

# CoBrite DX-1 Continuously Tunable Laser



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marketplace for **Scientists & Engineers**

**contact@LaserLabSource.com**

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**800.877.5065**

# CoBrite DX1 – Tunable Laser

## Features

- ✓ Tune to any Frequency within specified range
- ✓ Ultra compact housing
- ✓ USB Port
- ✓ Easy remote control/API via SCPI



## 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)**

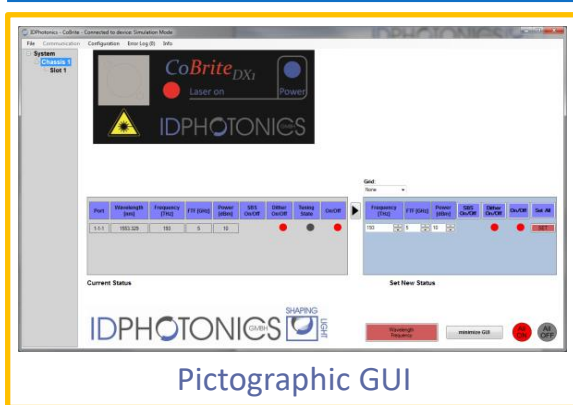
- ✓ General purpose tunable laser with standard tuning range, Typical Line width < 25kHz

CoBrite DX1 is a versatile tunable Laser light source that is easy to set up using any PC's standard USB port by an easy-to-use GUI. Multiple devices can be operated on a single PC allowing easy control even for high count multi-channel applications. Remote operation control via SCPI style commands empowers users to setup and perform complex automated tasks within minutes being 100% compatible to our CoBrite chassis series.

Once set up, CoBrite DX1 will operate autonomously even without PC on last setting by it's built-in set & forget feature. A save last state feature allows to recover at last setting including on/off state after a power cycle.

Optical Parameter	Laser Type N	Laser Type S	Laser Type G	Unit
Frequency range; C – Band L – Band	190.70 – 196.65 (1524.5 - 1572nm) 186.00 – 191.1 (1568.8 – 1611.7nm)	191.12 – 196.25 (1527.6 – 1568.6nm) Not available	191.1 – 196.25 (1527.61 – 1568.77nm) 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 tuning range for any frequency	C Band 10.0 – 16.0 L Band 9.0 – 14.5	8.8 – 17.8 (17.0 dBm EOL) -	9.5 – 15.5 -	dBm
Spectral Line width; 3dB instantaneous, 3.5us (Lorentzian contribution)	< 100 25 typical	80 typical < 100 (Pout < 16dBm) < 150	< 100 25 typical	kHz
Frequency accuracy over Lifetime Over 24 hours	+/- 2.5 0.3	+/- 1.5 0.3	+/- 2.5 0.3	GHz
SMSR; Side mode suppression ratio; measured with 0.1nm RBW	> 40 55 typical	> 40	> 40 55 typical	dB
RIN (10MHz to 3GHz)	-145 (10 MHz – 44GHz, 7dBm)	-140 (100kHz – 20MHz) -150 (20MHz – 1GHz)	-145 (10 MHz – 44GHz, 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 Over 1 hour Over 24 hours		-/+1 +/- 0.01 (typ.) +/- 0.03 (typ.)		dB
Output power setting resolution		0.1		dB
Optical Fiber	PM - PANDA Type Fiber, PER > 18dB, 25typ., E-Field on slow axis, aligned to connector key			

Inquire for customized parameters



Pictographic GUI

### Mechanical Parameter

Operating Temperature	0°C to 40°C	non-condensing
Storage Temperature	-20°C to 60°C	
Size of device (H x W x D)	32 x 82 x 150mm	1.3 x 3 x 6 inch
Power Supply (external, included)	100-240 VAC, 500mA, 50/60Hz 12VDC, 1.5A input at unit	

### Ordering Information

Article	No of Lasers	Laser Variant	Connector
CoBriteDX1	1	X: Laser Type (N,S,G*) Y: Laser Band - (C, L) band	FA = FC/APC FP = FC/PC SP = SC/PC

\* APC type connector only

### Contact information

ID Photonics GmbH  
Anton-Bruckner-Str. 6  
85579 Neubiberg  
GERMANY  
Tel.: + 49 (0) 89 – 201 899 16  
[info@id-photonics.com](mailto:info@id-photonics.com)  
[www.id-photonics.com](http://www.id-photonics.com)



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