MESSTEC Power Converter GmbH

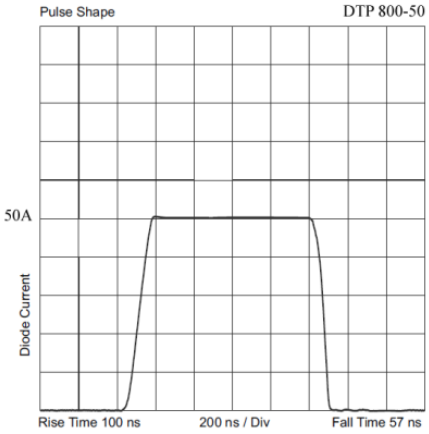
Data Sheet
DTP 800-50

Features

Drives laser diodes and TECs
Exceptionally short rise and fall time
High current stability
Very low ripple current
Excellent dynamic performance
No overshoot, no ringing
High output impedance

Specification Diode Unit

Diode current	0 ... 50 A
Diode voltage	0 ... 29 V
Supply voltage	15 V ... 30 V
Output power	800 W max*
Pulse width	200 ns ... CW
Rise time	100 ns
Fall time	57 ns
Pulse frequency	200 KHz / 1 MHz max
Ripple current	0.2 %
Diode current monitor	100 mV / A
Diode voltage monitor	200 mV / V
Auxiliary voltage outputs	+5.1 V, +15 V, -15 V
Reference voltage output	+5 V



Specification TEC Unit

TEC voltage	0 ... ±29 V max
TEC current	0 ... ±15 A max
Supply voltage	15 V ... 30 V
TEC power	450 W max*
Temperature range	0 ... +50 °C
Accuracy	±0.1 K
Temperature monitor	100 mV / °C
Temperature sensors	PT 1000 or KTY 11-5

General specifications

* 800 W max, Diode power plus TEC power

Ambient temperature	0 ... +45 °C
Dimensions	259 x 87 x 105 mm
Weight	2315 g
Ordering Code	10100530

Description

The DTP 800-50 is a super fast pulsed laser diode driver and a full bridge TEC driver with temperature controller utilizing MPCs technology.
This multiple patented technology allows pulsing with fall times 120 times shorter compared to the state of the art and with very low electromagnetic interference.
No current overshoot or ringing arise when altering output current or load impedance abruptly.
The DTP 800-50 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.