



# **Laser Electronics Catalog**

# FLASHLAMP DRIVERS

FLASHLAMP DRIVER - FLD-4U



Pulsed output, variable pulsewidth  
 Partial discharge  
 Output power up to 3500W  
 Output voltage up to 1350V  
 Built-in simmer supply and IGBT-discharge circuit  
 Touch panel, 6" LCD display

Optional  
 Embedded Pockels Cell Driver  
 Complete discharge  
 Output voltage up to 2000V

FLASHLAMP DRIVER - FLD-2U



Pulsed output, variable pulsewidth  
 Partial discharge  
 Output power up to 1750W  
 Output voltage up to 900V  
 Built-in simmer supply and IGBT-discharge circuit

Optional  
 Embedded Pockels Cell Driver  
 Complete discharge  
 Output voltage up to 2000V

# MODULES FOR FLASHLAMP PUMPING

CAPACITOR CHARGER - PCP-35



Output power 3500W  
 Output voltage up to 2000V  
 Input: 230VAC  
 Complete or partial discharge modifications  
 0.90 Power Factor Correction (Std.), 0.98 (Opt.)  
 Cooling Fan  
 Parallel operations of multiple modules

CAPACITOR CHARGER - PCP-17



Output power 1750W  
 Output voltage up to 2000V  
 Input: 230 VAC (rectified)  
 Complete or partial discharge modifications  
 0.90 Power Factor Correction (Std.), 0.98 (Opt.)  
 Low EMI and leakage current  
 Parallel operation  
 Compact and cost-efficient design

CAPACITOR CHARGER - PCA-20



Output power 2000W  
 Output voltage up to 2000V  
 Designed for medical lasers, 0.98 PFC, low leakage current  
 Efficiency >90%  
 Complete or partial discharge  
 Compact and cost-efficient design

CAPACITOR CHARGER - PCA-07



Output power 1000W  
 Output voltage up to 2000V  
 Input: 110 or 230VAC  
 Designed for medical lasers, 0.98 PFC, low leakage current  
 Complete or partial discharge  
 Compact and cost-efficient design

CAPACITOR CHARGER BOARD - PBZ-0204



Output power 200W  
 Output voltage 400V  
 Convective cooling  
 +24V DC input  
 Robust, stable and reliable design

SIMMER SUPPLY MODULE - SBZ-3008



+24V DC input  
 Dual flashlamps operation  
 Output current up to 800mA  
 Output voltage up to 300V  
 Output power up to 100W

SIMMER SUPPLY MODULE - SBZ-2008



+24V DC input  
 Single lamp operation  
 Output current up to 800mA  
 Output voltage up to 200V  
 Output power up to 70W

SIMMER SUPPLY MODULE - SCA-2008



230VAC input  
 Single lamp operation  
 Output current up to 800mA  
 Output voltage up to 200V  
 Output power up to 70W

DISCHARGE CIRCUIT - NBU-1012



Controls partial discharge of cap banks through the flashlamp  
 Contains simmer supply module SBZ-2008, IGBT switch, ignition circuit  
 Delivers quasi-rectangular pulses of up to 1000V/1200A/100 msec

DISCHARGE CIRCUIT - NBU-0405



Controls partial discharge of cap banks through the flashlamp  
 Optimized for Nd:YAG lasers  
 Contains: IGBT switch, ignition circuit  
 Delivers quasi-rectangular pulses of up to 500V/400A/20 msec  
 Compact, low-cost OEM design

## LASER DIODE CONTROLLERS

### LASER DIODE CONTROLLERS ( CW ) - LDD-2U



Cw output  
Up to 100A output current  
Up to 1500W output power  
Temp. control to 0.1 deg. C  
RS-232 interface  
Built-in 1 or 2 independent TEC controller units

### LASER DIODE CONTROLLERS ( PULSED ) - PDD-2U



Pulsed output  
Up to 4 channels in a single package  
Up to 200A output current (ea. ch.)  
Up to 150V output voltage (ea. ch.)  
Rise/fall-time ~10-20  $\mu$ sec  
Built-in 1 or 2 independent TEC controller units  
Optional embedded Pockels Cell driver

## LASER DIODE DRIVERS

### LASER DIODE DRIVERS - LDD-150 .. LDD-400



For laser diode bars, arrays and stacks  
Cw output  
Output power 150, 250, 400W  
Output current up to 100A  
0.98 power factor correction  
Low EMI and leakage current

### LASER DIODE DRIVERS - LDD-600 .. LDD-1500



For laser diode bars, arrays and stacks  
Cw output  
Output power 600, 1000, 1500W  
Output current up to 100A  
0.98 power factor correction  
Low EMI and leakage current

