arroyo instruments

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 intergated 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 <4 µA

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 provices 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 (±[% 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 (µA rms)	< 4	< 8	< 20	< 30
	Transients (µA)	< 150	< 250	< 350	< 500
	Compliance Voltage (V)	8	8	4	4
	Photodiode Current				
	Range (µA)	2 – 5,000			
	Resolution (µA)	0.1			
	Accuracy (±[% set+µA])	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 (±[% set+V])	0.05% + 0.005			
	Stability (ppm, time)	< 50, 1 hour			
	Temperature Coeff (ppm/°C)	< 100			
	External Modulation (Optional)				
	Input Range	0 – 10V, 10kΩ			
	Modulation Bandwidth (kHz)	100	85	75	65
Measurement	**Laser Current**				
	Resolution (mA)	0.02	0.05	0.1	0.2
	Accuracy (±[% 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 (±[% 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 (±[% of range])	1%			
	Laser Voltage				
	Resolution (V)	0.1			
	Accuracy (±% 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			

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