



## HIGH POWER PULSED LASER DIODE DRIVER

- OUTPUT UP TO 200A, 40V PULSED
- $\leq 45\mu\text{s}$  RISETIME
- 50 TO 400 $\mu\text{s}$  PULSES, 27W MAX.
- UP TO 1.33J 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 200A with  $\leq 45\mu\text{s}$  risetime into diode stacks of 24V to 40V at an average power to the load of 27W at 20Hz. 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 +32VDC

#### Output

Voltage 24 to 40V diode stack  
Current 200A 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) 27W (at 20Hz)  
Pulsewidth 50 to 400 $\mu\text{s}$

#### Regulation

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

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

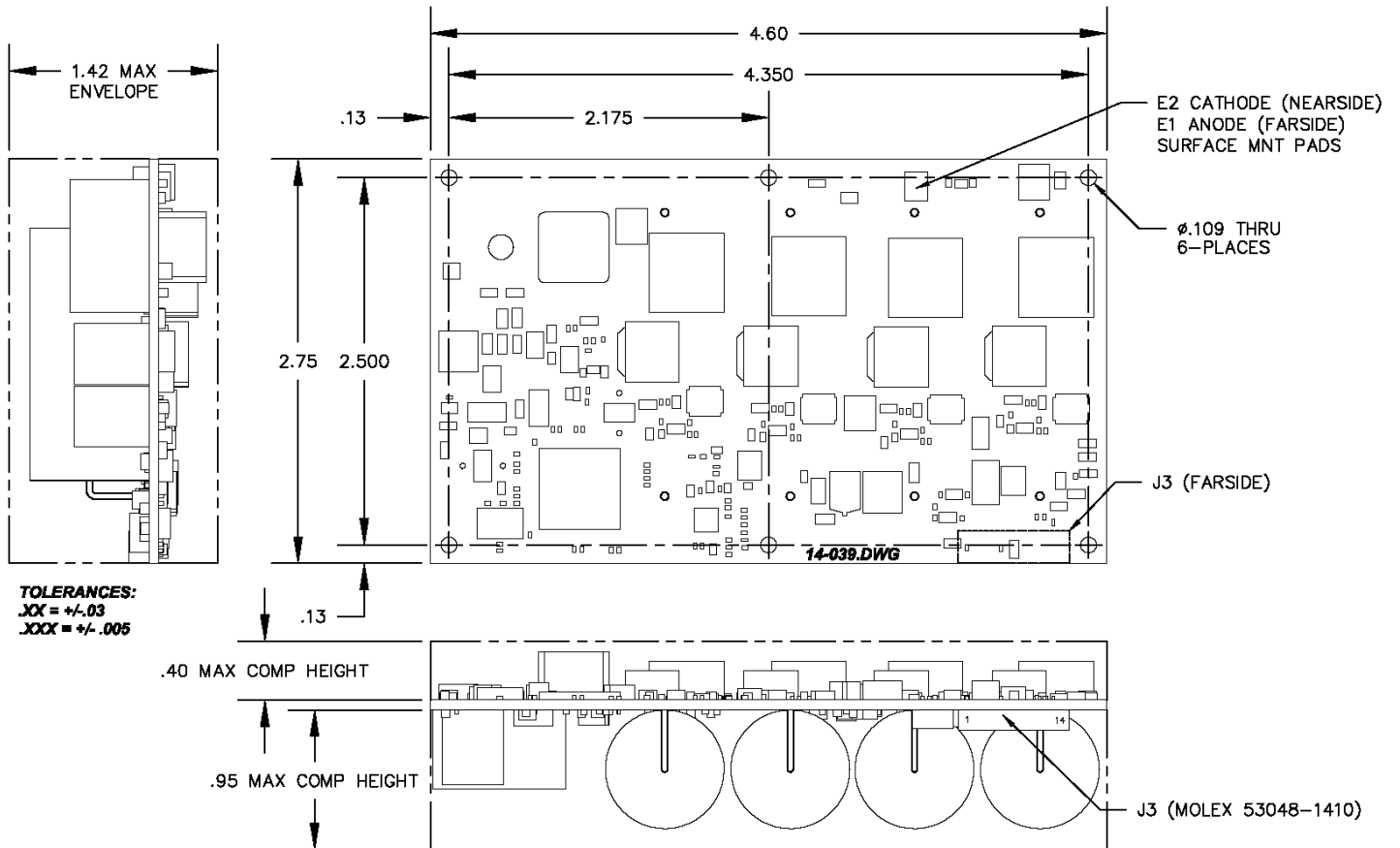


### APPLICATIONS:

#### *Pulsed High Current Laser Diode Current Source*

"In the event this commodity will be transferred to a "foreign person" as defined in 22 CFR 120.16, either outside or within the United States, a validated US State Department license is required."

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



774A Outline Drawing