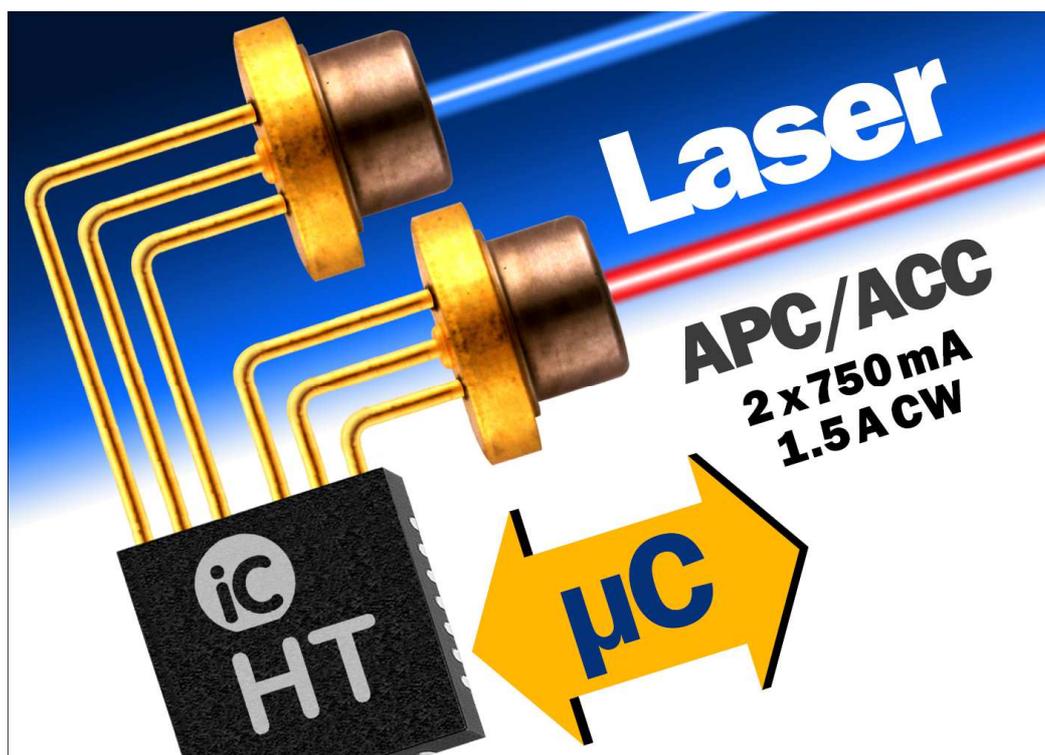


iC-HT: two-channel, CW laser diode driver with a μ C interface

Integrated laser diode driver for digital activation with a microcontroller

Two colors with one laser driver

The new laser diode driver iC-HT permits microcontroller-based activation of laser diodes in CW mode. With this device laser diodes can be driven by either the optical output power (using APC), the laser diode current (using ACC), or a full, controller-based power control unit. The maximum laser diode current per channel is 750 mA. Both channels can be switched in parallel for particularly high laser diode currents of up to 1.5 A. A current limit can also be configured for each



channel. Thanks to the high integration level of the analog functions for activation of the laser diodes with the microcontroller interface, multichannel laser diode control units can be implemented directly. Apart from the iC-HT only the

microcontroller and laser diodes are required, the latter with varying wavelengths, for example.

Download text and photo at http://www.ichaus.com/pressroom/ichaus_ht_pre.zip

Internal operating points and voltages can be output through analog/digital converters. The integrated temperature sensor permits the system temperature to be monitored and can also be used to check for feedback in the control circuit. Logarithmic digital/analog converters allow optimum power regulation across a large dynamic range enabling a variety of laser diodes to be used.

The relevant configuration is stored in two equivalent memory areas; internal current limits, a supply voltage monitor, channel-specific interrupt switching inputs, and a watchdog safeguard the operation of the laser diodes through iC-HT.

Alternatively, the device can be operated by pin configuration in place of the SPI or I²C interface, where external resistors define the APC performance targets.

An external supply voltage can be controlled through current output DCO to reduce the system power dissipation to a minimum, such as in battery-operated devices or systems.

iC-HT works on supply voltages of 2.8 V to 8 V and can thus drive both blue and green laser diodes. Operating temperatures range from -40°C to +125°C. The device is housed in a 28-pin QFN package measuring 5 x 5 mm.

The design-in process is supported by ready-to-operate demo boards and software for evaluation with a PC.

Further information is available at <http://www.ichaus.com/iC-HT>.

Introducing iC-Haus

iC-Haus GmbH is a leading independent German manufacturer of standard iCs (ASSP) and customized ASiC semiconductor solutions. The company has been active in the design, production, and sales of application-specific iCs for industrial, automotive, and medical technology for over 25 years and is represented worldwide. The iC-Haus cell libraries in CMOS, bipolar, and BCD technologies are fully equipped to realize the design of sensor, laser/opto, and actuator ASiCs, among others. The iCs are assembled in standard plastic packages or using iC-Haus chip-on-board technology to manufacture complete microsystems, multichip modules, and optoBGA™, the latter in conjunction with sensors.

Further information is available at <http://www.ichaus.com>.

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