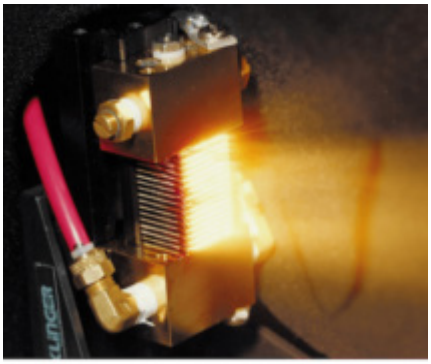
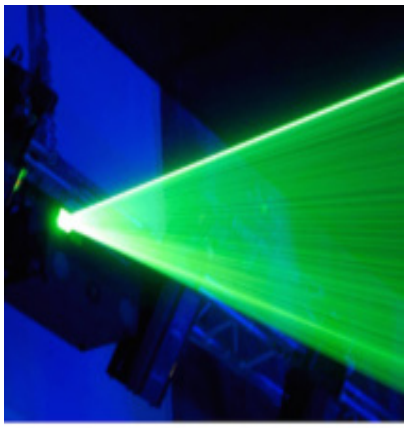
Lumina Power, INC.



Diode Pump Lasers

Medical Lasers

High Power Laser Diode Drivers



Digital Projection

Laser Welding

Your contact:

Schulz Electronic
Professional Power Supplies

Schulz-Electronic GmbH
Dr.-Rudolf-Eberle-Straße 2
D-76534 Baden-Baden
Fon + 49.7223.9636.0
Fax + 49.7223.9636.90
vertrieb@schulz-electronic.de
www.schulz-electronic.de

Lumina Power, INC.

Why Lumina Power?

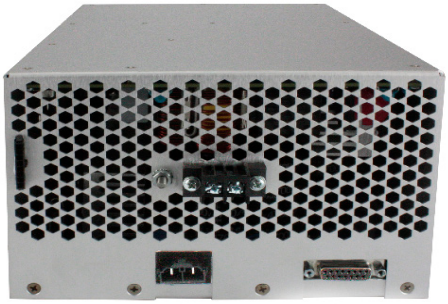
Lumina is the largest supplier of OEM laser power supplies
Our excellent pricing and fast delivery services earn us lifelong customers
We offer the most complete line of high power Laser Diode Drivers
Capacitor Charging power supplies with all popular options
Xenon & Mercury Arc Lamp power supplies and "short pulse" ignitors
Innovative custom products from prototype to volume manufacturing
Reliable sales & technical support worldwide.

With experience in high voltage (>300kV) and high power (>150kW), our R&D department can adapt configurations from our library of power supply topologies to meet any requirement imaginable.

Lumina Power, Inc. manufactures a complete line of Capacitor Charging Power Supplies, Capacitor Chargers, laser diode drivers, laser power supplies and Xenon arc lamp power supplies. With over twenty-five years of cumulative power supply design and manufacturing expertise, Lumina Power is able to offer standard and custom laser power designs that solve challenging OEM applications and meet stringent agency safety and emission requirements. Lumina Power's products include high power laser diode drivers, capacitor charging power supplies and Xenon & Mercury arc lamp power supplies.

Lumina Power, INC.

LDP



The LDP pulsed laser diode drivers are the second generation of precision pulsed diode drivers offered by Lumina Power. Building on more than a decade of experience in laser diode driver technology the new LDP drivers are capable of outputting up to 400 amps. Pulse widths of 50µs through CW operation are now possible at rep-rates to 5kHz (higher Rep-rates Optional).

The LDP incorporates new technology that enhances pulsed performance while reducing circuit complexity, shrinking the size of the package and increases reliability.

Features

- 1000/2000 Watts Average Output
- Output Currents to 400A
- Output Power to 80kW Peak
- Compliance Voltages to 200V
- Pulse Widths From 50µs to CW
- 10µs Rise/Fall Time
- Repetition Rates to 5kHz.
- Universal Input Voltage
- Auxiliary ±15 Volt Output

LDN

Features

- 600 to 2000 Watts Output
- Output Currents to 100amps
- Compliance Voltages to 200V
- Performance Level E Safety
- Power Factor Correction
- Universal Input Voltage
- Auxiliary +15/-15, +5V
- Low Conducted Emissions
- RoHS Compliant

The New LDN series laser diode drivers are the second generation of precision CW/Pulsed diode drivers offered by Lumina Power. Building on more than a decade of experience in laser diode driver technology the new LDN family incorporates the features of the LDD and LDY models.

