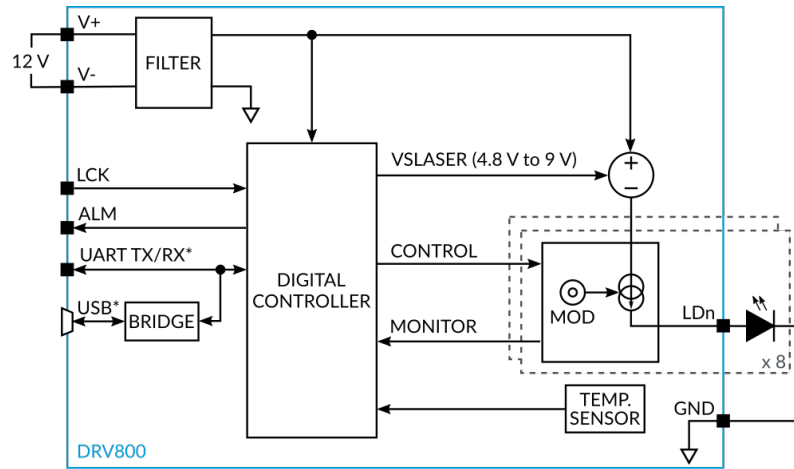Koheron DRV800 is a 8-channel laser driver with digital control. DRV800 can drive floating and cathode-grounded laser diodes. It delivers up to 210 mA per channel with up to 6.5 V compliance voltage. Channels are parallelable for higher output current. Each channel has a dedicated DC to 7 MHz modulation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

Specifications

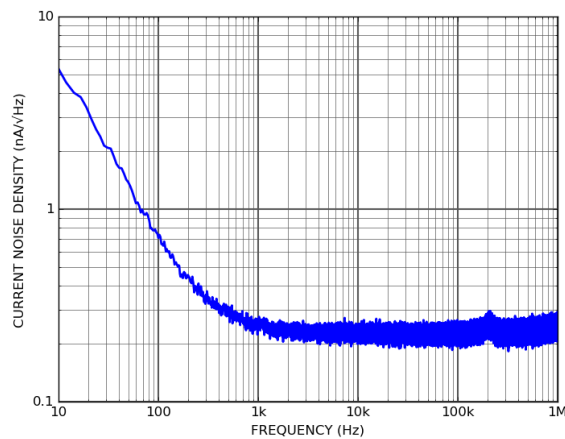| DRV800-8-200	
Current driver	
Laser current	0 mA to 210 mA
Compliance voltage	6.5 V
Laser current resolution	5 µA
RMS noise 10 Hz to 1 MHz	250 nA$_{rms}$
Current noise density 10 kHz	230 pA/√Hz
Temperature coefficient	50 ppm/°C
DC Crosstalk Single channel full scale output change	±25 µA
Modulation 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, nom. 12 V
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 °C to 50 °C
Compatible lasers	Floating diodes / cathode-grounded

Functional diagram

DRV800 functional diagram

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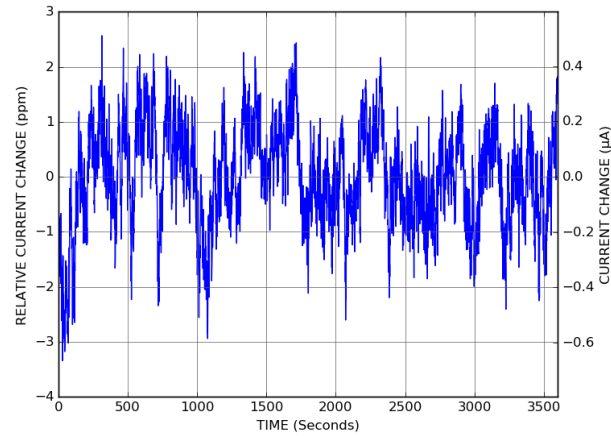
Current noise

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

DRV800 current noise

Current stability

Current stability over an hour driving 200 mA in a 10 Ω load:
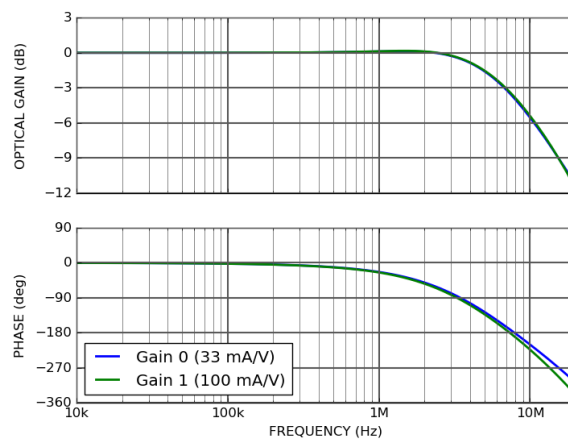
DRV800 one hour current stability

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:

DRV800 modulation frequency response

Cable length effect is presented in user guide.

Ordering codes

PRODUCT NUMBER	ATTRIBUTE
DRV800-8-200	None