

**Features**

- 4MHz - 200MHz clock
- Complete programmable laser diode driver
- 250mA maximum write output
- 8bit x 8bit multiplying DAC output provides 8bit full scale adjustment and 8bit resolution at any full scale output
- 0.12ns 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 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 #
EL6298CY	0°C to +70°C	32-Pin QFN	MDP0045
EL6298CL	0°C to +70°C	32-Pin LPP	MDP0046

**General Description**

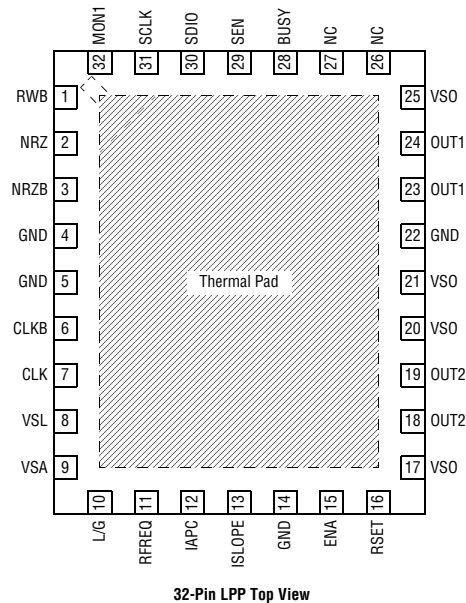
The EL6298C is a highly integrated laser diode driver designed to support multi-standard writable optical drives. It accomplishes this by incorporating a waveform generator wherein the diode currents and timing details can be programmed before operation. The data input circuitry inspects the NRZ serial 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. NRZ and clock are LVDS.

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 EL6298C requires 3.3V and 5V supplies, with all the logical interface operating on the 3.3V supply.

The EL6298C is available in 32-pin LPP and 32-pin QFN packages for improved thermal performance and reduced footprint.

**Connection Diagram**



CAUTION: These devices are sensitive to electrostatic discharge; follow proper IC Handling Procedures.  
 1-888-ELANTEC or 408-945-1323 | Intersil (and design) is a registered trademark of Intersil Americas Inc.  
 Elantec® is a registered trademark of Elantec Semiconductor, Inc.  
 Copyright © Intersil Americas Inc. 2002. All Rights Reserved

**EL6298C****Laser Diode Driver with Waveform Generator****PRODUCT BRIEF**

Effective May 15, 2002, Elantec, a leader in high performance analog products, is now a part of Intersil Corporation.

All Intersil U.S. products are manufactured, assembled and tested utilizing ISO9000 quality systems.  
Intersil Corporation's quality certifications can be viewed at [www.intersil.com/design/quality](http://www.intersil.com/design/quality)

*Intersil products are sold by description only. Intersil Corporation reserves the right to make changes in circuit design, software and/or specifications at any time without notice. Accordingly, the reader is cautioned to verify that data sheets are current before placing orders. Information furnished by Intersil is believed to be accurate and reliable. However, no responsibility is assumed by Intersil or its subsidiaries for its use; nor for any infringements of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Intersil or its subsidiaries.*

For information regarding Intersil Corporation and its products, see [www.intersil.com](http://www.intersil.com)

**Sales Office Headquarters****NORTH AMERICA**

Intersil Corporation  
7585 Irvine Center Drive  
Suite 100  
Irvine, CA 92618  
TEL: 949-341-7000  
FAX: 949-341-7123

Elantec  
675 Trade Zone Blvd.  
Milpitas, CA 95035  
TEL: 408-945-1323  
800: 888-ELANTEC  
FAX: 408-945-9305

**EUROPE**

Intersil Europe Sarl  
Avenue William Fraisse 3  
1006 Lausanne  
Switzerland  
TEL: +41-21-6140560  
FAX: +41-21-6140579

**ASIA**

Intersil Corporation  
Unit 1804 18/F Guangdong Water Bldg.  
83 Austin Road  
TST, Kowloon Hong Kong  
TEL: +852-2723-6339  
FAX: +852-2730-1433