New upgrades include increased energy storage for better pulsed performance, newly designed magnetics for cooler operation, lower inrush current at start-up and availability of an optional Performance Level “E” laser safety feature.

Offered in 4 power levels from 600 to 2000 watts the LDN family of laser diode drivers offer laser designers the most advanced and proven power supply technology available.

Lumina Power, INC.

LDDHC

The LDDHC series is a new family of OEM laser diode drivers designed for the emerging high power laser diode industry. With output currents to 200amps the LDDHC series is available in 3 power levels and a wide range of compliance voltages.

Compact size is possible due to the low-loss Zero Voltage Switching inverter and incorporation of planar magnetics. The LDDHC is virtually wire free. Power factor is greater than 0.99 and conducted emissions meet stringent European regulations. No additional line filter is required to meet emission requirements.

The LDDHC family has been designed with the knowledge that a high power laser diode is an expensive device. Rise and fall times are strictly controlled to reduce high voltage transients which could damage the laser diode.

Advantages

- Output Currents to 200A
- Ideal for OEM applications
- Safe turn-on/turn-off
- Compact design
- Power factor correction
- Low conducted emissions
- Auxiliary +15V/-15V/+5V
- Low leakage
- RoHS Compliant

LDPC

The LDPC series laser diode drivers offer the laser designer a compact low cost power supply for a variety of medical and industrial applications. In order to take full advantage of this unique product, care must be taken during the design process to ensure long term reliabilty.

This data sheet includes answers to many commonly asked questions about the various configurations available and includes critial cooling and electrical information.

Features

- DC input board level diode driver
- For CW & pulsed applications
- Compact design, low cost
- 50 Amp max. output

Lumina Power, INC.

LDQPC

The LDQPC quasi-pulsed laser diode drivers are specifically designed for low cost high volume applications. These DC input modules are available with average output power to 75 watts and current output to 200 amps. With a rise/fall time of typically 10us. they are ideally suited for compact short pulse laser applications. All configurations require 12 or 24VDC input and feature a simple analog interface.

Output current and voltage can be specified to meet your requirements. Built around the same topology that has made Lumina Power laser diode drivers the standard of the industry, these board level products offer the reliability and diode protection of the LDP series in a compact easy to integrate package.

FEATURES

- 75 Watts Average Power
- 10us. Rise/Fall Time (typical)
- 200 Amps Peak Output
- RoHS Compliant
- Analog Interface

ADVANTAGES

- Pulsed current to 1000 amps
- 6kW average output power
- Compliance Voltage: 10 to 150V
- ≤15µs. Rise/Fall time
- Advanced diode protection
- CW simmer mode available
- >90% Efficiency
- Continuously modulate current, pulse width and frequency

HPP

The HPP-6000 laser diode pulser is a new concept in pulsed diode driver development. Designed to be used with the LDD series drivers as the power source, the HPP pulser can deliver up to 1000 amps of output current with full protection of the laser diode. Pulse widths of ≥50µs to CW can be acheived with rise/fall times of <15µs. and repetition rates to 5kHz. A CW simmer current of up to 12 amps is available.

Control of the HPP pulser via the standard 15 pin analog/TTL interface includes inputs for enable, trigger, output current, simmer voltage and CW/pulsed operation. The output is fully protected against open and short circuits along with overtemp.

THe HPP pulser enhances Lumina Power's complete line of laser diode driver products from 10 watts to 6000 watts.

Lumina Power, INC.

LDQCW

The LDQCW series is a new family of OEM diode laser pulsars designed for the emerging high power diode laser industry. Lumina Power LDQCW diode drivers can be configured for compliance voltage requirements up to 100V.

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.

ADVANTAGES

- <25uSec rise/fall times
- 200A pulsing capability
- Power factor correction
- Auxiliary +/-15V outputs
- Compliance voltage capability up to 100V
- Ideal for OEM applications
- ROHS Compliant

ADVANTAGES

- 400µs. rise/fall times available
- Safe turn-on/turn-off
- Compact design
- Power factor correction
- Auxiliary +15V/-15V/+5V
- Low conducted emissions, low leakage
- ROHS Compliant

LDY

The LDY series is a new family of OEM laser diode drivers with all the performance of Lumina's flagship LDD line of laser diode drivers, as well as additional functions including pulsing capability, over-temperature sensing and crowbar shorting of the output.

