

Specifications	LYDYA™ Q-CW 180-60	LYDYA™ Q-CW 180-120
Number of outputs	1 or 2 outputs	
Peak current	0 - 180 A	
Actual load voltage ¹	0 - 38 VDC	0 - 96 VDC
Pulse width (t)	20 - 1500 µS	
Rise time/fall time	≤ 20 µS	
Pulse repetition frequency (F)	Single shot to 1 kHz	
Diode and Pockels trigger delay	0 - 2000 µS	
Maximum average power ² ($P_{\text{peak}} \times F \times t$)	1 output = 500 W 2 outputs = 250 W/output	1 output = 1250 W 2 outputs = 625 W/output
Power supply requirements	90 - 240 V @ 50 - 60 Hz	
Size (w x h x d)	1 output = 19"x 3"1/2 x 14" (483 mm x 89 mm x 356 mm) 2 outputs = 19"x 3"1/2 x 18" (483 mm x 89 mm x 458 mm)	

¹ voltage available at the diodes terminals (including the voltage loss due to the 3 meter cable).

² when using a 220 VAC power supply. Values must be divided by two when using a 110 VAC power supply.



(STANDARD FEATURES)

- Single or double output models,
- Key locked start-up,
- Front-panel or remote control,
- Current set-point potentiometer and current set-point value displayed on the front-panel,
- Complete diodes protection (current stability, slow start-up ramp, reverse polarity protection circuitry, "CROWBAR" diodes protection system, accurate current limit setting, overshoot < 1%...),
- Current pulses and Pockels cell triggered either by the internal clock or by an external signal,
- Fault status indicated on the front-panel by leds and retrieved by the software (diodes overheating, power supply fault, emergency stop, current limit exceeded, load fault, pulse width fault...),

- Software setting of: desired current, pulse width, pulse frequency, Pockels cell and current pulses trigger delay, intra cavity and extra cavity shutter states, SHG and THG rotation angle, cooling system parameters and status...
- Current monitoring by front-panel BNC,
- Set of dry contact inputs dedicated to the laser system safety management (shutter opening enabling/disabling, maintenance status, laser protection cover, emergency shutdown button state...)
- Electrical supply and control of the normalized "laser emitting" blue lamp (compulsory on all Class I installations),
- Auxiliary power supply (24 VDC - 100 W) assigned to the laser peripheral devices,
- Built-in Power Factor Corrector module.

(OPTIONAL FEATURES)

- **Remote pulse generation module.** In the case of a system needing several LYDYA™ drivers, integration can be facilitated by displacing the pulse generation module closer to the diodes. With this optional configuration of LYDYA™ driver, the pulse generator module can be up to 20 m away from the rest of the driver.

- **Additional power module.** If other specifications are required, extra power modules can be added on demand.

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Q-CW

LYDYA™

The Laser Diode Driver capable to drive a complete laser system !

Designed to drive diodes, bars and stacks

- Pulse width from 20 μ s to 1,5 ms
- Short rise and fall times (\ll 20 μ s)
- Overshoot \ll 1%
- Self-adaptation to the load
- Diodes protection circuitry
- 1 or 2 current outputs

Built-in laser equipment management functions

- Set of logic and analog inputs/outputs
- 12 bits analog acquisition
- RS-232/485, GPIB², CAN² computer interfaces
- Fully controllable by software
- Windows DLL for Visual Basic, LabView...
- 19" Industrial rack format - 2U high



- Pulsed current up to : 180 A¹
- Compliance voltage up to : 96 V¹
- Average output power up to : 1250 W¹

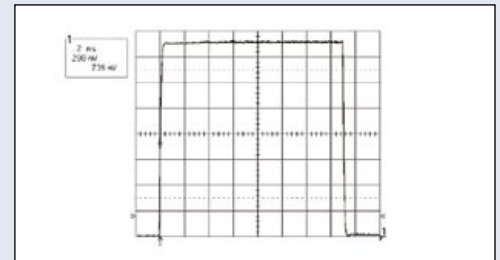
MUCH MORE THAN JUST A LASER DIODE DRIVER...

LYDYA™ is a valuable alternative to heterogeneous systems based on acquisition boards and time-consuming software development.

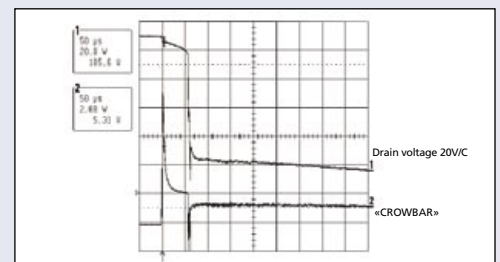
Featuring analog and digital inputs/outputs, LYDYA™ can notably manage:

- Pockels cell,
- intra cavity and extra cavity shutters,
- SHG and THG rotation angle,
- optical power measurement,
- diodes overheating security,
- system state check up,
- cooling system,
- laser safety...

This unique device makes it possible to control a whole of a laser system through a single user-friendly and powerful interface.



150 A / 50 Volts pulse, delivered during 1,5 ms. Short rise time and absence of overshoot are required for Q-CW driven high-power laser diodes stacks.



Response time of the "CROWBAR" diodes protection system.

1 : depending on the model - 2 : optional