



Power Supplies and Drivers for Lumics Diode Laser Systems



Description:

Lumics collaborates with Ostech to provide high precision and cost effective power supplies and drivers. 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 <20µsec option
- Bias current option for modulation
- Integrated driver for pilot laser
- Voltage, current and temperature limits
- TEC driver option

Benefits:

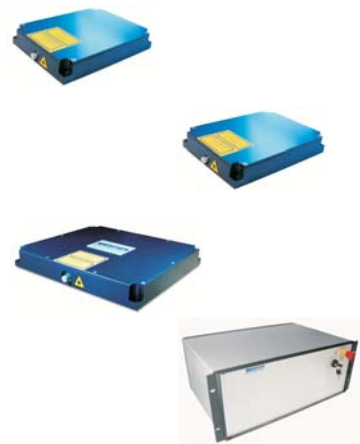
- Compact design
- Transient protection
- Save diode laser operation
- Customised interface options
- Cost-effective
- High Reliability
- LabVIEW driver

Applications:

- Solid state laser pumping
- Material processing
- Medical laser treatment
- Illumination
- Marking
- Analytics and sensing

Versions and Characteristics

Type / Parameter	Fits for Lumics DL	Symbol	Typ	Unit
1) LS11-LA14V18 / 110W	e.g. LU0808C030 (30W)			
Max. operating current		I_{max}	6	A
Max. operating voltage		U_{max}	18	V
Housing size (H-W-D) (1)			85x105x200	mm
2) LS11-LA14V18 / 250W	e.g. LU09xxC060 (60W)			
Max. operating current		I_{max}	14	A
Max. operating voltage		U_{max}	18	V
Housing size (H-W-D) (1)			85x105x200	mm
3) LS11-LA13V48 / 625W	e.g. LU09xxC160 (160W)			
Max. operating current		I_{max}	13	A
Max. operating voltage		U_{max}	48	V
Housing size (H-W-D) / 19inch rack mount 2 height units			88x482.6x337	mm
4) LS11-LA13V96 / 1250W	e.g. LU09xxC250 (250W), and LU09xxC380 (380W)			
Max. operating current		I_{max}	13	A
Max. operating voltage		U_{max}	96	V
Housing size (HxWxD) / 19inch rack mount, 3 height units			133x482.6x337	mm



General Parameters

Supply Voltage (AC) (2)	100 - 230	ACV
Cw. operation current resolution	$I_{max}/4000$	
Current accuracy	+/- 0.5	%
Current noise	$I_{max}/10000$	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	°C
Fan supply voltage ($I_{max}=500mA$)	12 - 24	V
Pilot laser supply voltage ($I_{max}=150mA$)	4-5	V

Peltier module option:

TEC max. peak current (to be specified)	+/-16	A
TEC max. peak voltage (to be specified)	+/-18	V
Max. temperature control range (will be limited depending on Laser power)	-20 to +60	°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

Your ideas are welcome.