### LASER DIODE DRIVERS - LDD-AUS



Cw output  
Output power 150, 250, 400W  
Output current up to 100A  
Contains auxiliary DC power supply for TEC  
Std aux output 12V/10A, 12V/0.5A, 5V/1A

### PULSED LASER DIODE DRIVER - PDD-150



Pulsed output  
Output current up to 200A  
Output voltage up to 150V  
Output power 150W  
Rise/fall-time <20  $\mu$ sec

## SINGLE DIODE CONTROLLERS

### SINGLE DIODE CONTROLLER - SDC (Pulsed + CW)



Contains both the current source and thermocontroller  
CW mode, 10MHz digital modulation, 1MHz analog modulation  
Output current up to 1A  
Compliance voltage 3V

### SINGLE DIODE CONTROLLER - SDC-BT (Pulsed)



Contains both the current source and thermocontroller  
Pulsed output (up to 30kHz; 1-20  $\mu$ sec; rise/fall time < 50 nsec)  
Output current up to 4A  
Compliance voltage 3V

## THERMOCONTROLLERS

### THERMOCONTROLLER - TEC



Controls Peltier modules  
Max output power 150W  
Different V/A combinations available  
Accuracy 0.1°C

### THERMOCONTROLLER - TEC-BT



Lab-type bench-top model  
Controls Peltier modules  
manages power up to 150W  
Different V/A ratios available  
Accuracy 0.1°C  
RS-232 interface

# LASER LIGHT SOURCES

## FIBER-COUPLED DIODE LASERS



CW or Pulsed Output  
808, 880, 940, 976, 1064, 1210,  
1380, 1470, 1532, 1710 & 1908 nm.  
Fiber core diameter 100-600  $\mu\text{m}$   
Output power up to 10 -100W  
Built-in TEC

## FLASHLAMP PUMPED SOLID-STATE LASER HEADS



Pulsed Output  
Free-Running or Q-switched  
Available modifications:  
Nd:YAG, 1.064  $\mu\text{m}$ , 100W  
Nd:YAP, 1.34  $\mu\text{m}$ , 70W  
Er:YAG, 2.94  $\mu\text{m}$ , 30W  
Alexandrite, 755 nm, 70W  
CTH:YAG, 2.08  $\mu\text{m}$ , 40W  
Fiber core diameter 500-1000  $\mu\text{m}$

# E-O Q-SWITCH (POCKELS CELL) HV DRIVERS

## POCKELS CELL DRIVER - QBD



Delivers HV pulses in "push-up" or  
"pull-down" (predefined)  
Output voltage up to 6kV  
Rep. rate up to 100kHz (voltage  
dependent)  
Leading edge rise-time <20 nsec  
Cost-efficient

## POCKELS CELL DRIVER - QBU



Very flexible topology  
Repeats incoming TTL signal  
Output voltage up to 6kV  
Rep. rate up to 100kHz (voltage  
dependent)  
Rise/fall-time <20 nsec (std.), <10  
nsec (custom)  
Applications: Q-switching, pulse  
slicing, reg. ampl.

## POCKELS CELL DRIVER - QBD-BT



Lab-type bench-top module  
Delivers HV pulses in "push-up"  
or "pull-down" (predefined)  
Output voltage up to 6kV  
Rep. rate up to 100kHz (voltage  
dependent)  
Leading edge rise-time <20 nsec

## POCKELS CELL DRIVER - QBU-BT



Lab-type bench-top module  
Delivers HV pulses in "push-up"  
or "pull-down" (predefined),  
repeats incoming TTL signal  
Output voltage up to 6kV  
Rep. rate up to 200kHz (voltage  
dependent)  
Rise/Fall-time <20 nsec (std.),  
<10 nsec (custom)

## LASER GATE ELECTRONICS



High-performance HV driver  
Selects individual pulses from a  
pulse train  
Output rep. rate up to 100kHz  
Output voltage up to 5 kV  
(available up to 10 kHz)  
Adjustable pulsewidth 10-1000 nsec  
Rise/Fall-time <5 nsec  
Applications: pulse picking (in ps  
and fs lasers), cavity dumping, pulse  
slicing

## HIGH-VOLTAGE SWITCH - QBX



Delivers HV pulses with  
dynamically variable amplitude  
Output voltage 500-5000 V  
Repetition rate up to 2kHz  
Pulse rise/fall time <1 $\mu\text{sec}$   
Applications: beam scanning,  
deflection, modulation

\*Every device and component can be  
fully-customized to your exact specifications



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