Compact PCB QCW Laser Diode Power Module

- OUTPUT CURRENT UP TO 5.0 AMPS QCW
- IDEAL FOR HIGH POWER LASER DIODES
- COMPLIANCE VOLTAGE FROM 1.6 TO 2.0VDC
- COMPACT PCB DESIGN
- Adjustable PULSEWIDTH FROM 2ms TO 8ms
- 3VDC INPUT POWER

DESCRIPTION:

The Model 781 is a single channel, non-isolated compact QCW laser diode driver. The high efficiency design will drive diodes up to 2V with 3V input. Current amplitude is trimpot adjustable and the output pulselength can be set equal to the input pulselength, fixed at 8ms, and can be truncated by an external detector signal input or by a detector in the laser package, if present (jumper selectable). Threshold adjusts via PCB mount pot (R28) and a test point is provided to set the threshold. Jumper (J8) selects source to truncate pulse: (1) external signal via coax or (2) photodiode inside laser package.

SPECIFICATIONS:

Input:
- Power: 3VDC
- Trigger: Opto-coupled; +5V at 10mA nominal; Min 10µs pulsewidth.
- Photodiode: Pulsewidth can be truncated by input signal from customer-supplied detector output.

Output:
- Voltage: 1.6 to 2.0V diode load
- Current: 5A QCW maximum, trimpot adjustable
- Pulselength: 2ms to 8ms adjustable via input pulselength to within ±5% fixed at 8ms (jumper selectable); or truncated by external photodiode input.

Monitor
- Scale: 1V = 5A; Accuracy: ± 5% from 3A to 5A. Receive differentially. Chassis ground (connected to laser anode) is separate from system ground (connected to Battery-). All internal voltages are referenced to the minus side of battery. Pin 8 of J9 is connected to Battery- to facilitate interface.
- Polarity: Non-isolated (Input/Output Grounds are common) Laser Diode has anode = case.
- Risetime: ≤500µs
- Ave. Power: 0.5W
- Duty Factor: 5% maximum
- Protection: Open circuit (laser) protection
- Connections: Thru holes to butterfly laser package
- Cooling: No external heatsinking required
- PCB Size: 1.9” x 1.1” x 0.31”
- Temperature: -40°C to +60°C Operating

Specifications subject to change without notice.

APPLICATIONS:

CW 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

<table>
<thead>
<tr>
<th>INPUT VOLTAGE</th>
<th>OUTPUT CURRENT</th>
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<tbody>
<tr>
<td>3VDC</td>
<td>5.0A Max</td>
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Typical Part Number: 781 =

- Output Current: 0.2 to 5.0A
- Voltage Compliance: 1.6 to 2.0V
- Current Control: Via Trimpot

NOTES:
1. ALL SPECIFICATIONS SUBJECT TO CHANGE