

## Features

- Mini-Small Package Outline
- Voltage-controlled output current source requiring one external set resistor per channel
- Current-controlled output current source.
- Rise time = 1.0 ns
- Fall time = 1.1 ns
- On chip oscillator with frequency and amplitude control by use of external resistors to ground
- Oscillator to 500 MHz
- Oscillator to 100 mA pk/pk
- Single +5V supply ( $\pm 10\%$ )
- Current amplification = 100
- CMOS control signals

## Applications

- MO drives
- Mini-Disc drives
- Writable optical drives
- Laser diode current switching

## Ordering Information

Part No	Temp. Range	Package	Outline #
EL6252CY	0°C to +70°C	MSOP10	MDP0043

## Complete Product Specifications Elantec Technical Support:

North America: 1-888-352-6832 X 311  
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## General Description

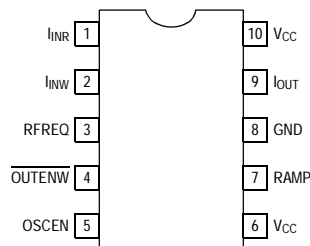
The EL6252C is a high-performance two channel laser diode current amplifier that provides controlled current to a grounded laser diode. The write amplifier can provide over 200mA of DC or pulsed current. The R and W channels have switching speeds of approximately one nanosecond rise/fall time and are summed together at the I<sub>OUT</sub> output. The level of the output current is set by an analog voltage applied to an external resistor which converts the voltage into a current at the I<sub>IN</sub> pin (virtually ground). The current seen at this pin is then amplified by 100X to become a current source at pin I<sub>OUT</sub>.

An on-chip 500 MHz oscillator is provided to allow current modulation when in the read mode. This is turned on when the OSCEN pin is held high (floating not recommended). Complete control of amplitude and frequency is set by two external resistors connected to ground at pins RFREQ and RAMP (see graphs in this data explanation).

Write current pulses appear when an 'L' signal is applied to the  $\overline{\text{OUT-ENW}}$  pin.

The external resistors allow the user to accurately and independently set each amplifier transconductance by applying a voltage to each resistor, without restriction on the voltage range, thus ensuring broad voltage DAC compatibility. Alternatively, the I<sub>IN</sub> pin can be biased from a current DAC or other current source.

## Connection Diagram



# ***EL6252C - Product Brief***

***2-Channel laser diode Driver + Oscillator***

## **General Disclaimer**

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# ***élantec***

HIGH PERFORMANCE ANALOG INTEGRATED CIRCUITS

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