

7144 SERIES

MULTISOURCE MULTICHANNEL LASER DRIVER



The 7144 MultiSource laser diode drivers feature the same precision and protection found in our benchtop products, giving you a seamless transition from benchtop to high density. Optional analog modulation extends control outside the box, and Ethernet and USB provide easy computer connectivity options.



OVERLAPPING LASER PROTECTION

Including safety interlock, ESD protection, hardware limits for current & voltage, and soft power-on.



MULTIPLE OPERATING MODES

Choose from: ● Constant Current ● Constant Power ● Constant Voltage



REMOTE VOLTAGE SENSING

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



ANALOG MODULATION (OPTIONAL)

Bandwidths up to 100 kHz.



ETHERNET INTERFACE

The built-in Ethernet interface allows the 7144 to be easily accessed via a network and integrated into larger system applications.



HIGH CONTRAST VFD MULTI-VIEW DISPLAY

Operational summary and individual channel information on an easy-to-read VFD display.

AT-A-GLANCE

Current Ranges:

- ▶ 500mA / 8 Volt
- ▶ 1 Amp / 8 Volt
- ▶ 2 Amp / 4 Volt
- ▶ 4 Amp / 4 Volt

High Accuracy

- ▶ Up to 0.025% of reading
+ 0.025% of scale

Low Noise

- ▶ As Low as <math><4\ \mu\text{A}</math>

Compliance Voltages

- ▶ Up to 8 Volts available
(contact factory for higher compliances)

Remote Operation via PC

- ▶ USB
- ▶ Ethernet



COMPACT MULTI-CHANNEL

The 7144 MultiSource Laser Driver provides 4 channels of fully independent laser control in just 1U of rack space.

And maintains the high performance of our benchtop units!

7144 MULTISOURCE LASER DRIVER SPECIFICATIONS

	7144-0.5-08	7144-01-08	7144-02-04	7144-04-04	
Setpoint	Laser Current				
	Range (mA)	0 – 500	0 – 1000	0 – 2000	0 – 4000
	Resolution (mA)	0.02	0.05	0.1	0.2
	Accuracy (\pm [% set+mA])	0.025% + 0.12	0.025% + 0.3	0.05% + 0.4	0.05% + 0.8
	Stability (ppm, time)	< 10, 1 hour			
	Temperature Coeff (ppm/°C)	50			
	Noise/Ripple (μ A rms)	< 4	< 8	< 20	< 30
	Transients (μ A)	< 150	< 250	< 350	< 500
	Compliance Voltage (V)	8	8	4	4
	Photodiode Current				
	Range (μ A)	2 – 5,000			
	Resolution (μ A)	0.1			
	Accuracy (\pm [% set+ μ A])	0.05% + 1			
	Stability (ppm, time)	< 200, 24 hours			
	Temperature Coeff (ppm/°C)	< 200			
	PD Bias (V)	-5V (fixed)			
	Laser Voltage				
	Range (V)	0 – 8	0 – 8	0 – 4	0 – 4
	Resolution (V)	0.001			
	Accuracy (\pm [% set+V])	0.05% + 0.005			
Stability (ppm, time)	< 50, 1 hour				
Temperature Coeff (ppm/°C)	< 100				
External Modulation (Optional)					
Input Range	0 – 10V, 10k Ω				
Modulation Bandwidth (kHz)	100	85	75	65	

Measurement	Laser Current				
	Resolution (mA)	0.02	0.05	0.1	0.2
	Accuracy (\pm [% reading+mA])	0.025% + 0.12	0.025% + 0.3	0.05% + 0.4	0.05% + 0.8
	Laser Voltage				
	Resolution (V)	0.001			
	Accuracy (\pm [% reading+V])	0.05% + 0.005			
Photodiode Current	Resolution (μ A)	0.1			
	Accuracy (\pm [% reading+ μ A])	0.05% + 1			

Limits	Laser Current				
	Resolution (mA)	1			
	Accuracy (\pm [% of range])	1%			
	Laser Voltage				
Resolution (V)	0.1				
Accuracy (\pm % FS)	2.5%				

General	Laser Connector	DB-9, female			
	Computer Interface	USB 2.0 Full Speed (Type B), Ethernet			
	Power	90 – 240 V, 50 / 60			
	Size (H x W x D) [inches (mm)]	1.75 (45) x 19 (283) x 14 (356)			
	Operating Temperature	+10°C to +40°C			
	Storage Temperature	-20°C to +60°C			

www.arroyoinstruments.com

 **arroyo instruments** 800-644-0416

1201 Prospect Street, San Luis Obispo, CA 93401 sales@arroyoinstruments.com