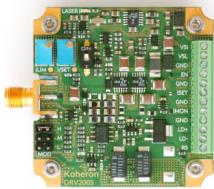


# DRV200S - Low noise laser driver with external setpoint



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 5 MHz modulation input with adjustable modulation gain.

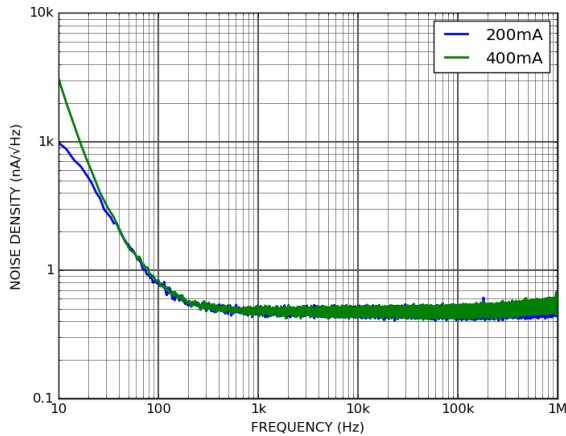
## Specifications

	<b>DRV200S-A-40</b>	<b>DRV200S-A-200</b>	<b>DRV200S-A-400</b>
Laser current	0 - 40 mA	0 - 200 mA	0 - 400 mA
Internal supply voltage (VSI)	4.8 V - 6 V	4.8 V - 6 V	4.8 V - 6 V
Laser supply voltage (VSL)	3 V - 19 V	3 V - 19 V	3 V - 19 V
Maximum compliance voltage	15.5 V	15.5 V	15.5 V
3 db modulation bandwidth	8 MHz	6 MHz	6 MHz
Current monitor gain	50 mV/mA	10 mV/mA	5 mV/mA
Temperature coefficient	30 ppm/°C	30 ppm/°C	30 ppm/°C
RMS noise (10 Hz - 1 MHz)	65 nA <sub>rms</sub>	255 nA <sub>rms</sub>	530 nA <sub>rms</sub>
Current limit	13 - 60 mA	65 - 300 mA	130 - 600 mA
Slow start (90 % setpoint)	1.0 s	1.0 s	1.0 s
Modulation gains	200 $\mu$ A/V, 2 mA/V, 20 mA/V	1 mA/V, 10 mA/V, 100 mA/V	2 mA/V, 20 mA/V, 200 mA/V
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 - 50 °C	0 - 50 °C	0 - 50 °C
Compatible lasers	Floating diodes / anode-grounded	Floating diodes / anode-grounded	Floating diodes / anode-grounded

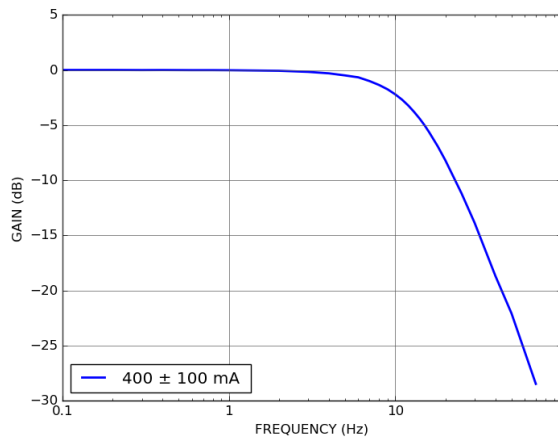
## Characterization

### Current noise

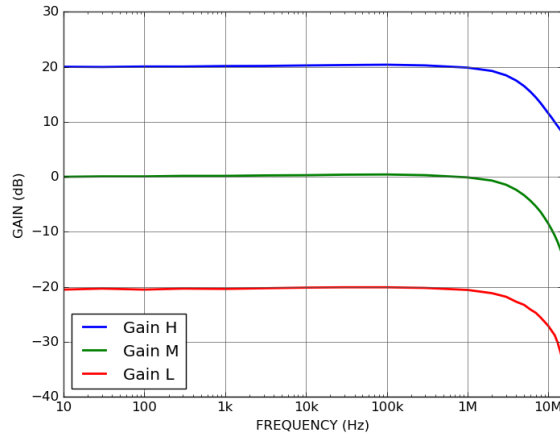
The figure below shows the current noise of the DRV200S-A-400 (400 mA laser current) operated at 200 mA and 400 mA. The setpoint is produced by a [VREF100 voltage source](#).



### Setpoint frequency response



### DC current modulation input



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.