



## He-Ne laser power supply

Size: 200 x 105 x 60 mm  
Weight: 0.8 kg

Model	Output Voltage (Vdc)	Start voltage * - on request	Output Current	Input Voltage (Vac)	Laser head connector	Price
HNPS-1014-36Lab	1000-1400 V	>10kV, >12kV*	up 3 to 6 mA	115, 230Vac	Alden, high voltage	365€
HNPS-1319-36Lab	1300-1900 V	>10kV, >12kV*	up 3 to 6 mA	115, 230Vac	Alden, high voltage	365€
HNPS-1926-47Lab	1900-2600 V	>10kV, >12kV*	up 4 to 7 mA	115, 230Vac	Alden, high voltage	365€
HNPS-2432-57Lab	2400-3200 V	>10kV, >12kV*	up 5 to 7 mA	115, 230Vac	Alden, high voltage	485€
HNPS-2432-810Lab	2400-3200 V	>12kV	up 8 to 10 mA	115, 230Vac	Alden, high voltage	on request
HNPS-3240-57Lab	3200-4000 V	>12kV	up 5 to 7 mA	115, 230Vac	Alden, high voltage	485€
HNPS-3240-810Lab	3200-4000 V	>12kV	up 8 to 10 mA	115, 230Vac	Alden, high voltage	on request
HNPS-4254-78Lab	3200-4000 V	>12kV	up 7 to 8 mA	115, 230Vac	Alden, high voltage	on request



## Laser Power Supplies For Pulsed Flash-Lamp Pumped Solid-State Lasers

<b>Model</b>	<b>FLD</b>
<b>Input</b>	
Voltage	230 VAC *
<b>Output:</b>	
Max. output voltage	450V (up to 1000 V on request)
Max. output power	3.5 kW *
Pulse width	0.1-20 ms *
Repetition rate	Up to 200 Hz *
Efficiency	85-90%
<b>Protection</b>	overvoltage, overheating, flashlamp breakdown, interlock etc
Cooling	Forced air (built-in fans)
Simmer supply	SBZ-2008
Capacitor bank	28000uF *
<b>Environment:</b>	
Operation temperature	0 ... +40 °C
Storage temperature	-20 ... +80 °C
Humidity	90%, non-condensing
Size (LxWxH)	500x315x172 mm
Weight	12 kg
<b>Price</b>	from 4600 €

\*- other values are available on request



## Pockels Cell Driver

Model	QBD	QBU
<b>Input:</b>		
Voltage	+24VDC	+24VDC
<b>Output:</b>		
Voltage	up to 6 kV (2.4-6 kV/2-5 kV/1.6-4 kV /1.2-3 kV/0.8-2 kV)	up to 5 kV (2-5 kV/1.6-4 kV /1.2-3 kV/0.8-2 kV)
Repetition rate	From single pulse to 100 kHz *	From single pulse to 100 kHz *
Load	up to 0.5 nF	up to 0.5 nF
Rise time (Fall time)	20 ns (typical)	20 ns (typical)
Recovery time	10 us (@ 100 pF)	10 us (@ 100 pF)
<b>Leakage current</b>	not more than 150 uA	not more than 150 uA
<b>Environment:</b>		
Operation temperature	0 ... +40 °C **	0 ... +40 °C **
Storage temperature	-40 ... +85 °C	-40 ... +85 °C
Humidity	90 %, non-condensing	90 %, non-condensing
<b>Size (LxWxH)</b>	110x80x25 mm	130x80x20 mm
<b>Weight</b>	0.1 kg	0.1 kg
<b>Output signal</b>		
<b>Price</b>	870€	1440€

\* – at low voltage and with small load capacitance

\*\* – harsh environment version is available on request



## Laser Flashlamp Pulse Driver

Model	NBU-1012	NBU-0405
<b>Input:</b>		
Voltage	+24V +/- 7V DC	+24V +/- 7V DC
<b>Output:</b>		
Voltage	up to 1000 V	400 V
Current	up to 1200 A	500 A
Flashlamp pulse width	up to 100 ms (on request)	up to 500 us
<b>Simmer Parameters:</b>		
Voltage	up to 150 V	
Open circuit voltage	up to 1350 V	
Current	up to 800 mA	
<b>Triggering Parameters:</b>		
Voltage	20 kV negative pulse	20 kV negative pulse
Pulse width	~1 us	1 us
Restrike rate	~30 Hz	2-3 Hz
<b>Environment:</b>		
Operation temperature	-20 ... +45 °C	-40 ... +60 °C
Storage temperature	-40 ... +85 °C	-65 ... +85 °C
Humidity	90 %, non-condensing	90 %, non-condensing
<b>Size (LxWxH)</b>	210x198x51.5 mm	178x120x30 mm
<b>Weight</b>	3.5 kg	0.6 kg
<b>Price</b>	2000€	1450€



