LDD1000

Laser Diode Driver

- 600 W power
- Up to 120 A laser diode current
- Up to 60 V laser diode voltage
- CW and pulse operation
- Extern analogue modulation
- Laser ramp function
- Interlock function
- RS232 PC Interface

Parameter	Unit	Value						
Specifications								
Power Laser Diode Driver	W	600						
Max. Laser Diode Current	A	10	13	18	27	43	53	120
Max. Laser Diode Voltage	V	60	48	36	24	15	12	5
Ripple / Noise (rms)	mA	200						
Current Limit Range		0 ... Max. Laser Diode Current						
Current Adjustment Accuracy	mA	100						
Temperature Coefficient	ppm/°C	< 100						
Short Term Stability (1 hr)	ppm	< 30						
Long Term Stability (24 hr)	ppm	< 75						
Repetition Rate	Hz	0 ... 100						
Pulse Width (*)	ms	> 5						
Rise- / Fall- Time (*)	ms	< 2 (10 % – 90 % of Max. Current)						
Analog Modulation								
Input Voltage		0 ... 10 V, 1 kΩ						
Transfer Function		10 A/V						
Bandwidth	Hz	0 ... 100						
Power Monitor								
Output Voltage	V	0 ... 10						
Transfer Function		10 A/V						
Pilot Laser								
Pilot Laser Voltage		5 V						
Pilot Laser Current	mA	Max. 300						
Pilot Laser Power Adjustment	ppm/°C	1 ... 100 %						
Temperature Sensors								
Sensor Types		Thermistor / PT100 / PT1000						
Thermistor		NTC, 10 kΩ @ 25°C, Current: 100 µA						
Power Supply								
Line Voltage	V	85 - 264 AC, Auto Ranging						
Frequency	Hz	50 - 60						
Power Consumption	W	1.500						
Fuses Rating for 115 V AC		16 A Slow Acting (5x20 mm)						
Fuses Rating for 230 V AC		8 A Slow Acting (5x20 mm)						

General Characteristics		
Ambient Temperature, Operating	°C	0 ... 30
Relative Humidity, Operating	%	30 ... 70
Weight	kg	6,4
Dimensions	mm^3	310 x 140 x 220 (W x H x D)

Notes:
(*) The risetime, the fall time and the pulse width may be prolonged by long cables between the power supply and the laser diode.

The signal ground (shielding) of the BNC-connectors of the trigger input, the trigger output and the analogue modulation input BNC-connector are isolated from the chassis ground (earth).

Attention:
The output pin „laser diode anode, plus, „+“ „ which is connected to the anode (A) of the laser diode is internally connected to any internal power supply voltage of the instrument.

Please be aware that most of all medium and high-power laser diodes have their housing electrically connected to the anode of the laser diode.

Therefore, in order to avoid any grounding loops when applying external instruments to the Laser Diode Controller unit it is recommended to isolate the housing of the laser diode from the chassis (earth).

Remark:
If the laser diode is mounted to the heat spreader of the heat sink provided by LASER ELECTRONICS it is already isolated from chassis ground (earth).

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