

## Applications

- Fiber lasers and amplifiers
- Medical systems
- Direct diode materials processing
- RGB displays

## Features

- Driver for single, high-power diodes
- WinVue user interface software
- Developer Kit or PCB-only options
- CW or Pulsed operation



The Vue-LV controller is designed for driving single, high-power laser diodes. Using a powerful microcontroller, sophisticated control software and switched-mode power conversion, the Vue-LV controller is compact and easy to use.

Unlike traditional drivers in which op-amps, resistors and capacitors regulate the output current, the Vue-LV's current regulation is a software algorithm running on a fast microcontroller. Output current is produced by a switched-mode drive stage, minimizing the waste heat generated and consequently the size.

Standard units include two pulsed modes (internally clocked or externally triggered), direct current control by an applied analog voltage, safety interlocks, and RS-232 & USB interfaces. Like all our controllers, the Vue-LV continuously protects against anomalous conditions that may endanger the laser or the controller itself. The Vue-LV also implements **Autostart**, our standard protocol that allows our controllers to start up and run without any external interface at all.

With WinVue software and an attached PC the user can do more than just control the laser diode. WinVue provides tools to aid the researcher in R&D and the production engineer in manufacturing: data logging, one-click LIV acquisition, power calibration, pulse repetition rate and width selection, power and current limits, and display of all control settings and inputs.

The most convenient choice for a single user is the Developer Kit, which combines a controller, a power supply, connectors, and the WinVue User Interface software program.

For OEM system integrators we offer the Vue-LV driver as a PCB only option with an extensive library of serial commands.

The Vue-LV has all the attributes expected in an OEM controller - and more. In addition to being compact, low cost and configurable, its extensive feature set allows it to be a bench top controller or an embedded control component in a complex instrument.



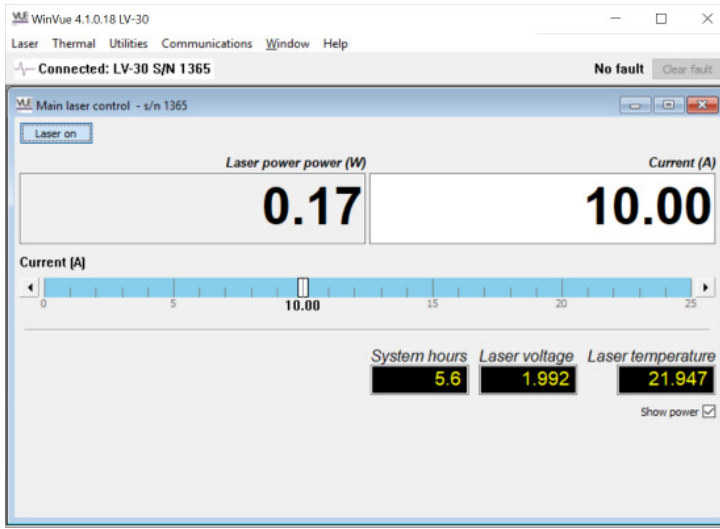
Developer Kit option (LV-30 shown)



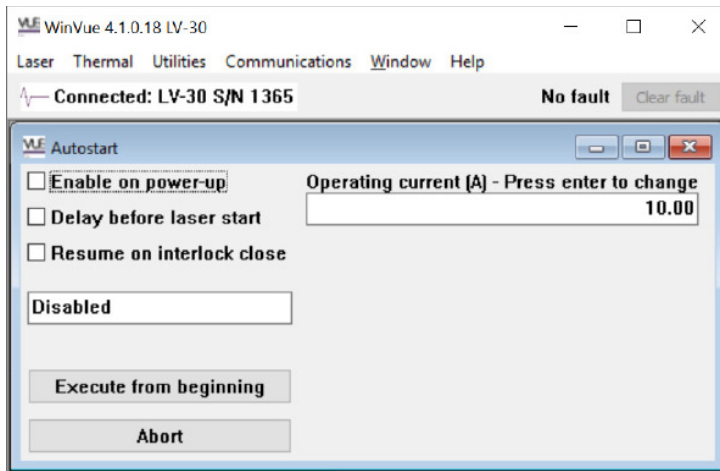
PCB only option (LV-30 shown)



SPECIFICATIONS	LV-15	LV-30
<b>Parameter</b>		
Output Current	15A	30A
Output Current Resolution	0.01A	0.02A
Maximum Output Power	36W	90W
Noise/ripple @ Max. Load	0.1% RMS of maximum current	
Compliance Voltage @ Max. Current	1.4 - 2.5V	
Aiming Beam Driver	Fixed 5V, 100mA	
<b>Pulsed Operation</b>		
Pulse Rate (Internal Control)	User settable up to 1 kHz max.	User settable up to 100 Hz max.
Pulse Rise Time (typical, at max. current)	< 200 $\mu$ s	< 5 ms
External Trigger	TTL, edge trigger, low = on	
<b>Analog Current Control</b>		
Input Signal Range	3.25V = full current	
<b>Input Signals</b>		
Laser Power Monitor	0 - 3.3V, user-calibrated	
Laser Power Monitor Resolution	0.03% of full scale	
Temperature Sensor (not included)	NTC 10k $\Omega$	
Temperature Resolution	0.03°C, typical	
Temperature Accuracy	User-calibrated	
<b>Connectors</b>		
Output	DB15 female, mixed pin	
Signal	Molex 12-pin	
USB	USB-mini B 5-pin	
Power Input	Molex 5-pin	
	Note: All male mating connectors are provided with the Developer's Kit. PCB-only customers will need to order the connectors listed at the rear of the user's manual.	
<b>General</b>		
Input Power Supply (included with Developer Kit)	5 VDC $\pm$ 5%, 10 A min.	12 VDC $\pm$ 5%, 8 A min.
Efficiency	90%	85%
EMI	Designed to meet FCC-B	
Operating Temperature	0°C to 40°C, non-condensing	
Air-cooling Required	No	Yes
Dimensions (LxWxH) - Developer Kit	7.5" x 2.7" x 1.0"	
Dimensions (LxWxH) - PCB only	6.3" x 2.5" x 0.6"	
<b>Power Supply (optional - included with Developer Kit)</b>		
Input Voltage	90 - 264 VAC	
Input Current	47 - 67 Hz	
Frequency	< 2A at 115V	
<i>Krona Electronics is continually improving the performance of its products. Specifications are subject to change without notice.</i>		



WinVue user interface software  
Main laser control window



WinVue user interface software  
Autostart window

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