## Capacitor Charging Power Supply

	PCP-17	PCP-20
<b>Model</b>		
<b>Input:</b>		
Voltage	230 VAC rectified	230 VAC
<b>Output:</b>		
Maximal output voltage	500/700/1000/1500/2000 V	500/700/1000/1500/2000 V
Average power	1750 W	2000 W
Stability	0.5%	0.5%
Pulse to pulse	0.5%	0.5%
Efficiency	More than 90%	More than 90%
PFC coefficient	0.90 (Partial)	0.98 (active)
Leakage current	Not more than 150 µA	Not more than 150 µA
<b>Protection:</b>	HV arc to ground during operation	HV arc to ground during operation
	Turn on with open circuit	Turn on with open circuit
	Turn on with short circuit	Turn on with short circuit
	Shut down on over-temperature,	Shut down on over-temperature,
	Shut down on over-voltage	Shut down on over-voltage and open interlock
<b>Cooling</b>	Forced air (external fan required)	Forced air (built-in fan)
<b>Environment:</b>		
Operation temperature	-20 ... +45 °C	-20 ... +45 °C
Storage temperature	-40 ... +85 °C	-40 ... +85 °C
Humidity	90%, non-condensing	90%, non-condensing
<b>Size (LxWxH)</b>	155x140x73 mm	263x168x131 mm
<b>Weight</b>	1.3 kg	2.5 kg
<b>Options</b>	Modifications for full (complete) discharge are available on request	
<b>Price</b>	1600€	2200€



## High and Medium Power Laser Diode Drivers (CW)

Model	LDD-150 / 250 / 400	LDD-600 / 1000 / 1500
<b>Input:</b>		
Voltage	110/230VAC, 50/60Hz or 230VAC, 50/60Hz	110/230VAC, 50/60Hz or 230VAC, 50/60Hz
Current	< 3 A	< 15 A
<b>Output:</b>		
Maximum power (W <sub>max</sub> )	150, 250 or 400W	600, 1000 or 1500W
Maximum current (I <sub>max</sub> )	selectable in range 10 ... 100 A	selectable in range 10 : 100 A
Maximum voltage (U <sub>max</sub> )	is obtained automatically from formula $W_{max} / I_{max}$	is obtained automatically from formula $W_{max} / I_{max}$
Rise/fall time	< 1 ms (10% to 90% full current), < 500 µs on request	< 1 ms (10% to 90% full current), < 500 µs on request
Current regulation accuracy	< 1% of I <sub>max</sub>	< 1% of I <sub>max</sub>
Current value error	< 1% of I <sub>max</sub>	< 1% of I <sub>max</sub>
Current overshoot	< 1% of I <sub>max</sub>	< 1% of I <sub>max</sub>
Efficiency	> 80%	> 80%
<b>Safety:</b>		
PFC value	> 0.98 (active)	> 0.98 (active)
Leakage current	< 150 µA	< 150 µA
Safety approval	IEC60950, IEC60601-1	IEC60950, IEC60601-1
Case fault voltage	4000 VAC	4000 VAC
EMC approval	EN55011 (Class A)	EN55011 (Class A)
<b>Interface:</b>		
Connector	15 Pin "D"-Sub Female	15 Pin "D"-Sub Female
Current program	analog, 0-10 V	analog, 0-10B
Current monitor	analog, 0-10 V	analog, 0-10B
Voltage monitor	analog, 0-10 V	analog, 0-10B
<b>Environment:</b>		
Operating temperature	0 : +40 °C	0 ... +40 °C
Storage temperature	-20 : +60 °C	-20 ... +60 °C
Humidity	90%, non-condensing	90%, non-condensing
<b>Size (LxWxH)</b>	250x180x70 mm	290x220x70 mm
<b>Weight</b>	1.8 kg	2 kg
<b>Price:</b>	1200€ / 1300€ / 1500€	1750€ / 2000€ / 2400€