The LDY series is ideal for high power applications where economy is important and performance cannot be compromised. Compact size is possible due to the low-loss Zero Voltage Switching inverter and incorporation of planar magnetics.
The LDY is virtually wire free.

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.

The LDY family has been designed with the knowledge that a high power laser diode is an expensive device. Rise and fall times are strictly controlled to reduce high voltage transients which could damage the laser diode.

Lumina Power, INC.

LDD

The LDD series are the industrial standard for OEM laser diode drivers and are ideal for high power applications where economy is important and performance cannot be compromised. Compact size is possible due to the lowloss Zero Voltage Switching inverter and incorporation of planar magnetics. The LDD is virtually wire free.

Power factor is greater than 0.99 (1Ø models) and conducted emissions meet stringent European regulations.
No additional line filters required to meet EN 55011 emission requirements.

The LDD series is designed with multiple safe guards to protect your expensive laser diodes. Rise and fall times are strictly controlled to reduce high voltage transients which could damage the laser diode.

ADVANTAGES

- Ideal for OEM applications
- Safe turn-on/turn-off
- Compact design
- Power factor correction (1Ø models)
- Auxiliary +15V/-15V/+5V
- Low conducted emissions, low leakage
- ROHS Compliant

LC

Lumina Power announces the new LC series controller that easily connects your computer to any Lumina Power power supply. This new interface device converts the standard input and output signals from the power supply to an Ethernet connection allowing for GUI control over the various functions of the supply. Users can now control output voltage and current along with enable, interlock and pulsing. Depending upon power supply model, monitor functions include output voltage, current, pulse width, repetition rate, faults and end of charge. Easy to use App included.

Feature:

- Easily control any Lumina power supply
- Ethernet connection to computer or network
- Graphical interface for setup and control
- Control and monitor all of the functions of the

power supply

LDP Pulsed/CW Laser Diode Drivers

Models

Model	Poutmax	Ioutmax	Pulse Range	Input Voltage
LDP-1000-XX-YY	1000W CW 1000 W Pulsed	400A Pk 100A CW	50µs. to CW	100 to 240VAC
LDP-2000-XX-YY	2000W CW 1000 W Pulsed			200 to 240VAC

Specifications

OUTPUT

Power:	See Chart: 200V max. (higher voltages available)
Current:	400A (Pulsed)

INPUT

Voltage:	
LDP-1000:	100 to 240VAC ±10%, 50/60 Hz
LDP-2000:	200 to 240VAC ±10%, 50/60 Hz
Power Factor:	> .98

INTERFACE

Connector:	15 Pin “D” Sub Female
Current Program:	0-10V for 0-Max Current
Current Monitor:	0-10V for 0-Max Current
Voltage Monitor:	0-10V for 0-Max Voltage

PERFORMANCE

Rise/fall Time:	10µs for Vout <30V
Current Regulation:	<0.5% of Maximum output current
Current Ripple:	<0.5% of maximum output current
Current Overshoot:	<1% of max. output current
Stable Output Range:	20 to 100% of rated of rated current

ENVIRONMENT

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

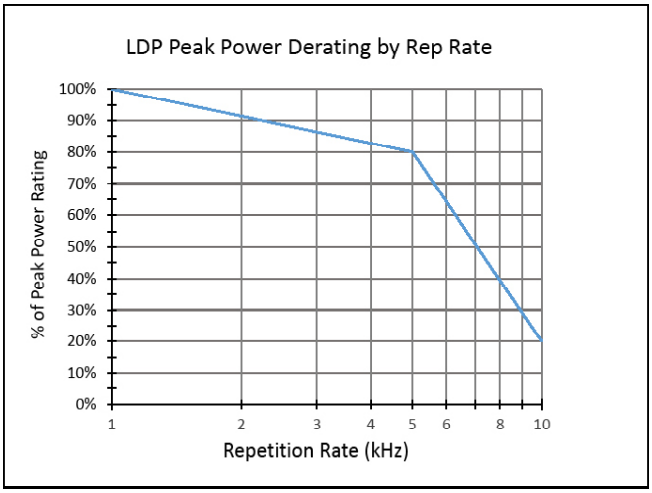
AUXILIARY OUTPUTS

+15V @ 100mA.
-15V @ 100mA

CE/Safety Agency Approvals:

