

# 53 Gbaud Quad-Channel, Linear VCSEL Driver

**Part No.**

IN5612DV

**Product Type**

Linear Drivers

**Market Segments**

Inside Data Centers

**Applications**

400G/800G Active Optical Cable (AOC)

**Features**

- Supports baud rates up to 53 Gbaud
- Quad-channel driver
- Programmable I<sub>bias</sub> and I<sub>mod</sub> currents
- Burn-in current
- Low power dissipation
- Direct-couple VCSEL diode without bias-T
- I2C interface
- ADC for digital monitor
- Peak detector outputs
- On-die TEMP sensor
- Available in die form

**Description**

The IN5612DV is a 53 Gbaud quad-channel linear Vertical Cavity Surface Emitting Laser (VCSEL) driver designed for 400G/800G AOC applications.

The IN5612DV comes in bare die for surface mount on the module PCB enabling direct wire bonding to a quad-channel VCSEL. This frees up space consumed by bias-T components.

The IN5612DV supports an output bias current and output modulation current.

For minimizing pad-count and PCB routing, an I2C interface is implemented in the IN5612DV that allows the control of all analog functions. Analog values such as bias current and temperature monitoring can be read from the digital interface by means of an ADC.

The IN5612DV is available in bare die.