Data Sheet June 15, 2004 FN7223

## 3-Channel Laser Diode Driver + Oscillator

The EL6215 is a high-performance three channel laser driver that provides controlled current to a grounded laser diode. Write channels 2 and 3 should be used as the write channels, 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).



## Features

- Shrink-Small Outline Package
- Voltage-controlled output current source requiring one external set resistor 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 (±10%)
- Disable feature for power-up protection and power savings
- Pb-free Available as an Option

## Applications

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

## Ordering Information

| PART NO. | PACKAGE | TAPE & REEL | PKG. DWG. # |
|---|---|---|---|
| EL6215CL | 24-Pin QFN | - | MDP0046 |
| EL6215CL-T7 | 24-Pin QFN | 7” | MDP0046 |
| EL6215CL-T13 | 24-Pin QFN | 13” | MDP0046 |
| EL6215CU | 24-Pin QSOP | - | MDP0040 |
| EL6215CU-T7 | 24-Pin QSOP | 7” | MDP0040 |
| EL6215CU-T13 | 24-Pin QSOP | 13” | MDP0040 |
| EL6215CUZ (See Note) | 24-Pin QSOP (Pb-free) | - | MDP0040 |
| EL6215CUZ-T7 (See Note) | 24-Pin QSOP (Pb-free) | 7” | MDP0040 |
| EL6215CUZ-T13 (See Note) | 24-Pin QSOP (Pb-free) | 13” | MDP0040 |

NOTE: Intersil Pb-free products employ special Pb-free material sets; molding compounds/die attach materials and 100% matte tin plate termination finish, which is compatible with both SnPb and Pb-free soldering operations. Intersil Pb-free products are MSL classified at Pb-free peak reflow temperatures that meet or exceed the Pb-free requirements of IPC/JEDEC J Std-020B.