

26 Gbaud Quad-Channel, Linear VCSEL Driver

Part No.

IN2814DV

Product Type

Linear Drivers

Market Segments

Inside Data Centers

Applications

200G PAM-4 SR4 QSFP
400G PAM-4 SR8 QSFP-DD or OSFP

Features

- Supports baud rates up to 26 Gbaud
- Quad-channel driver
- Programmable I_{bias} and I_{mod} current
- Burn-in current
- Low power dissipation
- Direct-coupled to VCSEL diode without bias-T
- I2C interface
- ADC for digital monitor
- On-die TEMP sensor
- Available in die form

Description

The IN2814DV is a 26 Gbaud quad-channel, linear Vertical Cavity Surface Emitting Laser (VCSEL) driver designed for next generation PAM-4 200G and 400G short reach (SR) applications.

The IN2814DV comes in bare die for surface mount on the module PCB enabling direct wire bonding to a quad-channel VCSEL driver. This frees up space consumed by bias-T components.

The IN2814DV provides a wide linear input range to support interoperability with PAM-4 transceiver ICs. Its output bias current and its output modulation current are tailored to a linear operation range of 25G VCSEL.

For minimizing pad count and PCB routing, an I2C interface is implemented in the IN2814DV 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.