

# Mainframe Series for *CoBrite*<sub>MX</sub> Laser

## Features

- ✓ 19" rack mountable chassis platform
  - ✓ 3 Different chassis variants to scale with your needs
  - ✓ Each available with handles or rack mounting brackets
- ✓ Swappable cards & central controller
- ✓ Scales from 4 to 104 Laser sources per system
- ✓ 4 lasers per card; ultra high density
- ✓ 3 different Laser types to match your need; mix within one system
- ✓ Easy-to-use pictographic GUI
- ✓ Remote control
  - ✓ USB & Ethernet connectivity
  - ✓ SCPI Style commands

## Applications

- ✓ generation of channel grids for DWDM transport testing
  - ✓ flexible grid testing
- ✓ ready for data rates 100G+
- ✓ Coherent Transmission
  - ✓ Local Oscillator
  - ✓ Transmitter Laser
- ✓ Versatile Light Source



This series of mainframes host our *CoBrite*<sub>MX</sub> tunable laser modules. All variants can be equipped with handles and rubber feet for bench-top use or brackets for 19inch rack mount usage.

### *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*

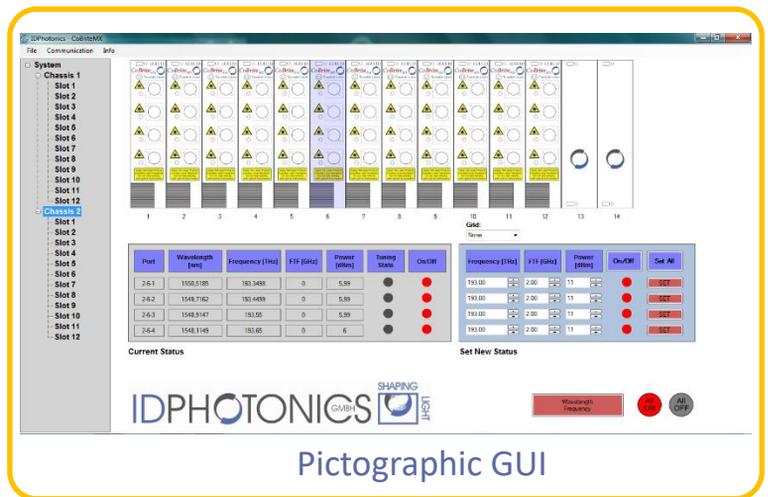
Is the core mainframe for demanding applications as it hosts up to 12 cards with 48 lasers and provides central control for our *PMUX* multiplexing solution.

### *CBSL56*

Is controlled by a *CBMA48* mainframe and extends system capacity by another 14 slots to scale up to 104 laser channels in one integrated system.

## Mainframe Specifications

| Parameter                 | CBMA24  | CBMA48(SL)                              | CBSL56                                  |
|---------------------------|---|---|---|
| Module Capacity           | 6   | 12                                      | 14                                      |
| Ports                     | 1x Ethernet, 1x USB front, 1x USB rear              |   |   |
| Control & Automation      | Windows based pictographic GUI, SCPI style commands |   |   |
| Operating Temperature     | 0 to 40°C, non-condensing                           |   |   |
| Storage Temperature       | -20°C to 60°C, non-condensing                       |   |   |
| Dimensions<br>(W x H x D) | 345 x 152 x 380mm<br>(13 x 6 x 15 inch)             | 482 x 152 x 540mm<br>(19 x 6 x 21 inch) | 482 x 152 x 540mm<br>(19 x 6 x 21 inch) |
| Laser Safety Interlock    | Key located in front, Software based interlock      |   |   |
| Power Supply              | 100-240 VAC, 50/60Hz, 10A                           |   |   |



Invisible Laser Radiation  
Class 1M Laser Product  
EN 60825-1: IEC 60825-1

### Ordering Information

| CB                            | -XXXX   |
|-------------------------------|---|
| Article                       | Variant   |
| CoBrite <sub>MX</sub> Chassis | MA24<br>MA48<br>MA48-SL<br>(extendible by CBSL56)<br>SL56 |

### Contact information

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# CoBrite<sub>MX</sub> – Tunable Laser Series

## Features

- ✓ Versatile CW Laser Light source
- ✓ Tune to any Frequency within specified range
- ✓ Ultra compact; 4 laser per card
- ✓ Polarization Maintaining Fiber
- ✓ Local On/off switch at each port
- ✓ FC/ APC, FC/PC or SC/PC connector type



