

## Vue-HCV High Current Controller



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### Configurations

- In a chassis with power supply
- PC board only

### Accessories

- WinVue for HCV
- Output cable
- Standard NTC 10k $\Omega$  thermistor

### See also

- TEC driver (integrates with HCV)
- HCT high current laser diode + TEC driver

The Vue-HCV delivers up to 100A of current at a compliance voltage of 5.0V. It is suitable for driving high current laser diode devices or any similar load. It is a low-noise, current-regulated source, designed to avoid current overshoots that can potentially damage laser diodes.

The HCV is microprocessor controlled, and is operated by simple commands received over either RS-232 or USB. It comes with WinVue, our Windows User Interface application, that allows full operational control of the unit. In this configuration it is suitable for laboratory and research use. Its small size and low cost also make it suitable for OEM applications. When controlled by a user-written program, it is easily integrated into larger systems.

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### Features:

- Can be pulsed at up to 1000 Hz (clocked internally or externally triggered by TTL)
- Stand-alone mode allows automatic startup without programming or any external interface (**autostart**)
- Analog input can be used to control the laser current
- Extensive **interface command set** facilitates user-written control applications
- Can monitor an external temperature for a safety shutoff
- Can monitor an external input for laser power display
- Firmware logic protects diode and driver by detecting open/short circuits, incorrect input voltage, and other anomalies
- User-settable limit on laser diode current
- Firmware-regulated constant power mode is available; please contact the factory for details
- Design customization services are available. Send us your specific requirements.

### Specifications

• Our design philosophy



PC board



WinVue User Interface

	Vue-HCV
<b>Output</b>	
Output Current	100A
Output Current Resolution	0.03%
Noise/ripple	0.10% RMS <sup>1</sup>
Compliance Voltage	5.0 V (at output pins)
Laser Voltage Measurement Resolution	0.002 V
Laser Voltage Measurement Accuracy	3%
<b>Monitor Inputs</b>	
Laser Power Input Signal Range	0 - 3.3 V
Laser Power Input Signal Resolution	0.03%
Laser Power Input Signal Accuracy	User calibrated
Recommended Thermistor	NTC 10KΩ
Temperature Resolution	0.03°C, typical
Temperature Accuracy	User calibrated
<b>Pulsed Operation</b>	
Maximum Pulse Rate	1000 Hz
Rise Time (nominal)	170 μs
Pulse Width	User settable in increments of 0.5 ms
External Trigger type	TTL
External Bias Control	0-3.22V
<b>Connectors</b>	
Data	RS-232, DB-9 or USB-B
External Trigger and Bias Control	10-pin Molex
Output	DB37 female, mixed pin
Optional Output Cable, 1 Meter	DB37 male, one end only
<b>General</b>	
Input Power	90-264 VAC
Frequency	47-67 Hz
Current	8.6A max
Power Factor	0.95
Efficiency	85%
EMI	Designed to meet FCC-B
Operating Temperature	0°C to 40°C, non-condensing
Dimensions (HxWxD)	3.8"x6.3"x11.8"

<sup>1</sup>If noise is a critical requirement in your application, please contact us for more information.