arroyo instruments

4200-DR SERIES LASERSOURCE
DUAL-RANGE LASER DRIVER

The 4200 Series LaserSource is a high-accuracy, dual-range laser driver for low-power laser and LED applications. This laser driver offers features typically found in only more expensive units, such as overlapping laser protection systems, high modulation rates, and programmable PD bias.

DUAL RANGE LASER DRIVER
Operates at half-scale for improved resolution and lower noise.

OVERLAPPING LASER PROTECTION
Including safety interlock, ESD protection, hardware limits for current & voltage, soft power-on, and intermittent contact safeguards.

REMOTE VOLTAGE SENSING
Supports an extra pair of sensing wires to measure the operating voltage of your laser diode or LED.

PROGRAMMABLE PHOTODIODE BIAS VOLTAGE
Menu-selectable PD bias voltage, from 0 to -5 Volts.

ANALOG MODULATION
Bandwidths up to 325 kHz.

MULTIPLE OPERATING MODES
Choose from: ● **Constant Current** ● **Constant Power** ● **Constant Voltage**

SIMPLE USER INTERFACE
Easy to Read, High Contrast VFD Display with all messages and settings in plain English.

View All 3 At Once:
● **Current Set Point** ● **Photodiode Current** ● **Laser Voltage**

AT-A-GLANCE

Current Ranges:
- 50 mA / 100 mA
- 250 mA / 500 mA
- 1 Amp / 2 Amp

High Accuracy
- Up to 0.025% of reading + 0.025% of scale

Low Noise
- As Low as <1 µA

Compliance Voltages
- Up to 10 Volts available

Remote Operation via PC
- Use your existing control code. Our command set is compatible with other manufacturers.
- USB Connection

GROUND LOOPS: ELIMINATED.
YOUR LASER IS PROTECTED.

A ground loop can destroy your laser in an instant. Every input and control circuit on the LaserSource is electrically isolated. Offset voltages, ground connections, and AC noise will never act on your system.

No other laser driver on the market has this capability.

4200-DR
SPECIFICATIONS

		4201 -DR		4205 -DR		4220-DR	
Set Point	**Laser Current (ACC)**						
	Range (mA)	50	100	250	500	1000	2000
	Maximum Resolution (mA)	0.002	0.005	0.01	0.02	0.05	0.1
	Accuracy (± [% reading + mA])	0.025% + 0.02	0.025% + 0.03	0.025% + 0.08	0.025% + 0.12	0.025% + 0.3	0.025% + 0.5
	Stability (ppm, time)	< 10, 1 hour					
	Temperature Coeff (ppm/°C)	50					
	Noise/Ripple (µA rms)	< 1	< 1	< 1.2	< 1.5	<10	< 15
	Transients (µA)	< 50		< 100		< 200	
	Compliance Voltage (V)	10		10		5	
	Photodiode Current (APC)						
	Range (µA)	5 – 5000					
	Resolution (µA)	0.1					
	Accuracy (± [% reading + µA])	0.05% + 1					
	Stability (ppm, time)	< 200, 24 hours					
	Temperature Coeff (ppm/°C)	< 200					
	PD Bias (V)	0 to -5Volts programmable					
	Laser Voltage (AVC)						
	Range (V)	0 – 10		0 – 10		0 – 5	
	Resolution (V)	0.001					
	Accuracy (± [% reading + V])	0.05% + 0.005					
	Stability (ppm, time)	< 50, 1 hour					
	Temperature Coeff (ppm/°C)	< 100					
	External Modulation						
	Input Range	0 – 10V, 10kΩ					
	Modulation Bandwidth (kHz)	325		325		150	
Measurement Channels	**Laser Current**						
	Resolution (mA)	0.002	0.005	0.01	0.02	0.05	0.1
	Accuracy (± [% reading + mA])	0.025% + 0.02	0.025% + 0.03	0.025% + 0.08	0.025% + 0.12	0.025% + 0.3	0.025% + 0.5
	Laser Voltage						
	Resolution (V)	0.001					
	Accuracy (± [% reading + V])	0.05% + 0.005					
	Photodiode Current						
	Resolution (µA)	0.1					
	Accuracy (± [% reading + µA])	0.05% + 1					
Limits	**Laser Current**						
	Resolution (mA)	1					
	Accuracy (± [% reading + mA])	2		5		20	
	Laser Voltage						
	Resolution (V)	0.1					
	Accuracy (± % FS)	2.5%					
General	Display Type	2x20 VFD					
	Laser Connector	DB-9, female					
	Computer Interface	USB 2.0 Full Speed (Type B)					
	Power	100V / 120V / 230V, 50/60 Hz					
	Size (H x W x D) [inches (mm)]	1.82(47) x 8.5(215) x 11(280)					
	Weight [lbs (kg)]	4.8 (2.2)					
	Operating Temperature	+10°C to +40°C					
	Storage Temperature	-20°C to +60°C					

