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ICE BLOC®

ICE BLOC DD40

High-power laser diode driver



BUILD A BETTER LAB WITH ICE BLOC

High performance laser instrumentation with state-of-the-art connectivity and modern accessible interfaces. The new Ice Bloc range has been designed to help you capture, extract and view important experimental data with the aim of making your experiments easier to set up, manage and measure. Choose from a range of laser diode drivers, quantum cascade laser and actuator drivers as well as temperature controllers and digital timers.



INTRODUCING ICE BLOC DD40

Ice Bloc DD40 is a high-power, precision laser diode driver - available with a choice of 1 to 4 independent channels - designed to help you build laser-based photonic systems for research, experimental and production applications.

Driving the latest generation of high power laser diodes, the DD40 combines high current (up to 40A), low noise output with high accuracy and high-resolution current set points. Its compact form factor with customisable software interface allows easy integration of the DD40 into experiments or OEM setups

- Available with 1 to 4 independent channels
- Up to 40A per channel
- Analogue and photodiode monitor inputs
- Constant optical power mode
- Drive modulation inputs
- Ethernet connectivity and web interface



ICE BLOC FEATURES

SIMPLE WEB BASED CONTROL

Configure and run experiments from a modern web interface which provides easy access to all features and provides rich data visualization. Ice Bloc has a built-in web server, so there is no software to install or dedicated software drivers to download.

FULL SPEED AHEAD - IT'S CONNECTED BY ETHERNET

Ice Bloc is more secure, faster and works over a longer range than other connection technologies. The built-in 2-port Ethernet router makes it easy to connect to your lab's network for fast, secure, local and remote access. This set up means you'll be able to easily control, monitor, diagnose, even upgrade your system, from any computer.

ENGINEERED FOR HIGH PERFORMANCE AND LOW NOISE

Ice Bloc's high-end design and engineering strikes the optimum balance between noise, power and efficiency. All our components and electronics are fully optimised and highly sensitive ensuring you get the precision and power you need in your experiments.

CUSTOM CONTROL, WHENEVER YOU NEED IT

Control Ice Bloc with your own custom software or use any third-party packages including MATLAB, Python and LabVIEW. You can record internal and external measurement values for display or download.

HIGHLY CUSTOMISABLE

We're no strangers to customising devices to meet the exacting experimental requirements of our customers. If you need something different, for example reduced output noise, or a higher output current, we'll create an Ice Bloc to suit you.



SPECIFICATIONS

DIODE DRIVER

Output current range (per channel)	0 - 40 A
Output compliance voltage range	0.8 - 5 V
Maximum output power	250 W across all four channels
Total output noise	<0.02 % at 40 A
Current setting resolution	1 mA
Current accuracy	±2 %
Current temperature stability	50 ppm/°C

MODULATION

Input sensitivity	1 A/V
Modulation range	±3.2 A around the set point
Modulation frequency response	DC – 10 kHz
Input impedance	10 kΩ
Input resolution	24 bits
Maximum safe input	±20 V
Monitor input linear range	±4 V

PHOTODIODE

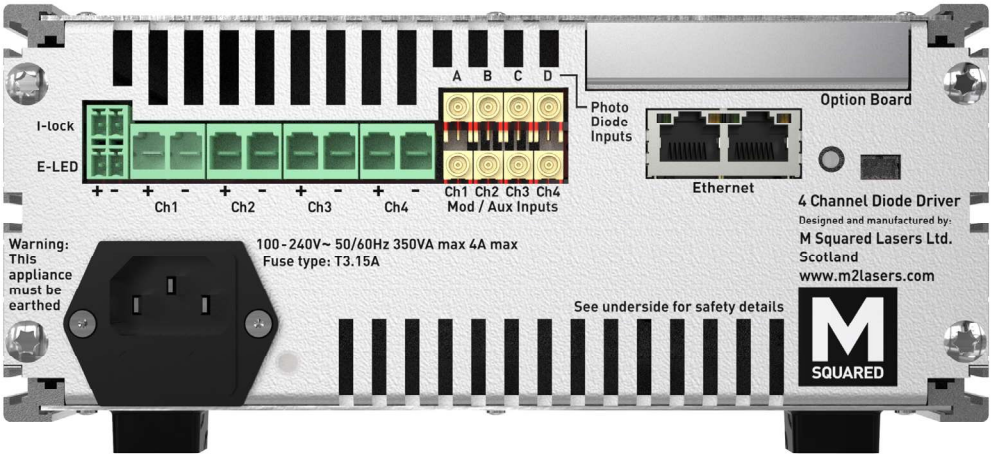
Input impedance	20 Ω (transimpedance)
Transimpedance gain range	80 V/A – 20 k V/A
Maximum safe input	±5 V (protected)
Input linear range	±10 mA
Input resolution	24 bits

AUXILIARY I/O

Interlock	
Open circuit voltage	3.3 V
Closed maximum resistance	3 kΩ
Maximum safe input voltage	±10 V
Emission LED	
Output voltage	+5 V
Current limiting resistance	620 Ω

GENERAL

Mains input voltage	100-240 V AC, 50/60 Hz, 350 VA (typical power: 15 W)
Size (W x H x D)	Half rack (203 mm) x 2U (89 mm) x 345 mm (8” x 3.5” x 13.6”)
Weight	4.1 kg
Operating temperature	0 °C to 70 °C
Storage temperature	-20 °C to 85 °C
Relative humidity	<90 % humidity, non-condensing
Indoor/outdoor use	Indoor use only
Altitude	<2000 m



Ice Bloc rear view: Industrial-grade connectors give quick, solder-free connection to photonic system components.

ICE BLOC®

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