



Power Supplies and Drivers for Lumics Laser Modules



Description:

Lumics collaborates with Ostech to provide high precision and cost effective power supplies and drivers for 14pin butterfly, high power pump modules and medical laser modules. Standard interface are the RS232 port, and analog current control. You can set arbitrary limits for currents, voltages and laser diode heat sink temperatures. The device can modulate the laser internally by on-board oscillator or may be configured for external modulation. Multiple circuits watch over the laser security to avoid any harm to the laser. Every device has passed our 24 h full power burn in and several safety tests for proving static discharge and transient protection.

Features & Functions:

- RS 232 interface
- External analog and digital modulation
- Fan control for powered air cooler
- Cw and pulsed operation
- Rise and fall time <math><20\mu\text{sec}</math> option
- Bias current option for modulation
- Integrated driver for pilot laser
- Voltage, current and temperature limits
- TEC driver included

Benefits:

- Compact design
- Transient protection
- Save diode laser operation
- Customised interface options
- Cost-effective
- High Reliability
- LabVIEW driver
- Mounting blocks are offered on request

Applications:

- Analytics and sensing
- Material processing
- Medical laser treatment
- Marking

Versions and Characteristics

Type / Parameter	Fits for Lumics DL	Symbol	Typical	Unit
1) DS11-LA20V08 / 1A, 6V	single mode 14pin butterfly laser modules LU1064M400 (400mW 1064nm single mode seed laser)			
Max. operating current		I_{max}	1	A
Max. operating voltage		U_{max}	6	V
Housing size (H-W-D) (1)			85x105x200	mm
2) DS11-LA20V08 / 14A, 6V	multi-mode TO220 pump modules LU0976T100 (10W 976nm pump module)			
Max. operating current		I_{max}	14	A
Max. operating voltage		U_{max}	6	V
Housing size (H-W-D) (1)			85x105x200	mm
3) DS11-LA20V08 / 20A, 6V	10W to 30W medical laser modules, and 25W pump module LU0980D300-D (980nm, 30W medical laser)			
Max. operating current		I_{max}	20	A
Max. operating voltage		U_{max}	6	V
Housing size (H-W-D) (1)			84x105x200	mm

General Parameters

Supply Voltage (AC) (2)	100 - 230	ACV
Cw. operation current resolution	$I_{\text{max}}/4000$	
Current accuracy	+/- 0.5	%
Current noise	$I_{\text{max}}/10000$	rms
External analog modulation	0-4	V
Pulse mode, rise and fall time (depending on configuration, please specify)	1 to 20	μsec
Ambient temperature	0 to 40	$^{\circ}\text{C}$
Fan supply voltage ($I_{\text{max}}=500\text{mA}$)	12 - 24	V
Pilot laser supply voltage ($I_{\text{max}}=150\text{mA}$)	4-5	V

Peltier module:

TEC max. peak current (to be specified)	+/- 16	A
TEC max. peak voltage (to be specified)	+/- 18	V
Max temperature control range (limited to 20-40 $^{\circ}\text{C}$ for 30W Laser)	-20 to +60	$^{\circ}\text{C}$
Temperature control accuracy	10	mK

Comments:

(1) Optionally in 19inch rack mount, or integrated in powered air-cooled diode laser system

(2) 24V on request

Mounting blocks for 14pin butterfly, TO220 modules and medical laser are offered on request



Your ideas are welcome.