

ED4U SERIES DRIVER
LASER SYSTEM & LASER DIODE DRIVER

> FEATURES AND BENEFITS



- Operates in either CW or QCW modes
- 0-350V compliance voltage range
- Water or Air cooled versions available
 - CE marked version available
- Integrated power supply (optional)
- Integrated RF driver (optional)
 - 19" rack mountable
 - Labview compatible*
RS232 and RS485

With all of the standard drive specifications of the eDrive™, the eDrive Nitro integrates optional power supplies, RF drivers, and other accessories in a single rack-mounted housing. Configurable for driving diodes in either CW or QCW operating modes, all aspects of your laser system can be managed with one unit. The eDrive Nitro is equipped with multiple control options, an easy to use local front panel interface along with a host of digital remote control options, including Labview* compatibility, which are all offered as standard.

The eDrive Nitro has been designed to maximize reliability. All system components are conservatively rated. High power circuits are physically separated from low power circuits. Minimal internal interconnect wiring increases reliability. A variety of power supplies, single or dual-axis Q-switch drivers/controllers, and temperature controller options are available. Please contact us for more information.

*Labview™ is the property of National Instruments Corporation.



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<http://www.optoscience.com>

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SPECIFICATIONS

Amplitude:	Air Cooled		Water Cooled	
	CW	QCW	CW	QCW
Output Current	0-50 A	0-300 A **	0-70 A	0-300 A **
Display Resolution	100 mA	100 mA	100 mA	100 mA
Accuracy	± 2%	± 2%	± 2%	± 2%
Noise	< 50 mA p-p	< 50 mA p-p	< 50 mA p-p	< 50 mA p-p

**See chart on page 3 for duty cycle ratings

Pulse Rate:	CW	QCW	CW	QCW
Range	—	0 - 50 kHz	—	0 - 50 kHz
Display Resolution (1 Hz)	—	0 - 100 Hz	—	0 - 100 Hz
(10 Hz)	—	100 Hz - 1 kHz	—	100 Hz - 1 kHz
(100 Hz)	—	1 kHz - 50 kHz	—	1 kHz - 50 kHz
Accuracy	—	± 2%	—	± 2%

Pulse Width:	CW	QCW	CW	QCW
Range	—	10 µs - 100 ms	—	10 µs - 100 ms
Display Resolution	—	100 ns	—	100 ns
Transition Time	—	5 µs Typical (100 A) 40 µs Typical (300 A)	—	5 µs Typical (100 A) 40 µs Typical (300 A)

Trigger In:	CW	QCW	CW	QCW
Type	—	Positive Edge Trigger	—	Positive Edge Trigger
Signal Input	—	TTL or 5 V CMOS	—	TTL or 5 V CMOS
Minimum Width	—	50 µs	—	50 µs
Input Impedance	—	50 Ω	—	50 Ω

Trigger Out:	CW	QCW	CW	QCW
Type	—	User configurable for EO Q-switched operation	—	User configurable for EO Q-switched operation
Characteristics	—	TTL of 5V CMOS	—	TTL of 5V CMOS

Compliance Voltage:	CW	QCW	CW	QCW
Range	0 - 350 V	0 - 350 V	0 - 350 V	0 - 350 V
Display Resolution	0.1 V	0.1 V	0.1 V	0.1 V
Accuracy	± 2%	± 2%	± 2%	± 2%

