



Medical Lasers



Diode Pump Lasers

Capacitor Charging Power Supplies



EV Charging Systems



Laser Welders

26 Ward Hill Avenue, Bradford, MA 01835
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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 ($>300\text{kV}$) and high power ($>150\text{kW}$), 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.



CCPF



CCPF Capacitor Charging Power Supplies

The CCPF family of capacitor charging power supplies utilizes the latest innovations in power electronics to deliver clean and efficient power for pulsed laser applications. A high power resonant inverter insures reliability during all modes of operating conditions. A soft switching power factor circuit ensures near unity power factor with low EMI. CCPF models can drive both PF loads and reservoir charging circuits.

Leakage current is less than 300uA, power factor is greater than 0.99 and conducted emissions meet stringent European regulations. No additional line filter is required to meet EN EN55011 emission requirements.

The CCPF family has been designed with the knowledge that a high power pulsed laser is a rugged high voltage environment.

ADVANTAGES	• Power factor correction	• Low EMI
• Ideal for OEM applications	• Compact size	• Low leakage for medical apps



CCHP



CCHP Capacitor Charging Power Supplies

The CCHP capacitor charging power supplies utilize the latest innovations in power electronics to deliver clean and efficient energy for pulsed power applications. A high power resonant inverter ensures reliable operation in harsh environments and operating conditions. The CCHP power supply can drive traditional pulse forming networks and reservoir partial discharge circuits. The CCHP is the first commercially available 3 Ø capacitor charger designed as a low cost module for high volume OEM use. Available in 208VAC and 400VAC input voltages the power supply can be used worldwide in medical and industrial applications. We also offer single phase versions of this power supply. Please visit our website for more information.

ADVANTAGES	<ul style="list-style-type: none">• 3500j/sec or 6000j/sec	<ul style="list-style-type: none">• Output Voltages to 4kV
<ul style="list-style-type: none">• 200 to 240VAC, 3 Ø Input• 380 to 480VAC, 3 Ø Input	<ul style="list-style-type: none">• 24V, 3amp Auxiliary• Compact Design	<ul style="list-style-type: none">• Universal Compatible Interface

CCPF CAPACITOR CHARGING POWER SUPPLIES

Shoebox Style	Poutmax	Voutmax	Input Voltage	Input Current	Size (L x W x H)	Wt
CCPF-500-XX	500J/sec	500V to 4kV	90-264VAC	5.5A @115VAC	9.13" x 6" x 3.7" 23.2 x 15.2 x 9.4 cm	4.5 lbs
CCPF-1500-XX	1500J/sec	500V to 4kV	90-264VAC	15A @115VAC	12.7" x 5.75" x 4.1" 32.3 x 14.6 x 10.4 cm	8 lbs
CCPF-2000-XX	2000J/sec	500V to 4kV	180-264VAC	11A @220VAC	12.7" x 5.75" x 4.1" 32.2 x 14.6 x 10.4 cm	8 lbs
CCPF-3500-XX	4000J/sec	500V to 4kV	180-264VAC	20A @220VAC	14.2" x 5.5" x 6" 36 x 13.4 x 15.2 cm	15 lbs
CCPF-1500-XX-SYS*	1500J/sec	500V to 4KV	180-264VAC	15A@220VAC	12.7" x 5.75" x 4.1" 32.3 x 14.6 x 10.4 cm	8 lbs

* Includes internal 150mA simmer supply and +24 auxiliary output

Chassis Style	Poutmax	Voutmax	Input Voltage	Input Current	Size	Wt
CCPF-2000-XX	2000J/sec	500V to 15kV	180-264VAC	11A @220VAC	16.5" x 17.3" x 3.7" 41.9 x 43.9 x 9.4 cm	20 lbs
CCPF-6000-XX	6000J/sec	500V to 4kV	180-264VAC	36A @220VAC	16.5" x 17.3" x 3.7" 41.9 x 43.9 x 9.4 cm	25 lbs

