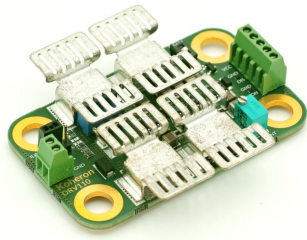


Ultra low noise high-voltage laser driver



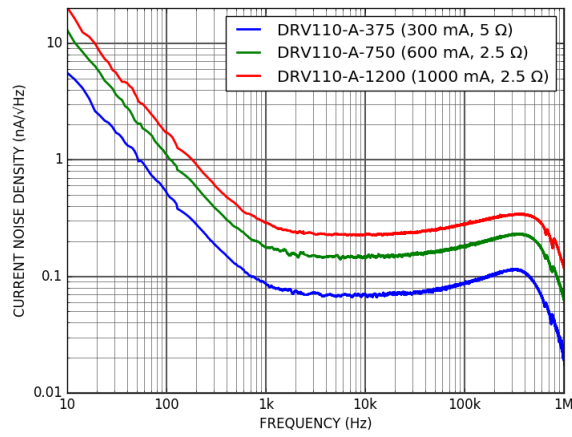
Koheron DRV110 is a current source that can drive up to 1200 mA of current with a compliance voltage of 15 V. Its current noise of 350 pA/√Hz (180 pA/√Hz for the 750 mA version) is below the noise of a 1 A Poissonian current source. The DRV110 can be used to drive high current LEDs below the shot noise limit. Thanks to its high compliance voltage and its low noise performance, the DRV110 is an excellent choice to drive quantum cascade lasers (QCL).

Specifications

	DRV110-A-375	DRV110-A-750	DRV110-A-1200
Current driver			
Laser current	0 - 375 mA	0 - 750 mA	0 - 1200 mA
Supply voltage	3 - 19.5 V	3 - 19.5 V	3 - 19.5 V
Compliance voltage	15 V	15 V	15 V
Temperature coefficient	25 ppm/°C	50 ppm/°C	50 ppm/°C
RMS noise (10 Hz - 1 MHz)	130 nA _{rms}	240 nA _{rms}	480 nA _{rms}
Current noise density (1 kHz)	110 pA/√Hz	200 pA/√Hz	400 pA/√Hz
Current limit (high setting)	400 mA	800 mA	1250 mA
Current limit (low setting)	200 mA	400 mA	500 mA
Slow start (90 % setpoint)	280 ms	470 ms	600 ms
Other			
Outside Dimensions	63 mm x 53 mm x 12 mm	63 mm x 53 mm x 12 mm	63 mm x 53 mm x 12 mm
Weight	23.5 g	23.5 g	23.5 g
Operating temperature	0 °C - 50 °C	0 °C - 50 °C	0 °C - 50 °C
Compatible lasers	Cathode-grounded / floating diodes	Cathode-grounded / floating diodes	Cathode-grounded / floating diodes

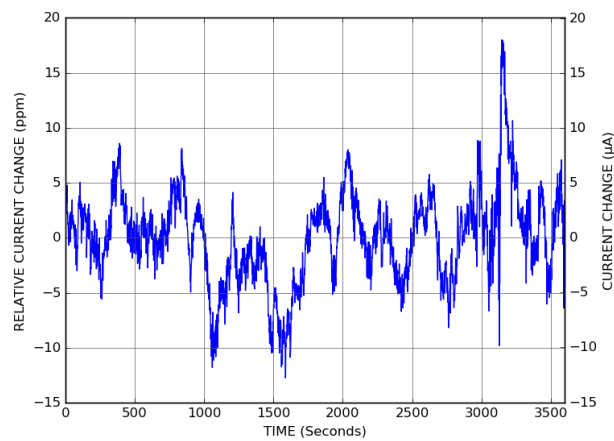
Current noise

The power spectral density of the DRV110 laser driver current noise characterized using a 5 Ω load (A-375) or a 2.5 Ω load (A-750 and A-1200). Voltage drop in regulator is 1 V.



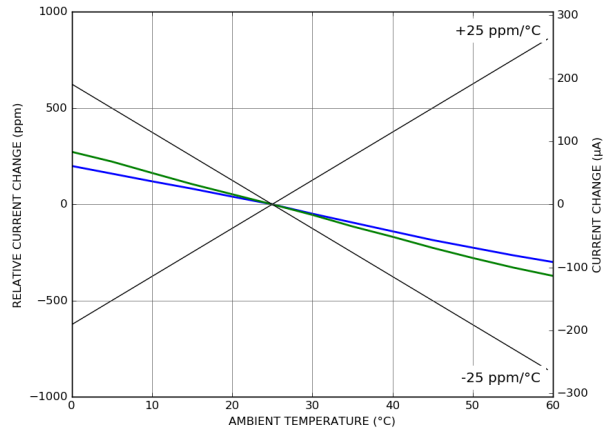
Current stability

Stability over 1 hour for a DRV110-A-1200 driving 1000 mA in a 10 Ω load.



Temperature coefficient

DRV110-A-375 operated at 300 mA in a 10 Ω load. Blue and green are two different samples.



Ordering codes

- DRV110-A-375: Laser current 375 mA
- DRV110-A-750: Laser current 750 mA
- DRV110-A-1200: Laser current 1200 mA