IEC 60601-1-2 4th Edition EMC
IEC 60601-1 3rd Edition Safety
IECEE CB SCHEME

Peak Power Derating Curve



RoHS

Your contact:

Schulz Electronic
Professional Power Supplies
Schulz-Electronic GmbH
Dr.-Rudolf-Eberle-Straße 2
D-76534 Baden-Baden
Fon + 49.7223.9636.0
Fax + 49.7223.9636.90
vertrieb@schulz-electronic.de
www.schulz-electronic.de

Lumina Power, INC.

LDN Series Laser Diode Drivers

Available Models

Model	Poutmax	Ioutmax	Input Voltage	Size (L x W x H)
LDN-600-XX-YY	600 Watts	100 amps	100-240VAC ± 10%	9.9" x 7.3"x 2,6" 25.1 x 18.5 x 6.6 cm
LDN-1000-XX-YY	1000 Watts			
LDN-1500-XX-YY	1500 Watts		200-240VAC ± 10%	
LDN-2000-XX-YY	2000 watts			
Maximum compliance voltage: 200V				

Specifications

NOTE: Lumina Power reserves the right to change the specifications of this product without notice.

INPUT

Voltage:	See table above
Power Factor:	>.98
Inrush current	Equal to Vin/10 ohms

INTERFACE

Connector:	15 Pin "D" Sub Female
Current Program:	0-10V for 0-Max Current
Current Monitor:	0-10V for 0-Max Current
Voltage Monitor:	0-10V for 0-Max Voltage

(Optional RS232 interface available)

PERFORMANCE

Rise Time:	>25msec using Pin 1 Enable
Pulse pin 8	~600usec (10% to 90% Full Current)
Current Regulation:	<0.5% of Maximum output current
Current Ripple:	<0.5% of maximum output current
Current Overshoot:	<1% of maximum output current

Note: Use pulse pin 8 for fast rise times (see page 3)

ENVIRONMENT

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

REGULATORY

UL60601-1 (medical) Emissions/Immunity: FCC 47 CFR Class A Emissions, EN55011:1998 Group 1 Class A Emissions, EN61000-3-2, EN61000-3-3, EN60601-1-2:2001
NOTE: Testing to be done March 2014.

AUXILIARY OUTPUTS

+5V @ 200mA
+15V @ 200mA
-15V @ 200mA

LASER SAFETY (optional)

Performance Level "E"
Compliance to ISO DIN 13849-1-2008 Standard

Lumina Power, INC.

www.luminapower.com
sales@luminapower.com

LDDHC Series Laser Diode Drivers

Specifications:

Input Voltage
LDDHC-600/1000 100 to 240VAC ± 10% 50/60Hz
LDDHC-1500 200 to 240VAC ± 10% 50/60Hz
Power Factor: >.98
Efficiency: >80%

Interface
Connector: 15 Pin “D” Sub Female
Enable: +5V to +15V (High=run)
Current Program: 0-10V for 0-Max Current
Current Monitor: 0-10V for 0-Max Current
Voltage Monitor: 0-10V for 0-Max Voltage

Performance
Rise/Fall Time: <1 ms. Standard (10% to 90% full Current) (<600us. Available)
Line Regulation: <0.5% of maximum output current
Current Regulation: <0.5% of maximum output current
Current Ripple: <0.5% of maximum output current
Curren t Overshoot: <1% of maximum output current
Power Limit: Limited to maximum power with power fold-back circuit

Dimensions
10.2”L x 8.0”W x 2.6”H (25.9 x 20.3 x 6.6 cm); Weight: 8 pounds

Environment
Operating Temp: 0 to 40C
Storage: -25 to 85C
Humidity: 0 to 95% non-condensing
Cooling: Forced air

Regulatory
Safety: ANSI/UL 60950-1, CSA C22.2 No 60950-1, CENELEC EN 60950-1, IEC 60950-1, UL 60601-1, CAN/CSA C22.2No 601.1-M90
Emissions/Immunity:FCC 47CFR Class A, CISPR 11 Group 1 Class A, IEC 61000-3-2, IEC 61000-3-3, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6,IEC 61000-4-11

Lumina Power, INC.

www.luminapower.com
sales@luminapower.com

LDPC Diode Driver Data Sheet

The LDPC series laser diode drivers offer the laser designer a compact low cost power supply for a variety of medical and industrial applications. In order to take full advantage of this unique product, care must be taken during the design process to ensure long term reliabilty. This data sheet includes answers to many commonly asked questions about the various configurations available and includes critial cooling and electrical information.

