CEO CUTTING EDGE OPTRONICS
A Northrop Grumman Company

# eDrive™ Nitro

ED4U SERIES DRIVER
LASER SYSTEM & LASER DIODE DRIVER

## FEATURES AND BENEFITS


- Operates in either CW or QCW modes
- 0-375V 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 reliablilty. 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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## SPECIFICATIONS

| | Air Cooled | | Water Cooled | |
|---|---|---|---|---|
| **Amplitude:** | CW | QCW | CW | QCW |
| Output Current | 0 - 50 A | 0 - 300 A (1) | 0 - 70 A | 0 - 300 A (1) |
| Display Resolution | 100 mA | | | |
| Accuracy | ± 2% | | | |
| Noise | 100 mA p-p (2) | | | |

(1) See chart on page 3 for duty cycle ratings. (2) Output current < 50 Amps

| **Pulse Rate:** | CW | QCW | CW | QCW |
|---|---|---|---|---|
| Range | 0 - 100 kHz (3) | | | |
| Display Resolution (1 Hz) | 0 - 100 Hz | | | |
| (10 Hz) | 100 Hz - 1 kHz | | | |
| (100 Hz) | 1 kHz - 50 kHz | | | |
| Accuracy | ± 2% | | | |

(3) CW Maximum pulse rate depends on the Q-switch window width. QCW Maximum pulse rate depends on current pulse width. Practical values are typically less than 10Khz.

| **Pulse Width:** | CW | QCW | CW | QCW |
|---|---|---|---|---|
| Range | 40 ns - 250 µs | 10 µs - 500 ms (4) | 40 ns - 250 µs | 10 µs - 500 ms (4) |
| Display Resolution | 10 ns (5) | 100 ns | 10 ns (5) | 100 ns |
| Transition Time | — | < 40 µs (6) | — | < 40 µs (6) |

(4) Depends on output current and internal capacitance, contact factory. (5) Rounded internally to nearest 40ns. (6) Contact CEO for faster transition times.

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

| **Trigger Out:** | CW | QCW | CW | QCW |
|---|---|---|---|---|
| Characteristics | TTL or 5V CMOS<br>50 Ω driver | | | |

| **Compliance Voltage:** | CW | QCW | CW | QCW |
|---|---|---|---|---|
| Range | 0 - 375 V | | | |
| Display Resolution | 0.1 V | | | |
| Accuracy | ± 2% | | | |

| **Current Monitor:** | CW | QCW | CW | QCW |
|---|---|---|---|---|
| Type | 30 A/V, 100A models; 60 A/V, 300A models | | | |
| Accuracy | ± 2% | | | |

| **Interlocks:** | CW | QCW | CW | QCW |
|---|---|---|---|---|
| Open Circuit Voltage | 5 VDC nominal | | | |
| Short Circuit Current | 90 mA nominal | | | |
| Type | Switch contact closure | | | |

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

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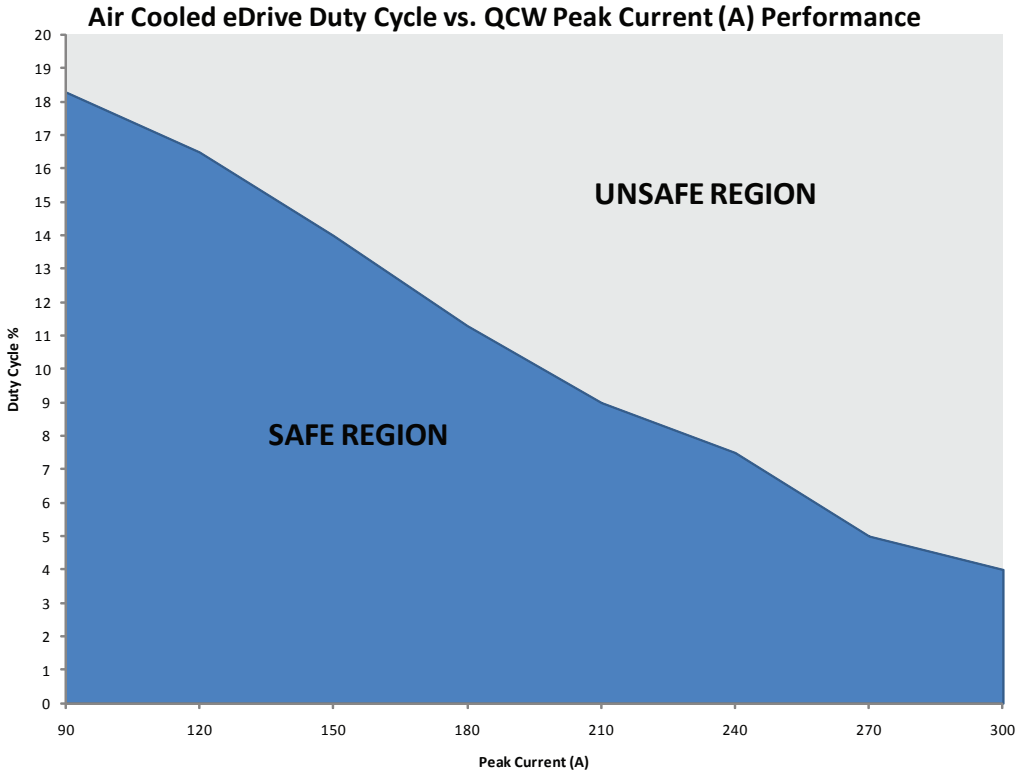
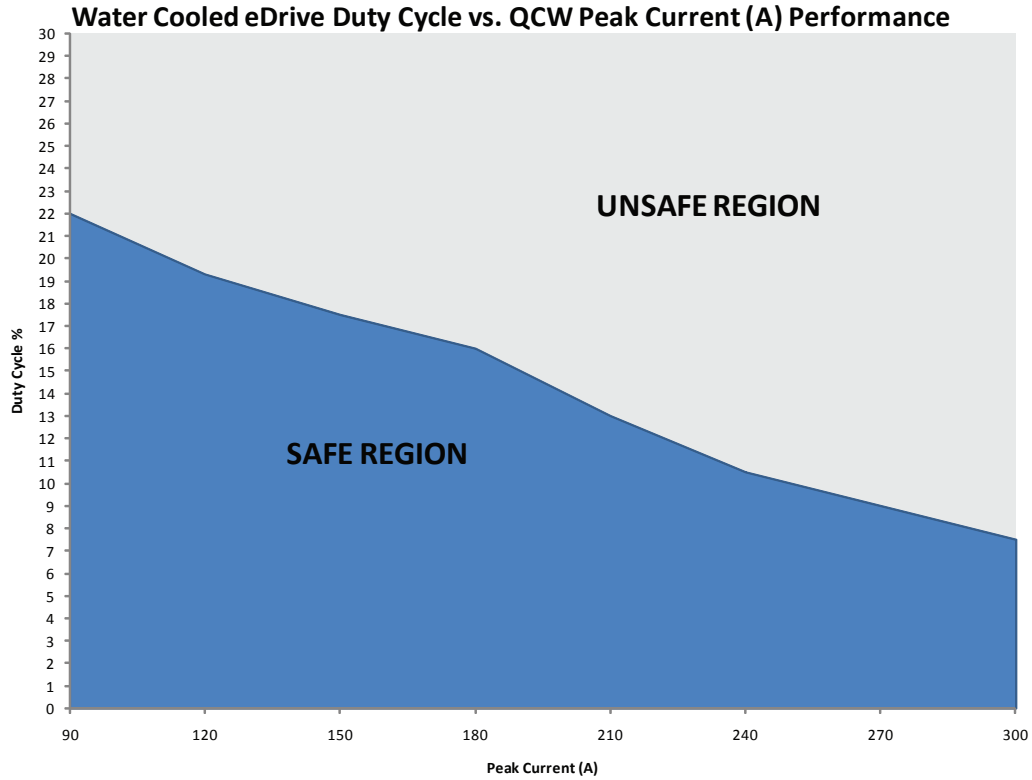
## DUTY CYCLE RATINGS