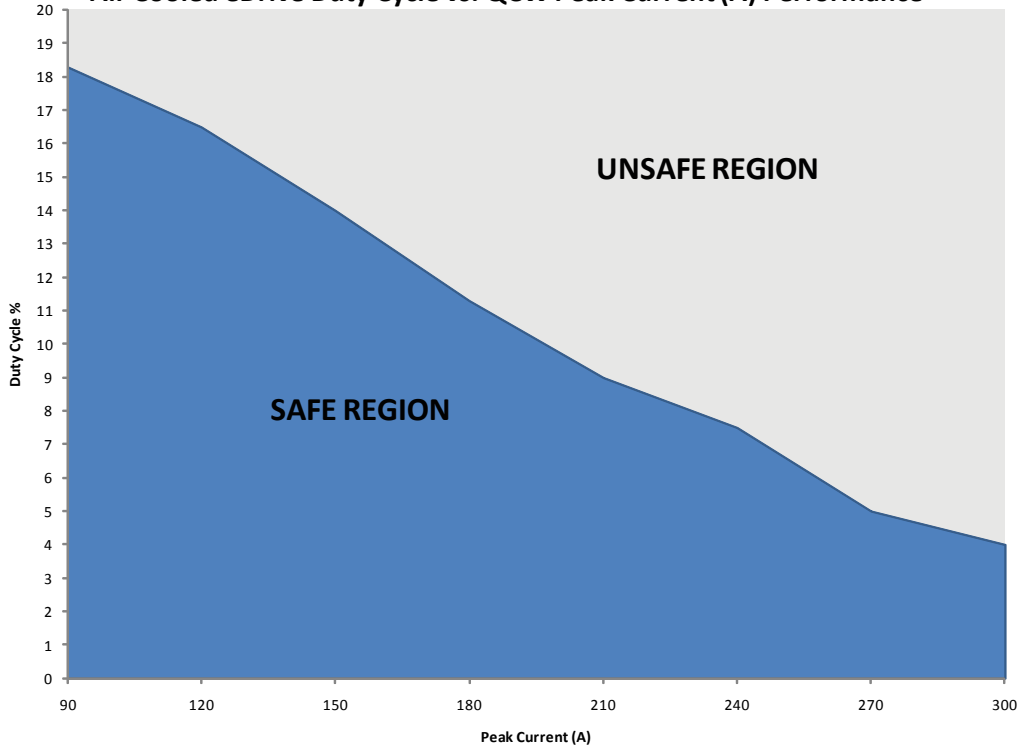
Current Monitor:	CW	QCW	CW	QCW
Type	10 A/V 0-5 V	20 A/V 0-5 V (0-15 V for high current models)	10 A/V 0-7 V	20 A/V 0-5 V (0-15 V for high current models)
Accuracy	± 2%	± 2%	± 2%	± 2%

Interlocks:	CW	QCW	CW	QCW
Open Circuit Voltage	5 VDC nominal	5 VDC nominal	5 VDC nominal	5 VDC nominal
Short Circuit Current	1 mA nominal	1 mA nominal	1 mA nominal	1 mA nominal
Type	Switch contact closure or TTL or 5 V CMOS compatible	Switch contact closure or TTL or 5 V CMOS compatible	Switch contact closure or TTL or 5 V CMOS compatible	Switch contact closure or TTL or 5 V CMOS compatible

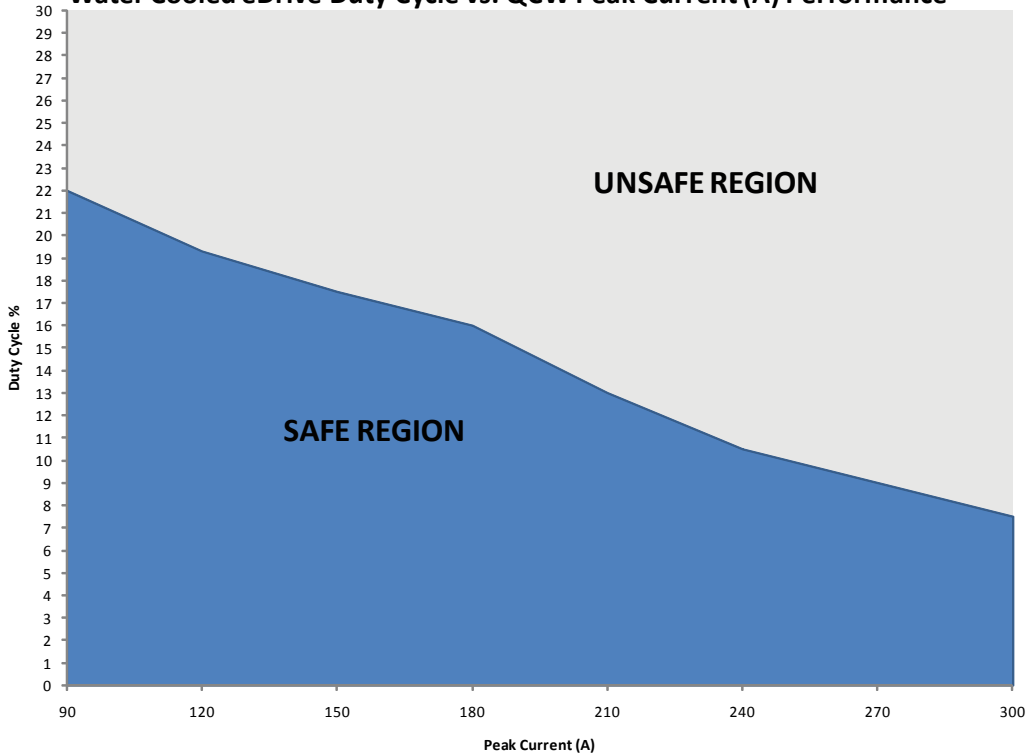
General:	CW	QCW	CW	QCW
Operating Temperature	0 - 40°C, non condensing	0 - 40°C, non condensing	0 - 40°C, non condensing	0 - 40°C, non condensing
Power Input	100 - 240 VAC, 50/60 Hz, 15A max	100 - 240 VAC, 50/60 Hz, 15A max	100 - 240 VAC, 50/60 Hz, 15A max	100 - 240 VAC, 50/60 Hz, 15A max

