HIGH CURRENT PULSED LASER DIODE DRIVER

- OUTPUT UP TO 118A, 24V PULSED
- \( \leq 25\mu s \) RISETIME
- 100\( \mu s \) - 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 118A with \( \leq 25\mu s \) 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: \(< 30\mu A \) (Enable in Low state)

**Output**
- Voltage: 18 to 24V (preliminary)(add -1 to part number)
- Current: 2 to 5V (add -2 to part number)
- 118A pulsed
- Pulse Energy: 1.0J max.
- Polarity: Floating output; neither anode nor cathode can be grounded
- Off-State Current: \( \leq 100\mu A @ 55^\circ C \)
- Risetime: \( \leq 25\mu s \)
- Avg. Power (load): 1.0W
- Pulseeight: 100\( \mu s \) – 3.0ms
- Regulation: \( \leq 2A \) (5-12VDC in)
- Efficiency: \( > 50\% \) excluding idle current (load dependent)
- Ripple Current: \( \pm 7A \) at 118A

**Protection**
- Open circuit
- Short circuit

**Connections**
- Driver I/O: 8 pin Molex 53261-0871
- Mate – Molex 51021-0800

**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 1.25", 2.1 oz

**Temperature**
- -32\(^\circ\)C to +55\(^\circ\)C operating
- -45\(^\circ\)C to +60\(^\circ\)C storage

Specifications subject to change without notice.

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.”
<table>
<thead>
<tr>
<th>LOAD VOLTAGE</th>
<th>OUTPUT CURRENT</th>
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<tbody>
<tr>
<td>18 to 24VDC</td>
<td>118 Amps peak pulsed</td>
</tr>
<tr>
<td>2 to 5VDC</td>
<td>773-1 (preliminary)</td>
</tr>
</tbody>
</table>

- **E4 (Diode Cathode)**
- **E3 (Diode Anode) Opposite Side**

Dimensions:
- 1.24 MAX
- .08
- .88 MAX
- 2.47
- 2.200
- 4 x ø.109 THRU