Specifications

Maximum Output Power:	225 watts: See Chart Page 2
Maximum Output Current:	50 Amps

Performance

Current Ripple:	0.2% at maximum output current
Regulation:	0.5% at maximum output current
Current Overshoot:	< 1% of maximum output current
Power Limit:	Limited to Maximum power with Fold Back Circuit
Rise/Fall Time:	3-20µs. depending upon output voltage

Interface

Inhibit/Enable:	5V to 15V to enable output
Current Program:	0 to 10V = 0 to full current
Current Monitor:	0 to 10V = 0 to full current
Voltage Monitor:	0 to 10V = 0 to full voltage[1]

Protection

Power supply Protection:	Reverse Input voltage, input overvoltage, over temp
Laser Diode Protection:	Control rise/fall times, no overshoot

Dimensions

LDPC:	68.75mm x 150mm x 45mm high
Operating Temp:	0 to 40°C, 90% RH non condensing
Cooling[2]:	See page 3 for fan size and mounting instructions

1. If maximum compliance voltage is less than 10V, Vout Monitor will read output voltage directly. If maximum compliance voltage is greater than 10V, then Vout Monitor will be scaled such that 0-10V = 0-Voutmax.
2. Proper cooling is required for reliable operation. See page 3 for correct fan placement and other cooling recommentations.

LDQPC QUASI-PULSED DIODE DRIVER

Specifications

INPUT
Input Voltage: +12 or 24VDC

OUTPUT
Output Power: 75 watts average
Ipulsemax: 200A peak
Vcompliancemax: Configurable up to 10 V

INTERFACE
Interface Connector: 15 Pin “D” Sub Female
Pulse Enable: +5V TTL to +15V CMOS
Current Program: 0-10V for 0-Ioutmax
Current Monitor: 0-10V for 0-Ioutmax
Voltage Monitor: 0-10V for 0-Voutmax

PERFORMANCE
Pulse Width Range: 20usec to 2msec
Max Rep Rate: 10kHz
Rise/Fall Time: 10 to 50uSec. (typical)
Current Regulation: 1.0% of max. output current
Current Ripple: <0.5% of max. output current
Current Overshoot: <5% of max. 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: to 90% non-condensing
Cooling: Forced air

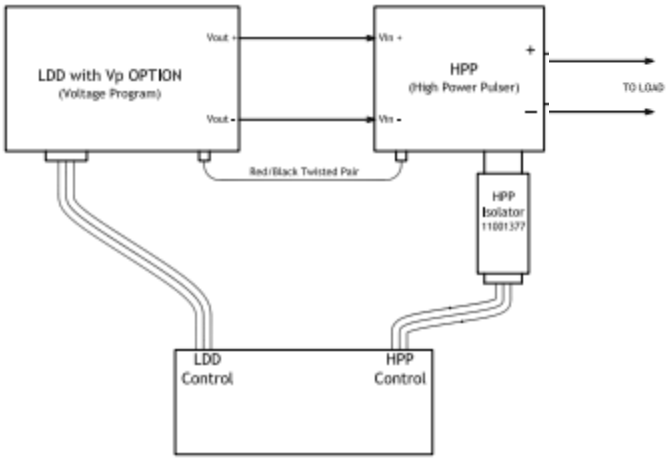
HPP-6000 Laser Diode Pulser

Specifications:

INPUT	
Voltage:	12 to 150VDC (see page 4)
Power Source:	Modified LDD-series laser diode driver (HP or VP Option)
OUTPUT	
Power:	≤6000W Average Power
Pulse widths	~50µs to CW
Output Voltage:	10 to 150 Volts.
Output Current:	1000 amps maximum
Efficiency:	>90% at full output
Regulation:	0.5% @100Hz
Rise Time:	<15µs (Voltage/Current dependant)
INTERFACE	
Connector:	15 Pin “D” Sub Female
Voltage Program:	0-10V for 0-Max Voltage
Voltage/current Monitors:	0-10V for 0-Max Voltage
Pulse Input:	TTL
Temperature Fault	TTL
Option Simmer	12 amps max
ENVIRONMENT	
Operating Temp:	0 to 40°C
Storage:	-20 to 85°C

NOTE: The HPP-6000 pulser is designed to be powered by a modified LDD series CW laser diode driver. Consult factory for exact LDD/HPP combinations for your application.

