



HIGH CURRENT PULSED LASER DIODE DRIVER

- OUTPUT UP TO 100A, 24V PULSED
- $\leq 25\mu\text{S}$ RISE TIME
- 100 μS - 3.0MS PULSES, 1W MAX.
- +5 TO +12VDC INPUT POWER
- COMPACT < 2.1" X 2.5" X 1.25"



DESCRIPTION:

The Model **773** is a highly compact, low voltage DC input power converter/laser diode driver designed to supply pulsed high current for laser diode-stack loads. Pulsed output current is 100A with $\leq 25\mu\text{s}$ risetime into diode-stacks of 3V to 24V at an average power to the load of 1.0W. The driver weighs 2.1 oz. in a compact package and is ideally suited for rangefinding applications. The unit does not require a heatsink and offers open circuit and short circuit protection. Please contact AMI to discuss your OEM requirements.

SPECIFICATIONS:

Input

Voltage	+5 to +12VDC
Current	< 575mA (avg) @ 5V input, 1W output
Inrush	< 2A
Idle	< 100mA @ 5V input, enabled but not pulsing
Non-Charging	< 30 μA (Enable in Low state)

Output

Voltage	18 to 24V (preliminary)(add -1 to part number) 2 to 5V (add -2 to part number)
Current	100A pulsed
Pulse Energy	1.0J max.
Polarity	Floating output; neither anode nor cathode can be grounded
Off-State Current	$\leq 100\mu\text{A}$ @ 55°C
Risetime	$\leq 25\mu\text{s}$
Avg. Power (load)	1.0W
Pulsewidth	100 μs – 3.0ms

Regulation

Line	$\leq 2\text{A}$ (5-12VDC in)
Efficiency	> 50% excluding idle current (load dependent)
Ripple Current	$\pm 7\text{A}$ at 100A

Cooling:

Natural convection (no heatsink required)

Protection

Open circuit
Short circuit

Connections

Driver I/O:	8 pin Molex 53261-0871 Mate – Molex 51021-0800
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External Controls

Enable	High input (3.3V CMOS) charges capacitor
Drive Pulse	High input (3.3V CMOS) starts current to diode load
PS Ready	High output (3.3V CMOS) when DDA capacitor has charged and driver is ready for laser firing
PS Inhibit	High input (3.3V CMOS) inhibits power supply and driver functions

Size & Weight

2.1" x 2.5" x 1.16"; 2.1 oz

Temperature

-32°C to +55°C operating
-45°C to +60°C storage

Specifications subject to change without notice.

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

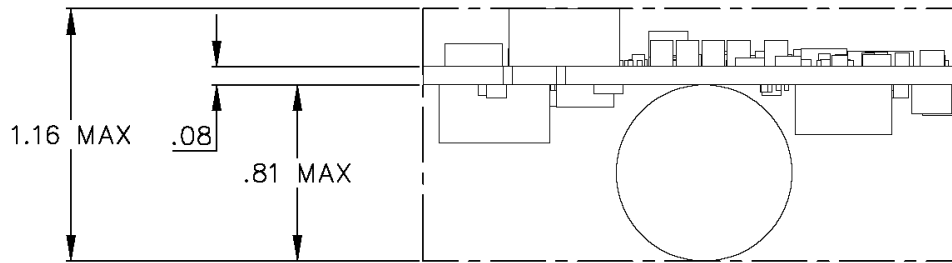


APPLICATIONS:

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
LOAD VOLTAGE	100 Amps peak pulsed
18 to 24VDC	773-1 (preliminary)
2 to 5VDC	773-2



E4 (DIODE CATHODE),
E3 (DIODE ANODE) OPPOSITE SIDE

