

8-channel digital laser driver



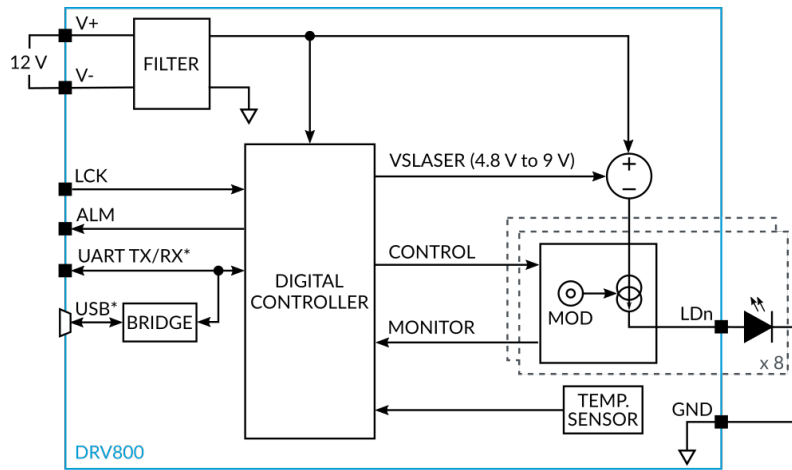
Koheron DRV800 is a 8-channel laser driver with digital control. DRV800 can drive floating and cathode-grounded laser diodes. It delivers up to 210 mA per channel with up to 6.5 V compliance voltage. Channels are parallelable for higher output current. Each channel has a dedicated DC to 7 MHz modulation input. Typical applications include photonic integrated circuits control, and laser diodes aging and testing.

Specifications

DRV800-8-200

Laser current	0 mA to 210 mA
Current driver	
Compliance voltage	6.5 V
Laser current resolution	5 μ A
RMS noise (10 Hz to 1 MHz)	250 nA _{rms}
Current noise density (10 kHz)	230 pA/ \sqrt Hz
Temperature coefficient	50 ppm/ $^{\circ}$ C
DC Crosstalk (Single channel full scale output change)	\pm 25 μ A
Modulation input	
3 dB bandwidth	7 MHz
Input voltage range (gain 0 setting)	-2 V to 2 V
Input voltage range (gain 1 setting)	-1 V to 1 V
Input impedance	50 Ω
Modulation gain (gain 0 setting)	33 mA/V
Modulation gain (gain 1 setting)	100 mA/V
AC Crosstalk (10 kHz)	-55 dB
Power supply	
Supply voltage	11 V to 13 V (12 V nominal)
Supply current	2 A
Quiescent current	100 mA
Other	
Outside dimensions	150 mm x 75 mm x 17 mm
Weight	100 g
Operating temperature	0 $^{\circ}$ C to 50 $^{\circ}$ C
Compatible lasers	Floating diodes / cathode-grounded

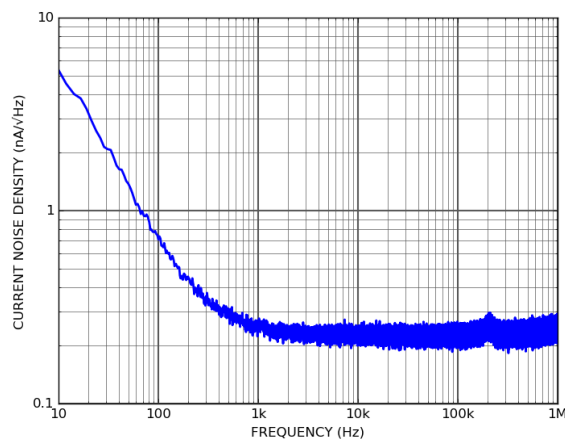
Functional diagram



DRV800 contains 8 current drivers, capable of driving floating and cathode grounded laser diodes. Each driver has its own modulation input.

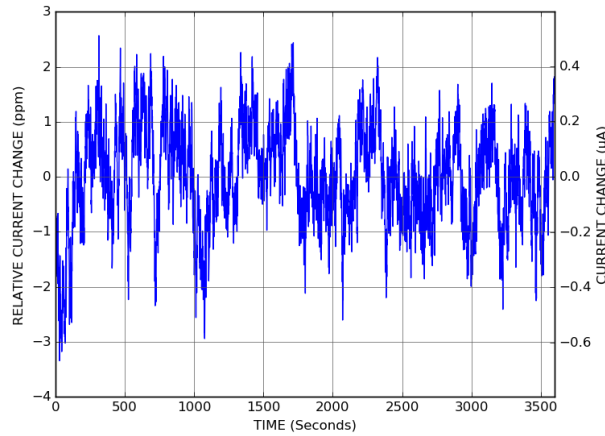
Current noise

Current noise density of the DRV800-8-200 operating at 200 mA:



Current stability

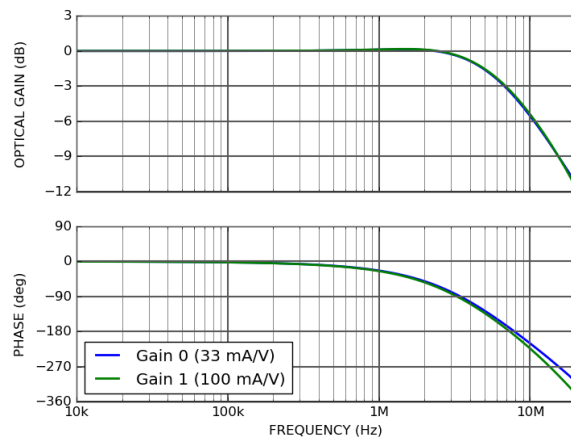
Current stability over an hour driving 200 mA in a 10 Ω load:



Modulation

The DRV800 laser diode driver features a DC modulation which controls the current setpoint input with 7 MHz bandwidth.

Modulation frequency response measured across a 10 Ω resistor with 200 mA output current:



Cable length effect is presented in [user guide](#).

Ordering codes

- DRV800-8-200