Due to the potential for ground loops between the LDD and HPP-6000 interfaces an isolator is required. Use Lumina Power supply Isolator part number 11001377. See block diagram on page 5.



Lumina Power, INC.

HPP-750 Laser Diode Pulser

Specifications:

INPUT

Voltage: 12 to 120VDC
Power Source: Modified LDD-series laser diode driver (HP Option)

OUTPUT

Power: 750 Average Power Maximum
Pulse widths ~50µs to CW
Output Voltage: 10 to 120 Volts.
Output Current: 350 amps Maximum
Efficiency: >95% at full output
Regulation: 0.5%

INTERFACE

Connector: 15 Pin “D” Sub Female
Voltage Program: 0-10V for 0-Max Voltage
Voltage/current Monitors: 0-10V for 0-Max Voltage
Pulse Input: TTL
Temperature Fault TTL

ENVIRONMENT

Operating Temp: 0 to 40°C
Storage: -20 to 85°C
Humidity: 0 to 90% non-condensing
Cooling: Forced air
Output Cable: 36” (91cm) Custom low inductance flatstrip cable

NOTE: The HPP-750 pulser is designed to be powered by a modified LDD series CW laser diode driver.
Consult factory for exact LDD/HPP combinations for your application.
Accesories: HPP-750 comes standard with 1 meter low inductance cable. Custom cable lengths are available.
To avoid ground loops in some installations an Interface Isolator may be required.

Lumina Power, INC.

LDQCW Quasi-CW Laser Diode Driver

Model	Pout Max.	Iout Max.	Input Voltage	Size (L xW x H)
LDQCW-50-XX-YY-ZZ	50 W	120 Amps	90-264 VAC	9.9”x7.3”x2.6” 25.2x18.6x6.6 CM
LDQCW-250XX-YY-ZZ	250 W	200 Amps	90-264 VAC	10.9”x7.3”x4.81” 27.2x18.5x12.2 CM
LDQCW-600-XX-YY-ZZ	600 W	200 Amps	90-264 VAC	

XX = Maximum pulsed output current.
YY = Required compliance voltage (unit will drive a load betweem 75% and 100% of this voltage)
ZZ = Maximum pulse width at maximum pulsed output current - specified by customer

NOTE 1: Average powe must not exceed Poutavg
NOTE 2: Output current and voltage compliance can be configured for individual requirements.
Auxiliary Outputs: +/-15V @ 0.5A (Auxiliary output on LDQCW-50: +12V @ 50mA)
Other Configurations Available Upon Request

INPUT
Voltage: See table above
Power Factor: >.98
OUTPUT
Poutavg See table above
Ipulsemax 200Apeak
Iavgmax 80A
Vcompliancemax Configurable up to 100V

INTERFACE
Interface Connector: 15 Pin “D” Sub Female
Pulse Enable: +5V TTL to +15V CMOS
Current Program: 0-10V for 0-Ioutmax
Current Monitor: 0-10V for 0-Ioutmax
Voltage Monitor: 0-10V for 0-Voutmax

PERFORMANCE
Pulse Width Range: 50usec to 2msec
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: to 90% non-condensing
Cooling: Forced air

REGULATORY
Safety: Compliant with UL60950

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

Lumina Power, INC.

LDQCW-4000 Pulsed Laser Diode Driver

Specifications

OUTPUT
Power: 4000 watts Continous (CW)
4000 watts average (pulsed)
Output Voltage: 50V max. Standard
(higher voltages available)
Current: 350 amps (Pulsed) *
250 amps (CW)
* See derating chart below

INPUT
Voltage: 200 to 240VAC ±10%, 50/60 Hz
Frequency: 47 to 63 Hz
Power Factor: > .98

