

ED2U SERIES DRIVER  
LASER SYSTEM & LASER DIODE DRIVER

## &gt; FEATURES AND BENEFITS



- Operates in both CW and QCW modes
- 0-350V compliance voltage range
- 100A or 300A pulsed versions available
- Water or Air cooled versions available
- CE marked versions available
- 19" rack mountable
- Coolant and safety interlocks
- Labview Compatible\*  
RS232 and RS485 interface

Configured to run diodes in either CW or QCW modes, the eDrive controller is an excellent tool for performing all critical operations for laser diode arrays in one box. With drive ratings of 70A CW and 300A QCW @  $\leq 7\%$  Duty cycle (water cooled version), the eDrive is capable of performing laser system functions such as shutter control, system interlocks, and Q-switching. The user has ultimate control with limit features for current and duty cycle, which allows the eDrive to protect the laser diode arrays.

All eDrives are equipped with multiple control options including RS232 and RS485 interface and are Labview™\* compatible. Whether you are in production or working in a research and development environment, the eDrives versatility will support your requirements well into the future. If you have any further questions, contact one of our sales representatives. We would be pleased to work with you to configure a controller to fit your needs.

\*Labview™ is the property of National Instruments Corporation.

## 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 - 500 ms	—	10 µs - 500 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: (optional)***	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

\*\*\*Non standard available upon request

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%

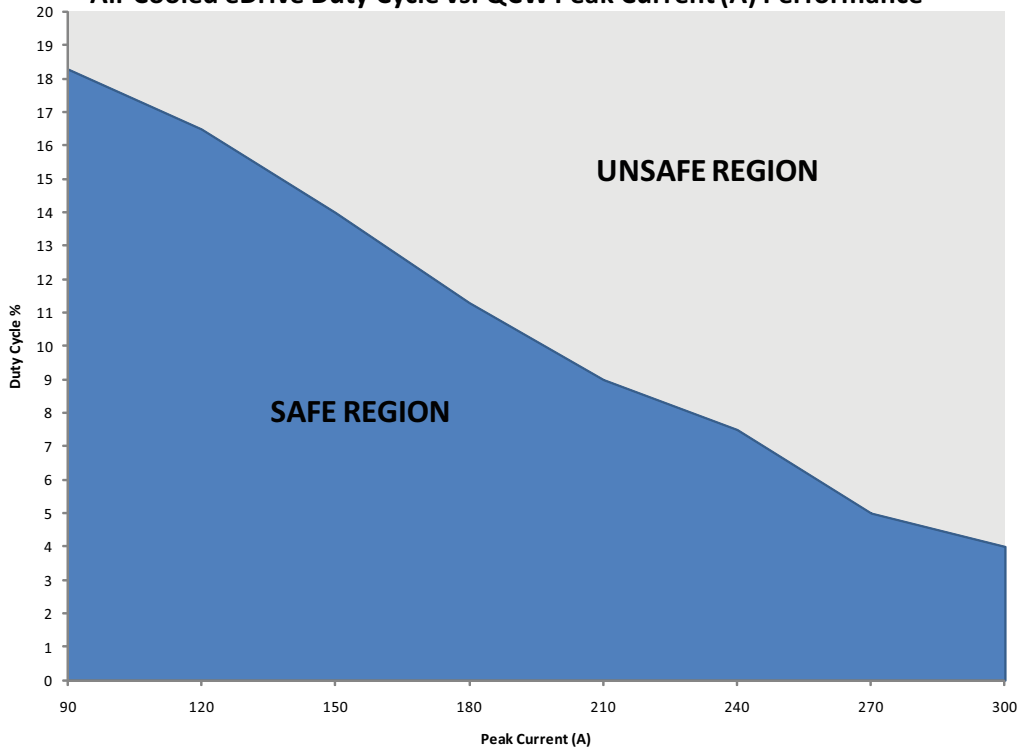
Current Monitor:	CW	QCW	CW	QCW
Type	10 A/V 0-5 V	20 A/V 0-5 V (0-15 V for high current models)	10 A/V 0-7 V	20 A/V 0-5 V (0-15 V for high current models)
Accuracy	± 2%	± 2%	± 2%	± 2%