INPUT

Voltage: See table above
Current: See table above
Power Factor: >.98

OUTPUT

Power: See table above
Output Voltage: Configurable from 500V to 15kV.
Output Current: 2 * Poutmax/Voutmax
Polarity: Positive or Negative
Efficiency: >80% at full output
Regulation: 0.5% @100Hz

INTERFACE

Connector: 15 Pin "D" Sub Female
Voltage Program: 0-10V for 0-Max Voltage
Voltage Monitor: 0-10V for 0-Max Voltage
Inhibit/Reset
End of Charge Indication
Temperature Fault
Over-voltage Indication

REGULATORY

Leakage Current: <300uA
Isolation: 4000VAC/5700VDC
EMI: EN55011
(depending upon Model)

ENVIRONMENT

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



Also available: CCHP-3800/6000
3Ø capacitor charging power supplies



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IGBT Driver Board



The IGBT Driver Board is designed to work with the CCPF series capacitor charging power supplies in partial discharge pulsed high voltage applications. With an output capability of up to 800 amps this board offers the designer a proven building block to drive flashlamps, pulsed UV, lasers or plasma devices. For a complete easy to implement system, combine the IGBT Board with a CCPF series capacitor charger and the SM series simmer.

Specifications

Performance

Maximum Current: 800 amps *
Maximum output voltage: 1200 volts *
Pulsewidth Range: 100 μ s through 10ms.
Rise/ fall time: 10 μ s @ 800 amps

Input/Output Voltages

Input Voltage: 15 Volts DC @ 500mA
Fire Control: 5 to 15 V to run
Fan Voltage: 15 Volts DC, 250mA max.

Connections:

Interface: (J1) 15 pin female D-Sub
Pin 2, Fire Control: 5 to 15V to run
Pins, 4, 12, 14 Ground
All other pins: No Connection

Capacitor Connector: 4 pin Molex: mating connector # 19-09-2048
Molex pin # 02-09-1102

Lamp Connector: 3 pin Molex: mating connector # 19-09-1039
Molex pin # 02-09-1102

Input Connector: (J3) 2 Pin Molex # 156

Fan Connection: (J2, J4) .25 male Quick Connects

* Note: The IGBT board can be configured for different output current and voltage requirements. Contact Customer Service with your requirements.



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CCHP 3 PHASE CAPACITOR CHARGING POWER SUPPLIES

Specifications

Input

Voltage:	200 to 240 VAC, +/- 10%. 3Ø 50-60 Hz or 380 to 480 VAC, +/- 10%, 3Ø 50-60 Hz (Factory Set)
Current:	CCHP-3500: 13.7A/Phase, 200V; 7.2A/Phase @380V CCHP-6000: 23.5A/Phase, 200V; 11.6A/Phase @380V
Power Factor:	PF=0.85

Output

Power:	CCHP-3500: 3500j/sec. avg. CCHP-6000: 6000j/sec. avg.
Output Voltage:	Configurable from 250V to 4kV
Output Current:	2 * Poutmax/Voutmax
Polarity:	Positive or Negative (Factory Set)
Efficiency:	>85% at full output
Regulation:	>0.5% @ 100Hz

Interface

Connector:	15 Pin "D" Sub Female
Voltage Program:	0 to 10 V for 0 to Max Voltage
Voltage Monitor:	0 to 10 V for 0 to Max Voltage
Inhibit/Reset	Note: Interface is compatible with CCPF interface or it
End of Charge Indication	can be modified to work with all popular analog interface configuration

Environment

Operating Temp:	0 to 40° C
Storage:	-20 to 85°C
Humidity:	0 to 90% non-condensing
Cooling:	Forced air
Dimensions:	17.3 inch (439mm) X 16.6 (422mm) X 3.7 (94mm)

Regulatory

UL 60950 Safety
CISPR 11 Conducted and Radiated Emissions
IEC 61000 Immunity



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We Excel at Customer Service!

Lumina Power is dedicated to providing immediate response to our customers. To place an order, get technical assistance, delivery updates or quotations, please contact our customer service group: 978-241-8260 or send us an email for a quick response. Hours of operation are 8AM to 4:30PM (GMT-5), Monday through Friday.

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