élantec
HIGH PERFORMANCE ANALOG INTEGRATED CIRCUITS

EL6291C - Product Brief

Laser Diode Driver with Waveform Generator

Features

- Complete programmable laser diode driver
- 250mA maximum 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$_{P-P}$ from 200MHz to 600MHz
- PLL allows reduced-frequency clock on flex cable
- Separate serial input works up to 25Mb/sec

Applications

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

Ordering Information

Part No	Temp. Range	Package	Outline #
EL6291CY	0°C to +70°C	32-Pin QFN	MDP0045
EL6291CL	0°C to +70°C	32-Pin LPP	MDP0046

General Description

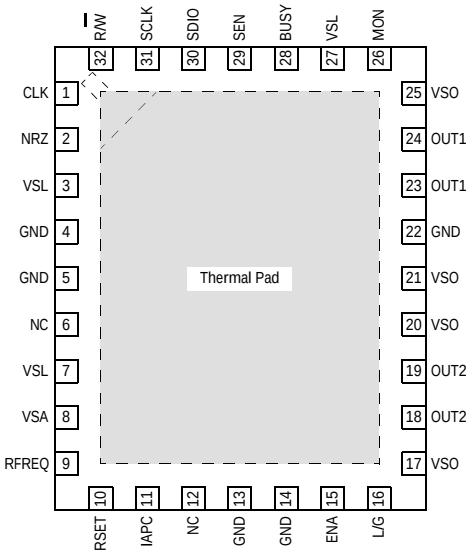
The EL6291C is a highly integrated laser diode driver designed to support multi-standard writable optical drives. It accomplishes this by incorporating a waveform generator wherein the diode currents and timing details can be programmed before operation. The data input circuitry inspects the NRZ serial 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 EL6291C requires 3.3V and 5V supplies, with all the logical interface operating on the 3.3V supply.

The EL6291C is available in 32-pin LPP and 32-pin QFN packages for improved thermal performance and reduced footprint.

Connection Diagram



32-Pin LPP Top View

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General Disclaimer

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