

Features

- Shrink-Small Outline Package
- Voltage-controlled output current source to 200mA per channel, requiring one external set resistor per channel
- Current-controlled output current source to 200mA per channel
- Rise time = 0.8ns
- Fall time = 0.8ns
- On chip oscillator with frequency and amplitude control by use of external resistors to ground
- Oscillator to 500MHz
- Oscillator to 100mA pk/pk
- Single +5V supply ($\pm 10\%$)
- Disable feature for power-up protection and power savings
- Fast Settling APC Amplifier

Applications

- CD-RW applications
- Writable optical drives
- Laser diode current switching

Ordering Information

Part No	Temp. Range	Package	Outline #
EL6283CU	0°C to +70°C	QSOP-16	MDP0041

General Description

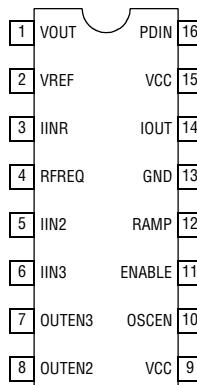
The EL6283C is a high-performance three channel laser driver that provides controlled current to a grounded laser diode. Write channels 2 and 3 can provide up to 200mA per channel of DC or pulsed current, with switching speeds of approximately one nanosecond rise/fall time. All three channels are summed together at the I_{OUT} output, allowing the user to create multilevel waveforms in order to optimize laser diode performance. 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_{IN} pin (virtually ground). The current seen at this pin is then amplified to become a current source at pin I_{OUT}.

An on-chip 500MHz oscillator is provided to allow output current modulation when in any mode. This is turned on when the OSCEN pin is held high. 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 sheet for further explanation).

Output current pulses are enabled when an 'L' signal is applied to the OUTEN pin. No output current flows when OUTEN is 'H', and additional laser diode protection is provided since the OUTEN input will float high when open. Complete I_{OUT} shut-off is also achieved by holding the ENABLE pin low, which will override all other control pins.

The EL6283C also includes a fast settling APC amplifier designed to interface directly with the front end monitor diode and the sample-and-hold amplifier for read and write power control. Its 100MHz bandwidth and 30ns settling time enable up to 16X CD-RW design.

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

EL6283C

3-Channel Laser Diode Driver w/Oscillator & APC Amplifier

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

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



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