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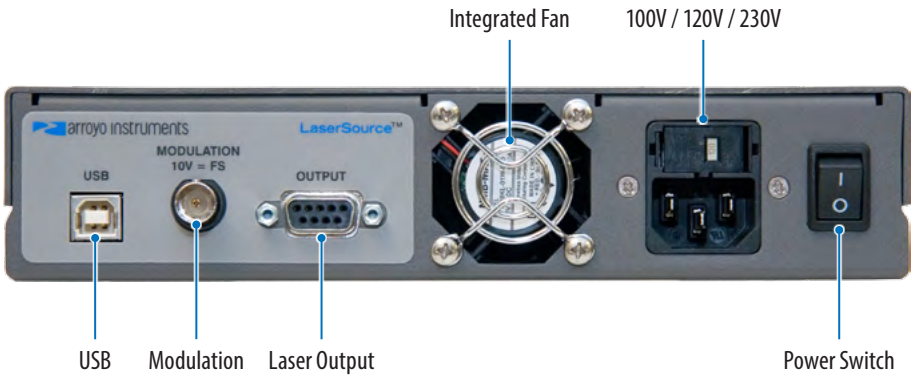
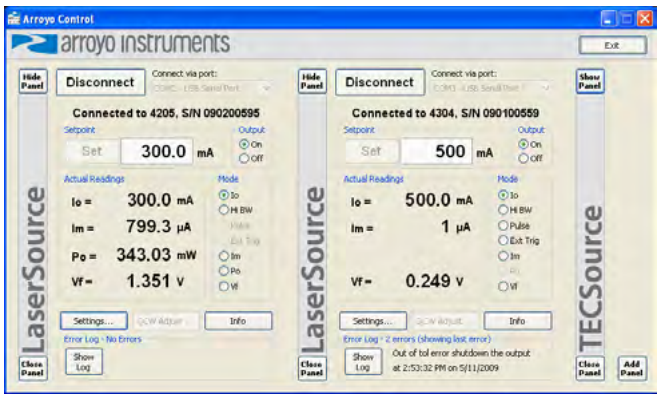
REAR VIEW



ARROYO CONTROL



Control any Arroyo laser driver or temperature controller directly from your PC. Simply connect to your Arroyo device via USB or RS-232 and gain direct access to settings, device limits, and adjustments from an easy-to-use Windows interface. You can even connect to multiple instruments at the same time.

Download ArroyoControl for free from www.arroyoinstruments.com.

LabView drivers available.

ACCESSORIES

1400-RM

4200 SERIES 2U RACK MOUNT KIT, 2 BAY

This rack mount kit is designed to work with any 4200 Series LaserSource or 5200 Series TECSource, and is machined out of a single piece of aluminum for excellent rigidity and strength. One or two instruments can be racked into a 2U high space.

1400-BL

1 BAY BLANK FOR 1400-RM

The 1400-BL is used to fill the unused opening in a 1400-RM when only rack mounting a single instrument. Machined from solid aluminum and black anodized, it is designed to match the cosmetic style of the 4200 and 5200 instruments.

Ordering Information:

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