arroyo instruments

# 485 SERIES LASERPAK
## OEM LASER DRIVER

The 485 LaserPak laser driver offers the same high-quality instrumentation that Arroyo Instruments benchtop units are known for, at one-third the size. LaserPak brings the great performance and laser protection features found on the LaserSource at a lower cost.

### OVERLAPPING LASER PROTECTION

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

### MULTIPLE OPERATING MODES

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

### ROBUST ANALOG INTERFACE

Provides on/off control, status, and analog monitor of current and photodiode. Auxillary thermistor and voltage monitor input for extended monitoring.

### ANALOG MODULATION

Bandwidths up to 65 kHz.

## AT-A-GLANCE

Current Ranges:

- 2 Amp / 15 Volt
- 4 Amp / 8 Volt
- 8 Amp / 4 Volt
- Custom Configurations

High Accuracy

- Up to 0.05% of reading + 0.05% of scale

Low Noise

- As Low as <60 µA

Compliance Voltages

- Up to 24 Volts available

Remote Operation via PC

- Use your existing control code. Our command set is compatible with other manufacturers.
- USB / RS-232 Connections

## A FULL LASER SYSTEM

Pair the LaserPak with the Arroyo TECPak to create a low-cost combination laser system with all the power and accuracy of a much more expensive solution.

***Build a full laser system that fits in your budget.***

# 485 SERIES
## LASERPAK CW MODE SPECIFICATIONS

| | | 485-02-15 | 485-04-08 | 485-08-04 |
|---|---|---|---|---|
| Setpoint | **Laser Current** | | | |
| | Range (mA) | 0 – 2000 | 0 – 4000 | 0 – 8000 |
| | Resolution (mA) | 0.1 | 0.1 | 0.5 |
| | Accuracy (±[% set+mA]) | 0.05% + 0.4 | 0.05% + 0.8 | 0.05% + 1.6 |
| | Stability (ppm, time) | < 10, 1 hour | | |
| | Temperature Coeff (ppm/°C) | 50 | | |
| | Noise/Ripple (µA rms) | < 60 | < 100 | < 200 |
| | Transients (µA) | < 300 | < 400 | < 600 |
| | Compliance Voltage (V) | 15 | 8 | 4 |
| | **Photodiode Current** | | | |
| | Range (µA) | 5 – 10,000 | | |
| | Resolution (µA) | 1 | | |
| | Accuracy (±[% set+µA]) | 0.05% + 1 | | |
| | Stability (ppm, time) | < 200, 24 hours | | |
| | Temperature Coeff (ppm/°C) | < 200 | | |
| | PD Bias (V) | Jumper selectable: No bias, -3V (default), -5V | | |
| | **Laser Voltage** | | | |
| | Range (V) | 0 – 15 | 0 – 8 | 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** | | | |
| | Input Range | 0 – 10V, 10kΩ | | |
| | Modulation Bandwidth (kHz) | 65 | 50 | 40 |
| Measurement | **Laser Current** | | | |
| | Resolution (mA) | 0.1 | 0.1 | 0.5 |
| | Accuracy (±[% reading+mA]) | 0.05% + 0.4 | 0.05% + 0.8 | 0.05% + 1.6 |
| | **Laser Voltage** | | | |
| | Resolution (V) | 0.001 | | |
| | Accuracy (±[% reading+V]) | 0.05% + 0.004 | | |
| | **Photodiode Current** | | | |
| | Resolution (µA) | 1 | | |
| | Accuracy (±[% reading+µA]) | 0.05% + 2 | | |
| Limits | **Laser Current** | | | |
| | Resolution (mA) | 1 | | |
| | Accuracy (±[% reading+mA]) | 20 | 40 | 80 |
| | **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), RS-232 (DB-9, male) | | |
| | Power | 115V / 230V, 50/60 Hz | | |
| | Size (H x W x D) [inches (mm)] | 3.0 (77) x 4.5 (115) x 8.5 (216) | | |
| | Operating Temperature | +10°C to +40°C | | |
| | Storage Temperature | -20°C to +60°C | | |

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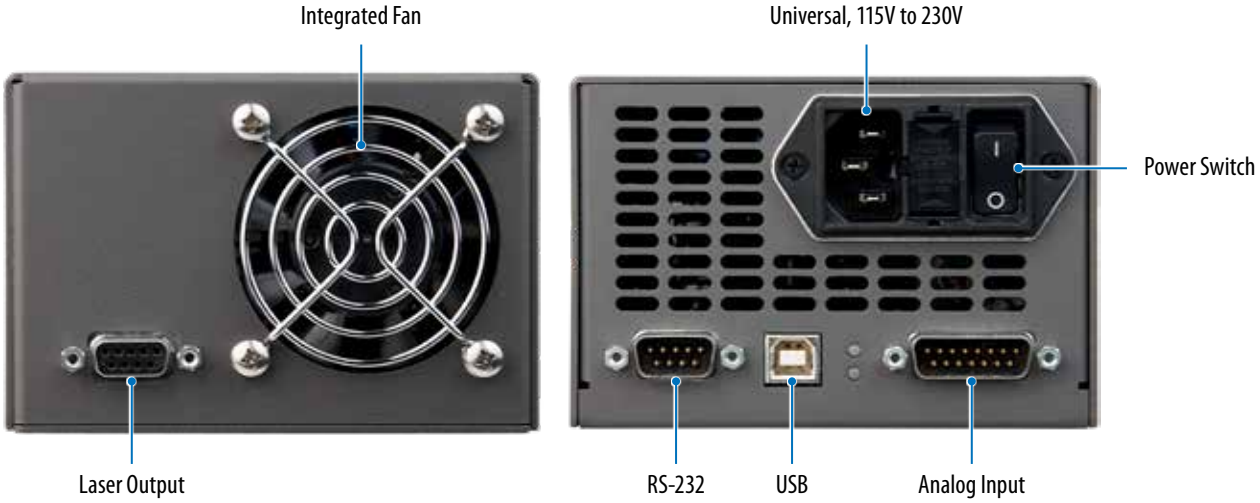
## REAR VIEW




## 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

### 1402-RM

#### PAK SERIES RACK MOUNT KIT, 3 OR 5 UNITS

This rack mount kit will mount any 485 LaserPak or 585 TECPak controller. When positioned flat, the 1402-RM can hold three units in a 2U space.

Mount the controllers on their sides, and the 1402-RM can hold five units in a 5U space.

There is also mounting support for a 7-port USB hub as well as holes for securing and dressing wiring to the tray with cable ties.



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