DT 1700-20 CW Laser Diode Driver and TEC Driver

Features

Drives high voltage, high power laser diodes and TECs

High accuracy

High current stability

Very low ripple current

Excellent dynamic performance

No overshoot, no ringing High output impedance

Specification Diode Unit

 $\begin{array}{lll} \mbox{Diode current} & 0 \dots 20 \ \mbox{A} \\ \mbox{Diode voltage} & 0 \dots 49 \ \mbox{V} \\ \mbox{Supply voltage} & 15 \ \mbox{V} \dots 50 \ \mbox{V} \\ \mbox{Output power} & 1000 \ \mbox{W max}^* \\ \mbox{Accuracy} & \pm 0.1 \ \% \\ \mbox{Temperature stability} & \pm 50 \ \mbox{ppm} \ \slash \ \cite{Constraints} \end{array}$

Ripple current 0.2 %
Settling time <1ms
Diode current monitor 250 mV / A
Diode voltage monitor 100 mV / V

Auxiliary voltage outputs +5.1 V, +15 V, -15 V

Reference voltage output +5 V

Specification TEC Unit

TEC voltage $0 \dots \pm 49 \text{ V max}$ TEC current $0 \dots \pm 15 \text{ A max}$ Supply voltage $15 \text{ V} \dots 50 \text{ V}$ TEC power 700 W max^* Temperature range $0 \dots +50 \text{ °C}$ Accuracy $\pm 0.1 \text{ K}$ Temperature monitor 100 mV / °C

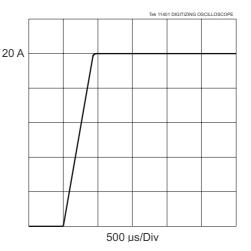
Temperature sensors PT 1000 or KTY 11-5



* 1700 W max, Diode power plus TEC power Ambient temperature 0 ... +45 °C Dimensions 259 x 69 x 105 mm

Weight 1900 g Ordering Code 10100410

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Description

The DT 1700-20 is a high-precision laser diode driver and a full bridge TEC driver with temperature controller and control logic utilizing MPCs patented technology.

This technology has a lot of advantages and is particularly suited for driving laser diodes.

It offers high accuracy and current stability, excellent dynamic performance, high output impedance, low electromagnetic interference and a lot of features for protecting laser diodes.

No current overshoot or ringing arise when altering output current or load impedance abruptly.

The DT 1700-20 can be operated by a microcontroller, an external control logic or completely analog. Two operating modes are possible, mode Laser On/Off and mode Auto On.

The device is well suited to build up simple laser systems with manual controlling, or complex laser systems with safety interlock, RS 232 interface and an industrial interface for controlling by a programmable logic controller.

A comprehensive range of accessories is available, like eight different types of control panels, a safety interlock unit and a control interface unit with an industrial interface and a RS 232 interface, which allows fully controlling and configuring the system.

For detailed information see operating manual or visit our website.