

MODULES

LDC/E-Temp3

High performance temperature controller for laser diodes ($\pm 3A$)



MAIN FEATURES

Ultra high resolution (better than 0.0002 °C). 24 bits ADC thermistor measurement
High temperature stability (0.001 °C)
 $\pm 3 A$ TEC current
Highly customizable PID loop, with several method for auto-calibration and graphical step response
For 10 k Ω thermistor NTC sensors. Other sensors soon

_PRODUCT SPECIFICATIONS

LDC/E-Temp3

TEC controller output

Current range	±3 A
Compliance voltage	< 4.3 V
Maximum output power	12.9 W

TEC controller sensor measurement

Measurement	4-wire
Sensor type	10 kΩ Thermistor
Resolution	<0.34 Ω (< 0.2 m°C)
Accuracy	±1.5 Ω (± 0.6 m°C)
Short term stability (40 s)	<2 m°C

Temperature control loop

Type	PID Manual independent configuration of P, I, D parameters Automatic PID calibration (several methods to choose) Graphical step response and configuration
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General

Protection features	Temperature limits, Temperature window, no sensor detection
Connector	D-SUB9 (female)
Format	VME 160mm (for use with chassis/xxHP series and SOM/E controller)
Operating temperature	0-40 °C
Storage temperature	-40-70 °C
Size	3U height, 4 HP width, 160 mm depth
Weight	TBD
Warm-up time	TBD

_PINOUT

Pin	Name	IN/OUT	Description
1	TEC+	O	TEC current positive
2	TEC+	O	TEC current positive
3	TEC-	O	TEC current negative
4	TEC-	O	TEC current negative
5	GND	I/O	Ground (chassis)
6	GND	I/O	Ground (chassis)
7	TH1	I	Thermistor terminal 1
8	TH2	I	Thermistor terminal 2
9	TEC+	O	TEC current positive
10	TEC-	O	TEC current negative
11	NC		Not Connected
12	NC		Not Connected
13	NC		Not Connected
14	TH1_SENSE	I	Thermistor terminal 1 sense
15	TH2_SENSE	I	Thermistor terminal 2 sense
C	Connector	I/O	Ground (chassis)

_ORDERING INFORMATION

LDC/**E**-Temp3-x

- x: blank (standard)
- OEMcontrol (OEM version remote controlled)
- OEMnoControl (OEM low cost potentiometer based control)



_v0.2 datasheet 20160406
LDC/E-Temp3

All product specifications are subject to change without prior notice