> **DUTY CYCLE RATINGS**

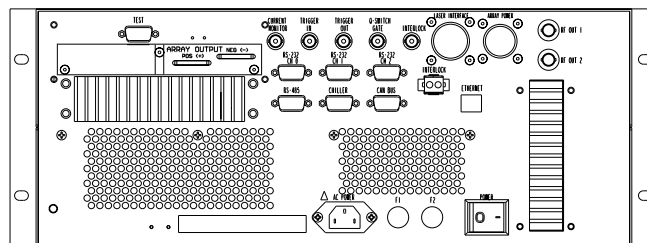
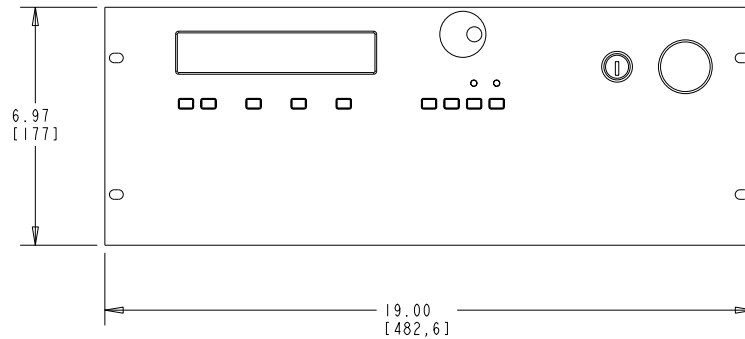
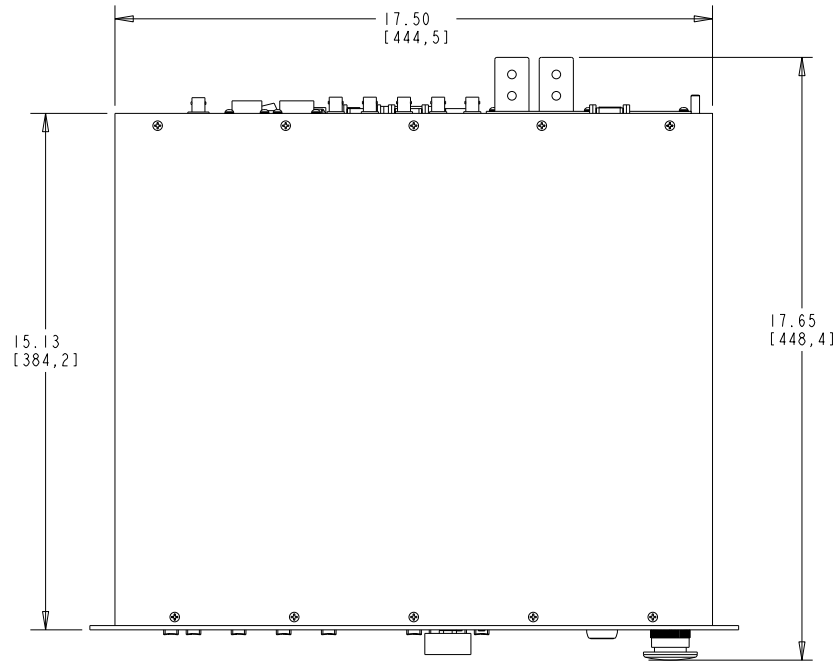
Air Cooled eDrive Duty Cycle vs. QCW Peak Current (A) Performance



Water Cooled eDrive Duty Cycle vs. QCW Peak Current (A) Performance



> MECHANICAL DRAWINGS



REAR VIEW

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