

Koheron DRV200S is an ultra-low noise current driver on which the current setpoint is controlled by an externally applied voltage. The DRV200S has variable current limit and compliance voltage. It also features a DC to 6 MHz modulation input with adjustable modulation gain.

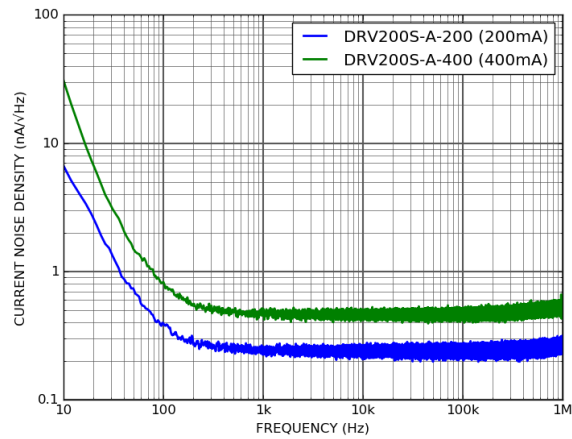
## Specifications

	DRV200S-A-40	DRV200S-A-200	DRV200S-A-400
<b>Current driver</b>			
Laser current	0 mA to 40 mA	0 mA to 200 mA	0 mA to 400 mA
Compliance voltage VSL = 19 V	15.5 V	15.5 V	15.5 V
Current noise density 1 kHz, Modulation gain M	55 pA/√Hz	270 pA/√Hz	480 pA/√Hz
RMS noise 10 Hz to 1 MHz	65 nA <sub>rms</sub>	265 nA <sub>rms</sub>	530 nA <sub>rms</sub>
Temperature coefficient	30 ppm/°C	30 ppm/°C	30 ppm/°C
Current monitor gain	50 V/A	10 V/A	5 V/A
Current limit	13 mA to 60 mA	65 mA to 300 mA	130 mA to 600 mA
<b>Modulation</b>			
3 dB modulation bandwidth	8 MHz	6 MHz	6 MHz
Modulation gain L setting	167 μA/V	833 μA/V	1.67 mA/V
Modulation gain M setting	1.67 mA/V	8.33 mA/V	16.7 mA/V
Modulation gain H setting	16.7 mA/V	83.3 mA/V	167 mA/V
<b>Power supplies</b>			
Internal supply voltage VSI	4.8 V to 6 V	4.8 V to 6 V	4.8 V to 6 V
Laser supply voltage VSL	3 V to 19 V	3 V to 19 V	3 V to 19 V
<b>Other</b>			
Outside dimensions	58 mm x 50 mm x 14 mm	58 mm x 50 mm x 14 mm	58 mm x 50 mm x 14 mm
Weight	19 g	19 g	19 g
Operating temperature	0 °C to 50 °C	0 °C to 50 °C	0 °C to 50 °C
Compatible lasers	<a href="#">Floating diodes</a>	<a href="#">Floating diodes</a>	<a href="#">Floating diodes</a>

## Characterization

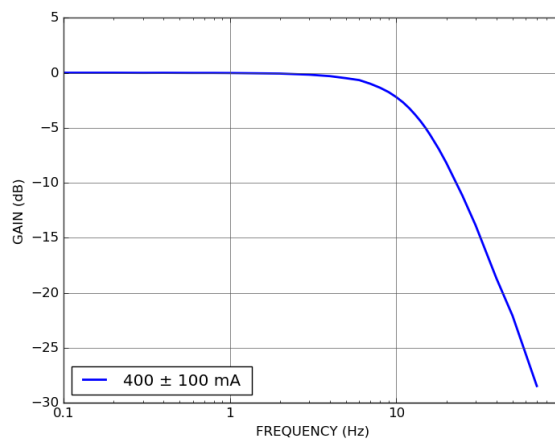
### Current noise

The figure below shows the current noise of the DRV200S laser driver. The setpoint is produced by a [VREF100 voltage source](#).



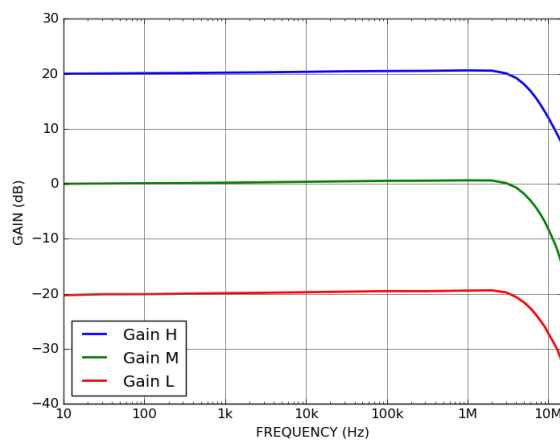
DRV200S current noise

## Setpoint frequency response

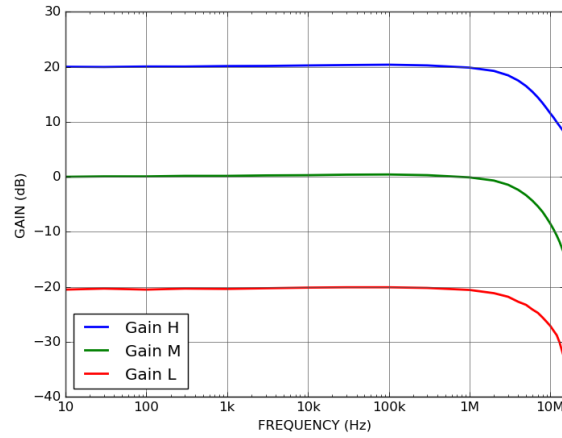


DRV200S setpoint frequency response

## DC current modulation input



DRV200S-A-200 (200 mA) modulation response



DRV200S-A-400 (400 mA) modulation response

Modulation performance are characterized using a DFB laser operated at 80 mA. The gain high modulation (H) is measured at 200 mV<sub>pp</sub> and the gains medium (M) and low (L) are measured at 2 V<sub>pp</sub>. Gains are normalized to the medium modulation gain at DC.

## Ordering codes

PRODUCT NUMBER	ATTRIBUTE
DRV200S-A-40	Laser current 40 mA
DRV200S-A-200	Laser current 200 mA
DRV200S-A-400	Laser current 400 mA