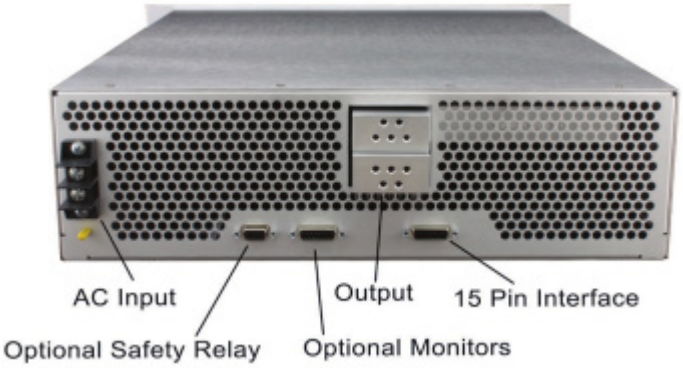
INTERFACE
Connector: 15 Pin “D” Sub Female
Current Program: 0-10V for 0-Max Current
Current Monitor: 0-10V for 0-Max Current
Voltage Monitor: 0-10V for 0-Max Voltage

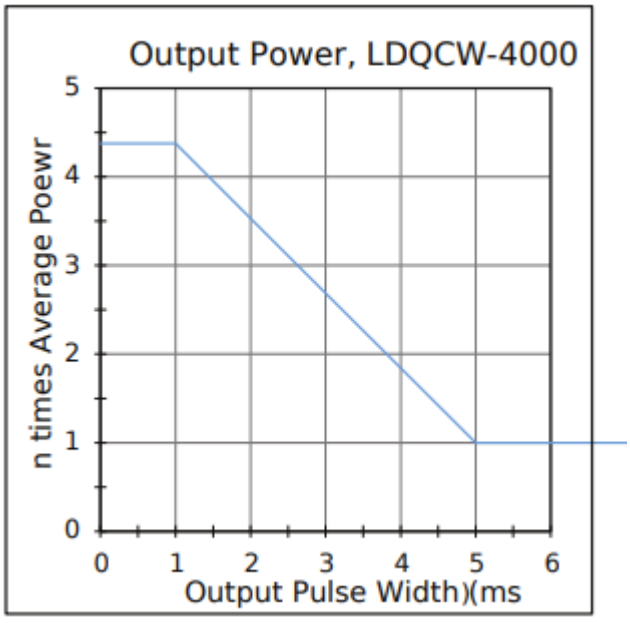
PERFORMANCE
Rise/fall Time: 5 to 10µs. (proportional to Vout.)
Fall Time:
Current Regulation: <0.5% of Maximum output current

Current Ripple: <0.5% of maximum output current
Current Overshoot: <1% of max. output current
Power Limit: Limited to max. 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

AUXILIARY OUTPUTS
+15V @ 50mA.





Lumina Power, INC.

LDY Series CW/QCW Laser Diode Drivers

Model	Pout Max	Iout Max	Input Voltage	Size (LxWxH)
LDY-600-XX-YY	600 Watts	100 Amps	100 to 240 VAC +/- 10%	9.9”x7.3”x2.6” 25.1x18.5x6.6cm
LDY-1000-XX-YY	1000 Watts			
LDY-1500-XX-YY	1500 Watts		200 to 240 VAC +/- 10%	
LDY-2500-XX-YY	2500 Watts	150 Amps		13.0”x8.5”x3.43” 32.9x21.6x8.7cm

Note: XX = Maximum required output current. YY = Maximum required compliance voltage.

Specifications

INPUT
Voltage: See table above
Frequency: 47 to 63 Hz
Power Factor: >.98

INTERFACE
Connector: 15 Pin “D” Sub Female
Current Program: 0-10V for 0-Max Current
Current Monitor: 0-10V for 0-Max Current
Voltage Monitor: 0-10V for 0-Max Voltage

PERFORMANCE
Rise/Fall Time: ~1msec. (see Page 4)
Current Regulation: <0.5% of Maximum output current
Current Ripple: <0.5% of maximum output current
Current Overshoot: <1% of maximum output current
Power Limit: Limited to maximum 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

REGULATORY
Safety: LDY-600/1000/1500: UL60950 (Industrial), UL60601-1 (medical) Emissions/Immunity: FCC 47 CFR
Class A Emissions, EN55011:1998 Group 1
Class A Emissions, EN61000-3-2, EN61000-3-3, EN60601-1-2:2001

AUXILIARY OUTPUTS
+5V @ 200mA
+15V @ 200mA
-15V @ 200mA

Lumina Power, INC.