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

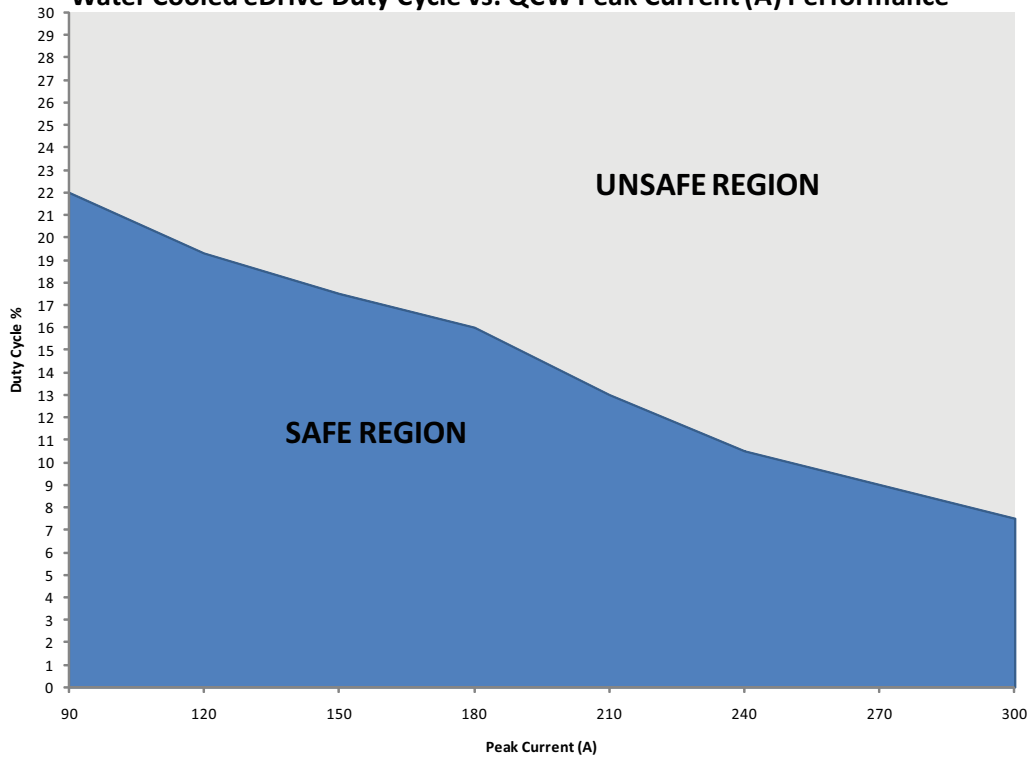
General:	CW	QCW	CW	QCW
Operating Temperature	0 - 40°C, non condensing	0 - 40°C, non condensing	0 - 40°C, non condensing	0 - 40°C, non condensing
Power Input	100 - 240 VAC, 50/60 Hz, 4A max	100 - 240 VAC, 50/60 Hz, 4A max	100 - 240 VAC, 50/60 Hz, 4A max	100 - 240 VAC, 50/60 Hz, 4A max

> DUTY CYCLE RATINGS

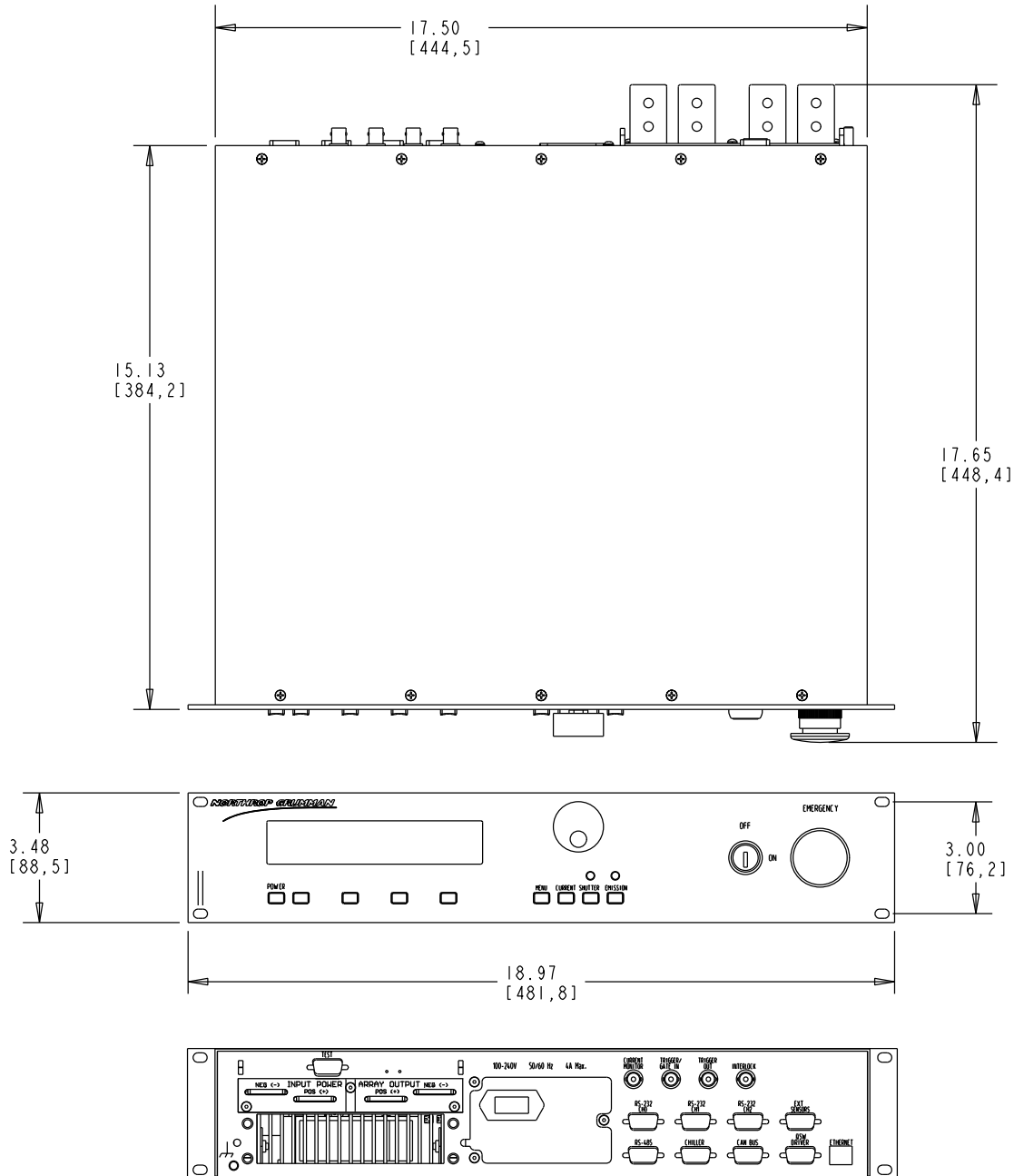
**Air Cooled eDrive Duty Cycle vs. QCW Peak Current (A) Performance**



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



> MECHANICAL DRAWINGS



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