



**NEW SOURCE
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Where performance equals value

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Quasi-CW Diode Laser Drivers 200A Pulsing Capability

Advantages

- *25uSec Turn-On/ Turn-Off
- *200A Pulsing capability
- *Power Factor Correction
- *Auxiliary +/-15V, +5V outputs
- *Wide Compliance Voltage Range
- *Ideal for OEM applications

The LDQCW series is a new family of OEM diode laser pulsars designed for the emerging high power diode laser industry. The LDQCW has the capability of driving a wide range of compliance voltages and incorporates proprietary internal power protection circuit.

Maximum efficiency is realized with circuitry that minimizes losses across the output pulsing circuit. Compact size is possible due to the low-loss Zero Voltage Switching inverter and incorporation of planar magnetics.

Leakage current is less than 250uA, power factor is greater than 0.99 and conducted emissions meet stringent European regulations. No additional line filter is required to meet EN 55011 emission requirements.



Available power outputs are:

- LDQCW-250: 250W_{avg}
- LDQCW-600: 600W_{avg}
- LDQCW-1000: 1000W_{avg}

Pulsed output current up to 200A

LDQCW Quasi-CW Diode Laser Drivers

Model	P _{outAvg} (see note 1)	I _{outmax} (see note 2)	Input Voltage	Size (L x W x H)
LDQCW-250-XX-YY	250W	200A _{max}	90-264VAC	11" D x 7.25" W x 4.75" H 28cm x 18.4cm x 12cm
LDQCW-600-XX-YY	600W	200A _{max}	90-264VAC	
LDQCW-1000-XX-YY	1000W	200A _{max}	180-264VAC	
XX = Maximum pulsed output current YY = Maximum required compliance voltage				
Note 1: Average Power must not exceed LDQCW ratings				
Note 2: Output Current and voltage compliance can be configured for individual requirements				
Auxiliary Outputs: +5V @0.5A, +/-15V @0.5A				
Other configurations available upon request				

Input

Voltage: See table above
Power Factor: >.98

Output

P_{outAvg}: See table above
I_{pulsemax}: 200A_{peak}
I_{avgmax}: 80A
V_{outmax}: 40V

Interface

Interface Connector: 15 Pin "D" Sub Female
Pulse Enable: +5V TTL to +15V CMOS
Current Program: 0-10V for 0-I_{outmax}
Current Monitor: 0-10V for 0-I_{outmax}
Voltage Monitor: 0-10V for 0-V_{outmax}

Performance

Pulse Width Range: 50usec to 3msec
Max Rep Rate: 10kHz
Rise/Fall Time: 25uSec
Current Regulation: 1.0% of Maximum output current
Current Ripple: <0.5% of maximum output current
Current Overshoot: <5% of maximum output current
Power Limit: Limited to maximum average power with power fold-back circuit

Environment

Operating Temp: 0 to 40 °C
Storage: -20 to 85 °C
Humidity: 0 to 90% non-condensing
Cooling: Forced air

Mechanical

Dimensions: See table above
Input Power Connector: Phoenix DMKDS 2,5 Terminal Block
Output Connector: Ampower Wavecrimp Connector #765608-1 (Strip Line system)

Regulatory

Leakage Current: <250uA

LDQCW Interface
Connector Type: 15 pin D-sub Female

Pin	Description
1	Pulsing Input: This signal is a TTL input for pulsing the system. System delivers pulses of current with output current levels as programmed on Pin 6
3	GND
4	Pulse Length Fault: When the pulse length has exceeded the energy capability of the system, system is shut off and this fault is transmitted. Fault output is TTL low.
5	Iout Monitor: 0 - 10V = 0 - Iout _{max}
6	Iprogram(+): 0 - 10V = 0 - Iout _{max}
7	Power Capability Exceeded Fault: When the average power capability of system is exceeded, system is shut off and this fault is transmitted. Fault output is TTL low.
8	GND
9	GND
10	High Buss Fault: When the internal buss voltage across the series pass network exceeds a safe level, system is shut off and this fault is transmitted. This fault is usually indicative of a short circuit in the load. Fault output is a TTL low.
11	+15V @0.5A
12	Ready-Monitor Signal: When the system completes an internal calibration after start-up, this signal is transmitted. When system is ready, signal is a TTL low.
13	Reset: User input signal to clear faults. A TTL high signal is required to reset system.
14	Enable: This signal permits system operation. A TTL high is required to ENABLE. A TTL low signal shorts the gate drive of the series pass network for protection of the diode laser.
15	-15V @0.5A