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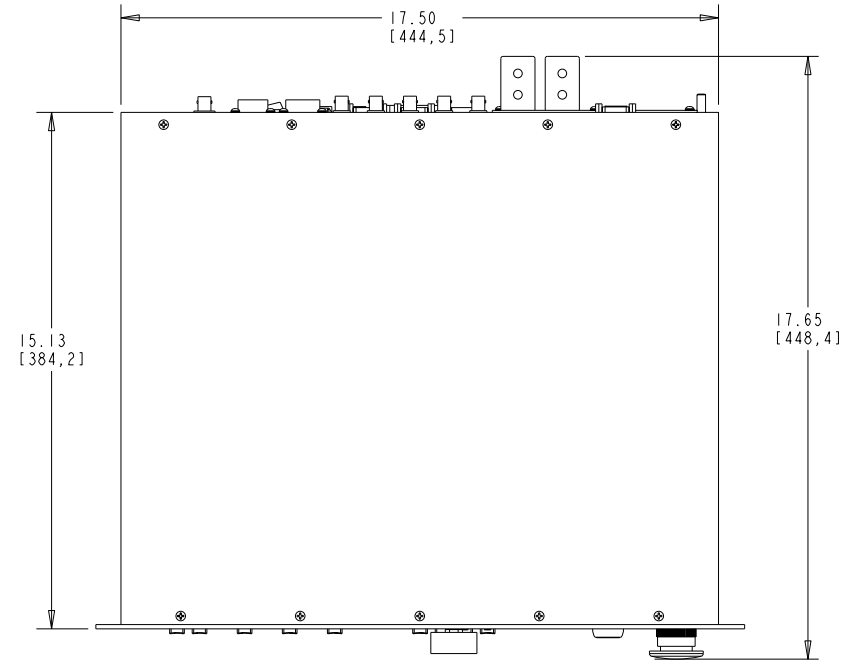
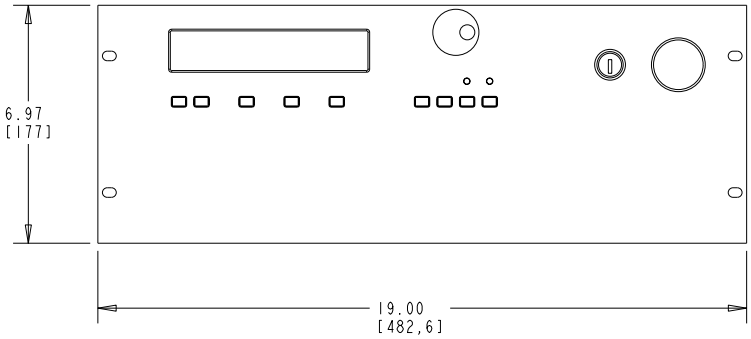
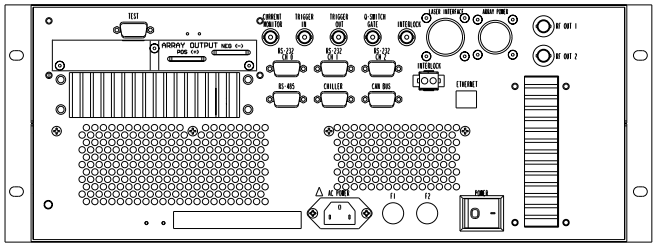
## MECHANICAL DRAWINGS



REAR VIEW



ISO 9001 Registered
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