## Choose from 3 Laser types

### Narrow Linewidth (N – type)

- ✓ Typical Line width < 25kHz
- ✓ Output power tunable up to 16dBm
- ✓ Ultra wide frequency tuning range
- ✓ C and L Band versions available
- ✓ Customizable on request

### Standard Linewidth (S – type)

- ✓ Typical Line width 80kHz
- ✓ Output power tunable up to 17.8dBm
- ✓ Fast tuning: 1 Second typical
- ✓ Low frequency noise
- ✓ Cost efficient coherent transmission

### Generic Light source (G – type)

- ✓ General purpose tunable laser with standard tuning range, 100kHz Linewidth

Our CoBrite<sub>MX</sub> tunable Laser modules offer full **continuous** tuneability over C- or L-band utilizing 3 different laser types to meet any application from ultra narrow linewidth coherent transmission to DWDM comb generation.

The laser types can be mixed within a single mainframe chassis.

Its Polarization maintaining output with up to 17.8dBm of output power makes it an ideal source for emulation of DWDM channels by external modulation.

CoBrite<sub>MX</sub> tunable laser modules are hosted in a variety of mainframes that scale from 4 Lasers up to 104 laser sources in one system to match your application.

## Optical Specifications

| Optical Parameter   | Laser Type<br>N   | Laser Type<br>S   | Laser Type<br>G  | Unit  |
|---|---|---|--|-------|
| Frequency range; C – Band<br>L – Band   | 190.70 – 196.65<br>(1524.5 - 1572nm)<br>186.00 – 191.1<br>(1568.8 – 1611.7nm) | 191.12 – 196.25<br>(1527.6 – 1568.6nm)<br>Not available | 191.1 – 196.25<br>(1527.61 – 1568.77nm)<br>Not available | THz   |
| Channel Spacing   | Continuous  | Continuous  | Continuous   | GHz   |
| Frequency fine tune resolution  | 1   | 10  | 1  | MHz   |
| Frequency fine tune range   | +/- 6   | +/- 10  | +/- 6  | GHz   |
| Optical Power C Band<br>tuning range L Band<br>for any frequency              | 10.0 – 16.0<br>9.0 – 14.5   | 8.8 – 17.8<br>(17.0 dBm EOL)<br>–                       | 9.5 – 15.5<br>–  | dBm   |
| Spectral Line width; 3dB<br>instantaneous, 3.5us<br>(Lorentzian contribution) | < 100<br>25 typical   | 80 typical<br>< 100 (Pout < 16dBm)<br>< 150             | < 100<br>25 typical                                      | kHz   |
| Frequency accuracy over Lifetime<br>Over 24 hours                             | +/- 2.5<br>0.3  | +/- 1.5<br>0.3  | +/- 2.5<br>0.3   | GHz   |
| SMSR; Side mode suppression ratio;<br>measured with 0.1nm RBW                 | > 40<br>55 typical  | > 40  | > 40<br>55 typical                                       | dB    |
| RIN (10MHz to 3GHz)   | -145 (10 MHz to<br>44GHz, 7dBm)   | -140 (100kHz – 20MHz)<br>-150 (20MHz – 1GHz)            | -145 (10 MHz to 44GHz,<br>7dBm)                          | dB/Hz |
| Power accuracy over tuning range  | +/- 0.5   | +/- 0.5   | +/- 0.5  | dB    |
| Tuning speed (max/typical)  | 15 / 10   | 2 / 1.0   | 15 / 10  | s     |
| Output Connector  | FC/APC, FC/PC or SC/PC  |   |  |       |
| Output power accuracy over Lifetime<br>Over 1 hour<br>Over 24 hours           |   | -/+1<br>+/- 0.01 (typ.)<br>+/- 0.03 (typ.)              |  | dB    |
| Output power setting resolution   |   | 0.1   |  | dB    |
| Optical Fiber   | Polarization- maintaining PANDA type Fiber, PER > 18dB, 25typ.                |   |  |       |



### Ordering Information

**CBMX -XY-XY-XY-XY -XX**

| Article               | Variant  | Connector                               |
|-----------------------|--|---|
| CoBrite <sub>MX</sub> | X: Laser Type** (N,S,G*)<br>Y: Laser Band - (C, L) band<br>XY = NN: No laser equipped<br>2 or 4 laser ports only | FA = FC/APC<br>FP = FC/PC<br>SP = SC/PC |

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\* APC type connector only  
\*\* Restricted to 1 type  
per card

Subject to change without further notice