LDD CW Laser Diode Drivers

Model	$Pout_{max}$	$Iout_{max}$	Input Voltage	Size (L x W x H)
LDD-50-XX-YY	50 Watts	15 amps	100-240VAC ± 10%	6.75" x 3.63" x 3.25" 17.1 x 9.2 x 8.26 cm
LDD-100-XX-YY	100 Watts	50 amps		7.5" x 5.8" x 2.6" 19 x 14.7 x 6.6 cm
LDD-150-XX-YY	150 Watts	60 amps		
LDD-250-XX-YY	250 Watts	80 amps		
LDD-600-XX-YY	600 Watts	100 amps		9.9" x 7.3"x 2,6" 25.1 x 18.5 x 6.6 cm
LDD-1000-XX-YY	1000 Watts			
LDD-1500-XX-YY	1500 Watts		200-240VAC ± 10%	
LDD-3000-XX-YY	3000 Watts	200 amps		17" x 16.6" x 3.4" 43.2 x 42.2 x 8.6 cm
LDD-6000-XX-YY	6000 Watts	300 amps	200-440VAC ± 10% 3Ø	17.3" x 16.6" x 4.25" 43.9 x 42.2 x 10.8 cm

XX = maximum required output current, YY= maximum required compliance voltage

Specifications

INPUT

Voltage: See table above
Power Factor: >.98

INTERFACE

Connector: 15 Pin "D" Sub Female
Current Program: 0-10V for 0-Max Current
Current Monitor: 0-10V for 0-Max Current
Voltage Monitor: 0-10V for 0-Max Voltage
(Optional RS232 interface available)

PERFORMANCE

Rise/Fall Time: <1msec standard (faster rise times available)
Current Regulation: <0.5% of Maximum output current
Current Ripple: <0.5% of maximum output current
Current Overshoot: <1% of maximum output current
Power Limit: Limited to maximum 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

REGULATORY

Safety: LDD-150/250: UL60950
LDD-600/1000/1500: UL60950 (Industrial), UL60601-1 (medical) Emissions/Immunity: FCC 47 CFR Class A Emissions, EN55011:1998 Group 1 Class A Emissions, EN61000-3-2, EN61000-3-3, EN60601-1-2:2001

AUXILIARY OUTPUTS

+5V @ 200mA
+15V @ 200mA
-15V @ 200mA

Note: No auxiliary outputs on LDD-50, No +5V output on LDD-100/150

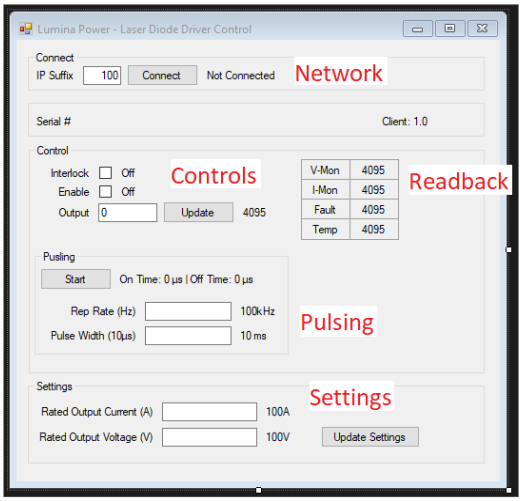
Lumina Power, INC.

LC Series Universal Controller

Lumina Power announces the new LC series controller that easily connects your computer to any Lumina Power power supply. This new interface device converts the standard input and output signals from the power supply to an Ethernet connection allowing for GUI control over the various functions of the supply. Users can now control output voltage and current along with enable, interlock and pulsing. Depending upon power supply model, monitor functions include output voltage, current, pulse width, repetition rate, faults and end of charge. Easy to use App included.

Feature:

- **Easily control any Lumina power supply**
- **Ethernet connection to computer or network**
- **Graphical interface for setup and control**
- **Control and monitor all of the functions of the power supply**



Computer Interface

Dimensions: 6.5 x 3.25 x 1.25 inches

1. DC input
2. Ethernet
3. BNC Pulse

Ordering Information: Order the LC-Controller by adding the model number to the standard description. Example: LC-Controller- CCPF. This version will control the CCPF series capacitor charging power supplies.

Lumina Power, INC.