

## Laser Diode Driver with Waveform Generator



The EL6900 is a highly integrated laser diode driver designed to support Blu-Ray 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 2, 3, 4, or 5 or more clock periods of space changing to 2, 3, 4, or 5 or more clock periods of mark, and vice versa. The part also has an IV amplifier with concurrent read and write sampling. The gains of the IV amplifier are programmable, eliminating the need for external potentiometers.

The architecture allows reprogramming of all output waveform parameters. The programming is accomplished through a serial interface port. The clock and NRZ inputs can be either standard CMOS or LVDS, selectable through a program bit.

The EL6900 operates on a 5V supply for the analog circuits and a 3.3V supply for the digital circuits.

### Ordering Information

PART NUMBER	PACKAGE	TAPE & REEL	PKG. DWG. #
EL6900CL	38-Pin QFN	-	MDP0046
EL6900CL-T7	38-Pin QFN	7"	MDP0046
EL6900CL-T13	38-Pin QFN	13"	MDP0046

**Get FULL DATASHEET**

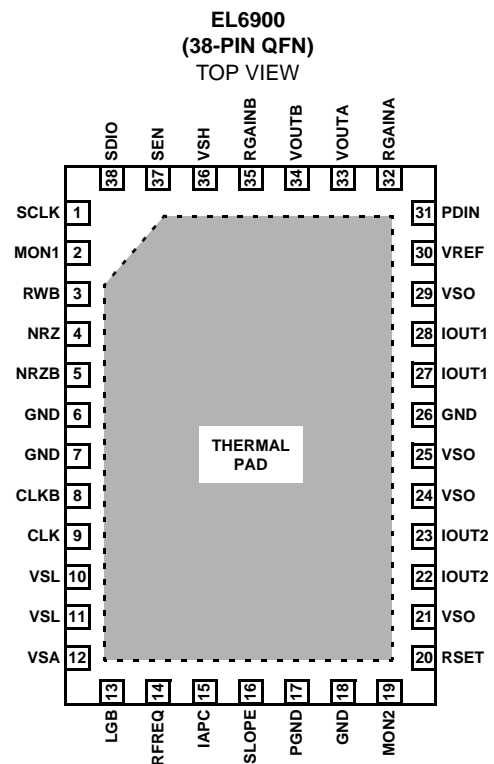
### Features

- Complete programmable laser diode driver
- 350mA maximum total output
- 8-bit x 8-bit multiplying DAC output provides 8-bit full scale adjustment and 8-bit resolution at any full scale output
- 120ps timer resolution
- Blu-Ray Disc standard
- Two analog inputs support slope and read APC
- HFM oscillator programmable to 100mAp-p from 100MHz to 500MHz
- PLL allows reduced-frequency clock on flex cable
- Separate serial input works up to 25MHz
- Dual sampled IV amplifier with programmable sample select and gain select
- Programmable HFM offset when HFM is off

### Applications

- Blu-Ray ultra-density optical (UDO) drives
- Blu-Ray consumer HDTV video recorders

### Pinout



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)