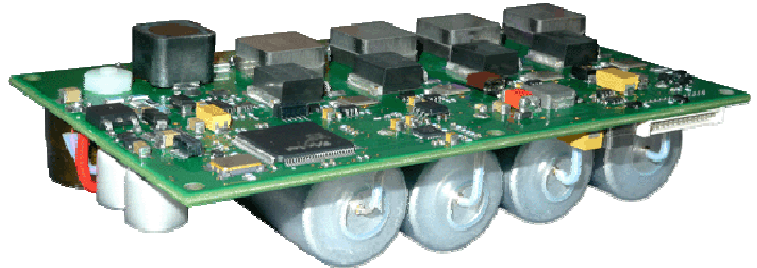




HIGH POWER PULSED LASER DIODE DRIVER

- OUTPUT UP TO 200 A, 40 V PULSED
- $\leq 45 \mu\text{S}$ RISETIME
- 50 TO 400 μS PULSES, 27 W MAX.
- UP TO 1.33 J PER PULSE
- $\geq 70\%$ EFFICIENCY
- COMPACT 4.6" X 2.75" X 1.4"



DESCRIPTION:

The Model **774A** is a highly efficient, low voltage DC input power converter/laser diode driver designed to supply pulsed high current for laser diode-stack loads. Pulsed output current is 200 A with $\leq 45 \mu\text{s}$ risetime into diode stacks of 24 V to 40 V at an average power to the load of 27 W at 20 Hz. The driver weighs 7.0 oz. in a compact package. The unit does not require a heatsink and offers open circuit, short circuit, and thermal overload protection. Please contact AMI to discuss your OEM requirements. Other input voltage and output current/voltage ranges available.

SPECIFICATIONS:

Input

Voltage +19.6 to +32 VDC

Output

Voltage 24 to 40 V diode stack
Current 200 A pulsed
Polarity Floating output; neither anode nor cathode can be grounded
Off-State Current $\leq 100 \text{ mA}$
Risetime $\leq 45 \mu\text{s}$
Avg. Power (load) 27 W (at 20 Hz)
Pulsewidth 50 to 400 μs

Regulation

Load $\approx 5 \text{ A}$ (24 to 40 V) (typical)
Line $\leq 2 \text{ A}$ (19.6 to 32 in)
Efficiency 75% typical
Ripple Current $\pm 7 \text{ A}$ at 200 A

Cooling:

Natural convection (no heatsink required)

Protection

Thermal shutdown
Open circuit
Short circuit

Connections

Driver I/O: 14 pin Molex Conn. 53048-1410
Mate – Molex 51021 series

Diode Load PCB pads, 0.25" x 0.20"

External Controls

Enable High (3.3 V) input charges storage capacitor
HV Ready Open Drain, Active High output (w/pull-up, 15 V max.) when within 4% of full charge.
Trigger High (3.3 V) input causes current pulse to be delivered to the diode load.
Current Monitor Output, 17 mV/A scaled representation of output current pulse

Size & Weight 4.6" x 2.75" x 1.4"; 7.0 oz

Temperature -30°C to +50°C operating
-45°C to +60°C storage



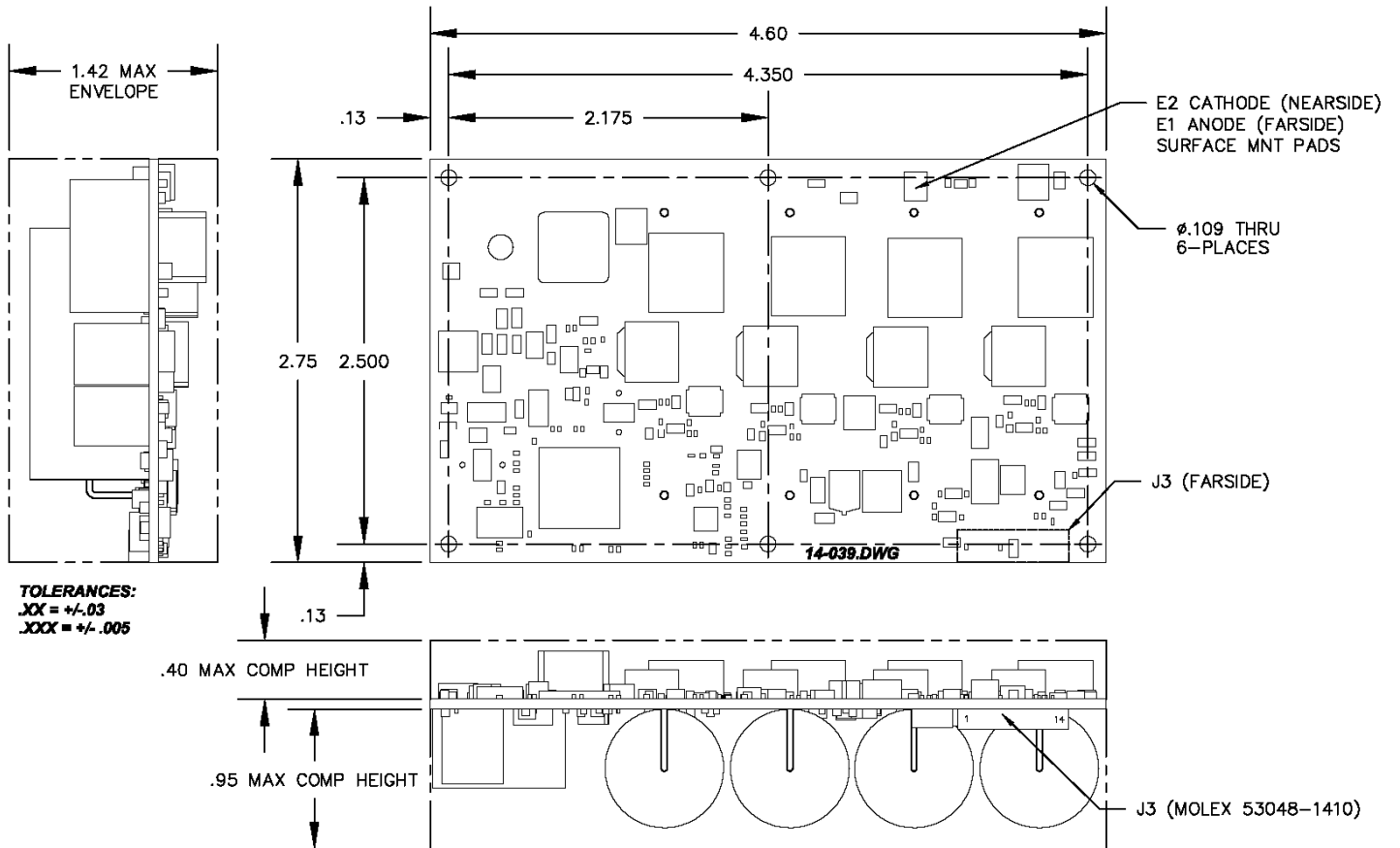
Specifications subject to change without notice.

U.S. Patent No. 7,348,948

APPLICATIONS:

Target designation, rangefinding, remote sensing, research, defense and security applications.

	MODEL NUMBER
	OUTPUT CURRENT
INPUT VOLTAGE	200 Amps peak pulsed
+19.6 to +32 VDC	774A



774A Outline Drawing