND CONNECTS

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