



CW1083-01

- IR DPSS Laser Module
- 1083 nm, <1 mW
- Fix Focus Glass Lens
- Automatic Power Control
- 3 VDC Input Voltage



Description

CW1083-01 is a compact size fix collimated diode pumped solid state (DPSS) Nd:YVO4 laser module with a typical emission wavelength of **1083 nm**, and an optical output power of **<1 mW**. It features automatic power control (APC) driving electronics for stable operation, and is designed for 3 VDC supply voltage. A matching **power supply, heat sink, and suitable laser module holder** is optionally available for quick setup and convenient operation (see page 3 for details).

Maximum Ratings (T_{CASE} = 25°C)

Parameter	Values		Unit
	Min.	Max.	
Operating temperature	+ 10	+ 40	°C
Storage temperature	- 20	+ 80	°C

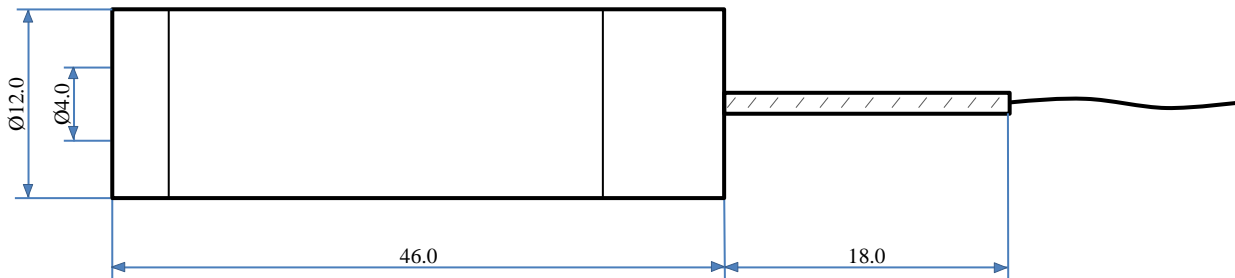
Electro-Optical Characteristics (T_{CASE} = 25°C)

Parameter	Values			Unit
	Min.	Typ.	Max.	
Peak Wavelength		1083		nm
Radiated Power			1	mW
Beam diameter at aperture		3		mm
Beam divergence		0.8		mrad
Polarization ratio		> 100:1		
Warm up time		< 3		s
Operating Current		70		mA
Supply Voltage	2.2	3	3.2	VDC
Material body	brass			
Material lens	glass			
Dimensions	Ø 12 x 46 (64)			mm
Leads	0.25 mm ² x 100 mm, 26 AWG PVC-Free			
MTTF	3000			h





Outline Dimensions



all dimensions in mm

Electrical Connection

Lead	Description
Red	+VDC
Black	GND

Precautions

Static Electricity:

Precautions against electrostatic discharge (ESD) must be taken when handling or operating the module. Surge voltage or electrostatic discharge can result in complete failure of the laser diode.

Heat Sinking:

In order to maintain lifetime and stability of the laser diode it is essential to provide efficient heat management. For long time stable operation proper contact between laser module and heat sink is mandatory.

Safety:

This laser module emits highly concentrated **invisible light** which can be **hazardous to the human eye and skin**. It is classified as **CLASS 3B laser product** according to **IEC 60825-1** and **21 CFR Part 1040.10 Safety Standards**. Actual laser light emitted and precautions necessary strongly depend on mode of operation.





Accessories

Power Supply

LPS31C



- 100-240 VAC universal input voltage
- AC Europlug (CEE7/16)
- IEC 60130-10 Type A connector
- Output 3 VDC, max. 1 A
- CE certified
- 30 x 80 x 75 mm
- 80 g

Heat Sink

SQ50x34



- Aluminium, black anodized
- Clamping mechanism
- 50 x 50 x 34 mm
- 114 g

Holder

RLM-1650



- Steel, black anodized
- Height, reach, tilt adjustable
- Fixture 360° turnable
- Max. module diameter: 16.5 mm
- 69 x 67 mm
- 152 g