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# 3-Channel Laser Diode Driver with Oscillator

# AD9662

## FEATURES

**Current controlled current source with 3 input channels**
**Output current for Channel 3—315 mA**
**Output current for other channels—210 mA**
**Rise time/fall time of 0.8 ns**
**On-chip oscillator**
**Single 5 V power supply (±10%)**
**Low output overshoot**
**Low power consumption**

## APPLICATIONS

**CD-RW drives**
**DVD-RW, DVD+RW, MO drives**
**Laser diode current switching**

## FUNCTIONAL BLOCK DIAGRAM

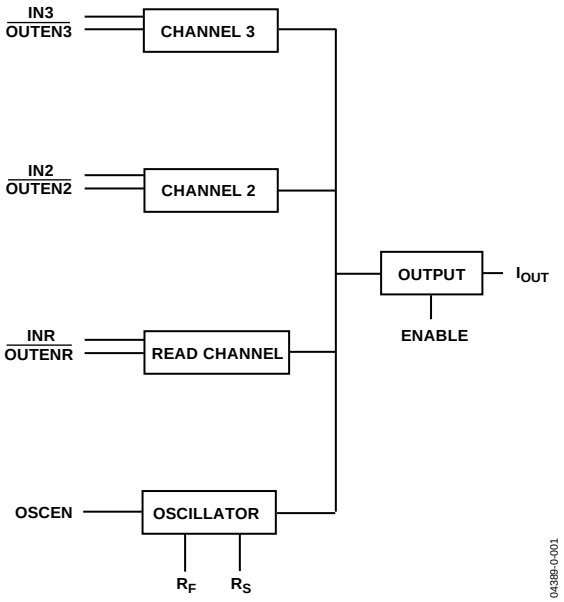


*Figure 1. AD9662 3-Channel Laser Diode Driver*

## GENERAL DESCRIPTION

The AD9662 is a laser diode driver for high performance CD and DVD recordable drives. It includes three channels for three different optical power levels: the read channel generates a continuous output power level, whereas Channel 2 and Channel 3 are used as write channels having 0.8 ns rise/fall times. All channel currents are summed at the $I_{OUT}$ pin. Each channel's output current is established by multiplying the channel's gain by the channel's input current. The input current for each of the input channels—INR, IN2, and IN3—can be set either by using an external resistor that converts an input voltage to a current or by directly using a current source.

An on-chip oscillator is provided to allow output current modulation (to reduce laser mode hopping). Two external resistors control the frequency and the amplitude swing of the oscillator. The push-pull oscillator can swing up to 100 mA p-p and has a frequency range of 200 MHz to 500 MHz.

*For more information about the AD9662, contact Analog Devices, Inc. via email at: high_current_drivers.com@analog.com.*

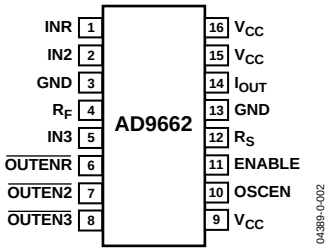


*Figure 2. QSOP-16 Pinout*

**Rev. SpA**
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