

General Description

The HXT4101A VCSEL driver is a key component for compact, high-performance, low-power optical modules. In conjunction with the VCSEL, the chip handles the complete digital-to-optical conversion, including CML input, laser driver, drive control, and supervision.

The HXT4101A can be used in standalone mode (no microcontroller need), or in an I2Ccontrolled mode. The I2C interface and the embedded monitoring circuits enable fully programmable OSAs with co-packaged VCSEL and driver, for example low-power SFP+ modules using Smart TO-cans[®].

Both operational modes require a small number of additional components resulting in low cost, compact, high yield assemblies.

Applications

- OC-192/STM-64 transmission systems
- 10GBASE-SR
- 2G/4G/8G/16G Fiber Channel
- USB 4.0 active optical cables
- SONET OC-192 with dual FEC
- Avionic optical interconnects

Features

- Low power consumption of 65 mW per channel while delivering 7 mA average and 7 mA modulation current
- 10 mA Average and 10 mA Modulation current max.
- 15 mA burn-in current max.
- Complete set of control and diagnostic features
- A/D read-out of temperature, effective VCSEL current and monitor photo-current
- I2C control interface
- Standalone modes for operation without microcontroller

Ordering Information

Part	Temp Range	Pin-Package
HXT4101A -DNT	-40 °C to +100 °C	Bare Die 1.1 mm x 1.1 mm

For price, delivery schedules, and to place orders, please contact IDT: <u>www.IDT.com/go/sales</u>

Device Diagram



Figure 1: Device diagram



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Sales

1-800-345-7015 or 408-284-8200 Fax: 408-284-2775 www.IDT.com/go/sales

Tech Support

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