MODEL 779A
CW/PULSED HIGH CURRENT LASER DIODE DRIVER

HIGH POWER CW OR PULSED LASER DIODE DRIVER

- OUTPUT CURRENT 30 AMPS CW OR 120 AMPS PULSED
- IDEAL FOR HIGH POWER LASER DIODES
- COMPLIANCE VOLTAGE UP TO 140VDC
- WIDE PULSEWIDTH TO 1.0mS
- BUILT-IN PULSE GENERATOR
- TRANSMISSION LINE CONSTRUCTION

DESCRIPTION:

The 779A Series laser diode drivers are designed to power high current laser diodes for applications such as laser pumping and illumination. A pulse generator with adjustable amplitude, width, PRF and current limiting is included. A CW enable and opto-isolated pulse input also provide for remote control. The 779A Series provides negative current for grounded anode emitters using a closed-loop current source.

SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
<th>Internal Controls</th>
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</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>Current</td>
<td>Current</td>
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<tr>
<td>+11V to +16VDC at 30mA typical</td>
<td>1 to 30 Amps CW</td>
<td>1 to 120 Amps min., trimpot</td>
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<tr>
<td>-5V to -150VDC for laser drive</td>
<td>1 to 120 Amps peak pulsed</td>
<td>10 to 120 Amps min., trimpot</td>
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<td></td>
<td>Risetime 4 ± 1µs at 120 Amps peak</td>
<td>Pulsewidth 100µs to 1.0ms min., trimpot.</td>
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<td>Pulse Flatness ±1% at 120 Amps peak</td>
<td>PRF 10Hz to 100Hz min., trimpot (add –A to part number) or 100Hz to 1kHz min., trimpot (add –B to part number)</td>
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<td>Compliance V 1V to 140VDC, depending on laser drive input supply voltage</td>
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<td></td>
<td>Monitor 50mV/A, 6VDC max into ≥10kΩ impedance</td>
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<tr>
<td></td>
<td>Protection Fast reverse polarity diode</td>
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<td></td>
<td></td>
<td>Current limit</td>
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<td></td>
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<td>External pulsewidth limit</td>
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<td>Thermal shutdown</td>
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</tbody>
</table>

| External Controls | 20A/V control input, current limit will limit maximum output current |
| Enable/PW/PRF | Opto-Isolated input at 10mA. Enable for CW mode and PW/PRF control for pulse mode. (Internal PW adjust will limit maximum PW in external pulse mode.) |
| Temperature | 0° to 50°C (derated) |
| Connections | Current Control BNC |
| | Pulse Enable BNC |
| | Output Low inductance connector with 1m flat conductor output cable |
| | Current Monitor BNC |
| | Power Terminal block |
| Size | 8.00” x 4.50” x 3.75” |

Specifications subject to change without notice.

APPLICATIONS:

CW and Pulsed High Current Laser Diode Current Source
Typical Part Number: **779A-1-B**

- **Output Current:** 1 to 30 Amps CW or 1 to 120 Amps peak pulsed
- **Compliance Voltage:** 1 to 140VDC
- **Current Control:** Trimpot or external control voltage
- **Input Connector:** BNC for CW enable or external PW/PRF control
- **Current Monitor Output:** 50mV/A, 6VDC max.
- **Input Voltage:** +11 to +16VDC at 30mA and -5 to -150VDC for laser drive
- **PRF Range:** 100Hz to 1kHz min., via trimpot