

## Features

- Complete programmable laser diode driver
- 350mA maximum total output
- 8bit x 8bit multiplying DAC output provides 8bit full scale adjustment and 8bit resolution at any full scale output
- 0.17 nsec timer resolution
- Two laser outputs allows read/write DVD and CD combinations
- Programmable waveform values support 2.6GB DVD-RAM, 4.7GB DVD-RAM, DVD-R, DVD+RW, DVD-RW, CD-RW, and CD-R
- Analog input supports APC
- HFM oscillator programmable to 100mA<sub>p-p</sub> from 100MHz to 500MHz
- PLL allows reduced-frequency clock on flex cable
- Separate serial input works up to 25Mb/sec
- Fast I/V amplifier with sampler

## Applications

- Combination DVD writable and CD writable drives
- DVD camcorders
- DVD video recorders

## Ordering Information

Part No	Temp. Range	Package	Outline #
EL6293CL	0°C to +70°C	32-Pin LPP	MDP0046

## General Description

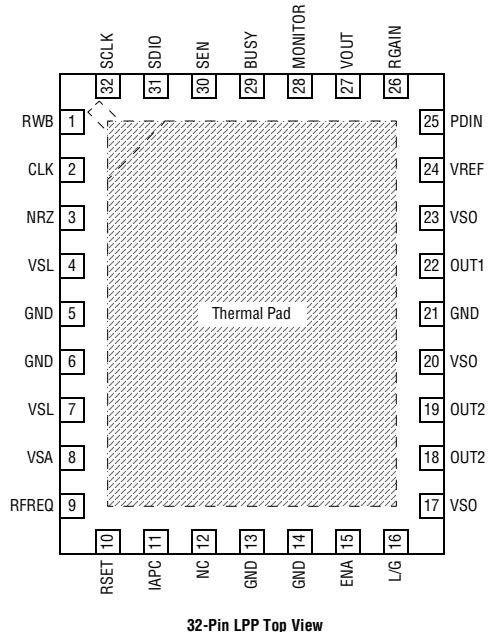
The EL6293C is a highly integrated laser diode driver designed to support multi-standard writable optical drives. It accomplishes this by incorporating a waveform generator wherein the diode currents and timing details can be programmed before operation. The data input circuitry inspects the NRZ serial data waveform and generates programmed waveforms in recognition of 3, 4, 5, or 6 or more clock periods of space changing to 3, 4, 5, or 6 or more clock periods of mark, and vice versa.

This programmable architecture allows reprogramming of the timers to support different media, DVD or CD standards, and different speeds. The programming is accomplished through a serial interface port. Two outputs are provided to support dual-laser multi-standard optical heads.

The EL6293C also contains a fast I/V amplifier with programmable sampler that allows the user to sample any level of the output waveform by using an external photodiode.

The EL6293C requires 3.3V and 5V supplies, with all the logical interface operating on the 3.3V supply.

## Connection Diagram



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Note: All information contained in this data sheet has been carefully checked and is believed to be accurate as of the date of publication; however, this data sheet cannot be a "controlled document". Current revisions, if any, to these specifications are maintained at the factory and are available upon your request. We recommend checking the revision level before finalization of your design documentation.

# ***EL6293C - Product Brief***

## ***Laser Diode Driver with Waveform Generator***

### **General Disclaimer**

Specifications contained in this data sheet are in effect as of the publication date shown. Elantec, Inc. reserves the right to make changes in the circuitry or specifications contained herein at any time without notice. Elantec, Inc. assumes no responsibility for the use of any circuits described herein and makes no representations that they are free from patent infringement.



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