

BlitzBuck V4

The BlitzBuck V4 is a round, 16.85mm diameter, high-current output switch-type, bucking laser driver. Capable of efficiencies up to 90% at approximately 2A of output current, this is one of the most efficient laser drivers on the market. Designed to fit in the pill of an Aurora C6 host, this laser driver can also be fit into a variety of other hosts.



Specifications:

Symbol	Parameter	Typical	Unit
I_{\min}	Minimum current output	1.42	A
I_{\max}	Maximum current output	3	A
V_{in}	Input voltage range	3-18	V
V_{out}	Output voltage range	$1-.85 * V_{\text{in}}$	V
ν	Efficiency over output range	85-90	%
f	PWM switching frequency	850	kHz

Connections:

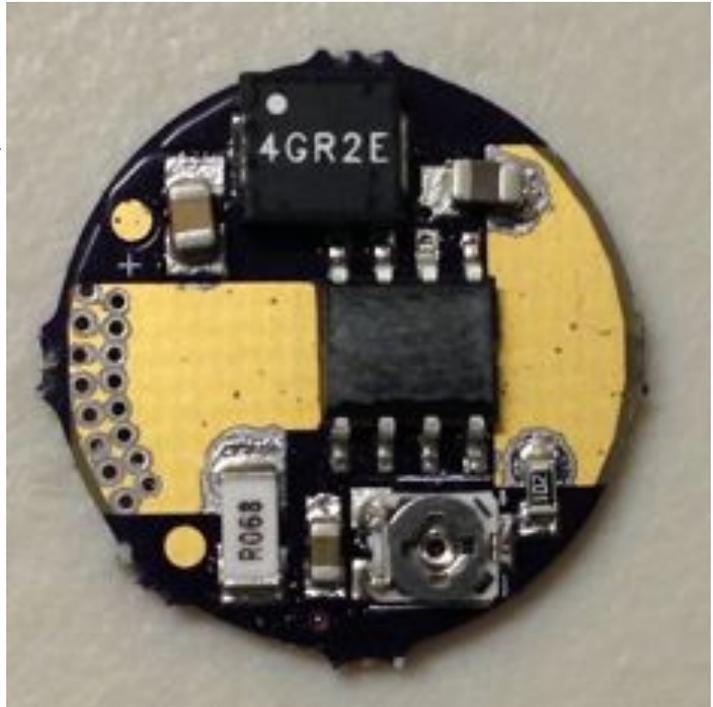
The two diode connections are the small round pads on the left side of the board. The one with the “+” symbol near it, is, of course, the positive diode connection. The other round pad is the negative diode connection.

Unlike other drivers, this driver does not have either continuous positive rail or continuous negative rail. As such, you should *never* directly connect either of the inputs to either of the outputs.

The *best* connections to be used (will reduce heating and improve overall effectiveness of the driver) is using the center pad on the bottom of the driver to access your positive input and the ring surrounding this central pad as your negative input.

Note: The positive pad is rather close to the edge of the board. As such, I recommend that users put a dab of non-conducting adhesive between the soldered wire and the edge of the board to ensure that no shorts are formed.

Finally, note that the gold-plated heatsink pad is directly connected to the ring on the bottom of the driver. This pad is in place to increase overall surface area of the exposed ground and therefore reduce heatsinking needs.



Current Adjustment:

For standard adjustment of the driver, there is only a single range: approximately 1.4A to approximately 3A. To reduce current, turn counter-clockwise. To increase current, turn clockwise.