

# 56 Gbaud Quad-Channel, Linear VCSEL Driver

**Part No.**

IN5614DV

**Product Type**

Linear Drivers

**Market Segments**

Inside Data Centers

**Applications**800G-AOC  
800G-SR8  
400G-SR4**Features**

- Supports baud rates up to 56 Gbaud
- Quad-channel, 250 µm pitch
- Programmable I<sub>bias</sub> and I<sub>mod</sub> currents
- Burn-in current
- Input swing
- Low power dissipation
- Direct-couple to VCSEL diode w/o bias-T
- I<sup>2</sup>C interface
- ADC for digital monitor
- On-die TEMP sensor
- Pad compatible with IN2814DV
- Available in die form

**Description**

The IN5614DV is a 56 Gbaud quad-channel linear Vertical Cavity Surface Emitting Laser (VCSEL) driver designed for next generation PAM4 400G/800G short reach (SR) applications.

The IN5614DV comes in bare die for surface mount on the module PCB enabling direct wire bonding to a quad-channel 250 µm pitch VCSEL. This frees up space consumed by bias-T components.

The IN5614DV supports interoperability with PAM4 transceiver ICs. It outputs bias current and modulation current.

For minimizing pad count and PCB routing, an I<sup>2</sup>C interface is implemented into the IN5614DV that allows the control of all analog functions. Analog values such as actual bias current can be read from the digital interface by means of an ADC.

The IN5614DV is available in bare die.