



# ROITHNER LASERTECHNIK GmbH

WIEDNER HAUPTSTRASSE 76  
TEL. +43 1 586 52 43 -O. FAX. -44

1040 VIENNA

AUSTRIA

OFFICE@ROITHNER-LASER.COM



## CW450-05

- Blue Laser Diode Module
- 450 nm, <5 mW
- Fix Focus Acryl Lens
- Automatic Power Control
- Wide Input Voltage Range (2-5 VDC)



### Description

**CW450-05** is a compact size fix collimated laser diode module with a typical emission wavelength of **450 nm**, and an optical output power of **<5 mW**. It features automatic power control (**APC**) driving electronics for stable operation, and supports a wide input voltage range (2-5 VDC). **CW450-05** comes equipped with a coaxial power connector. 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<sub>CASE</sub> = 25°C)

Parameter	Values		Unit
	Min.	Max.	
Operating temperature	+ 10	+ 60	°C
Storage temperature	- 20	+ 80	°C

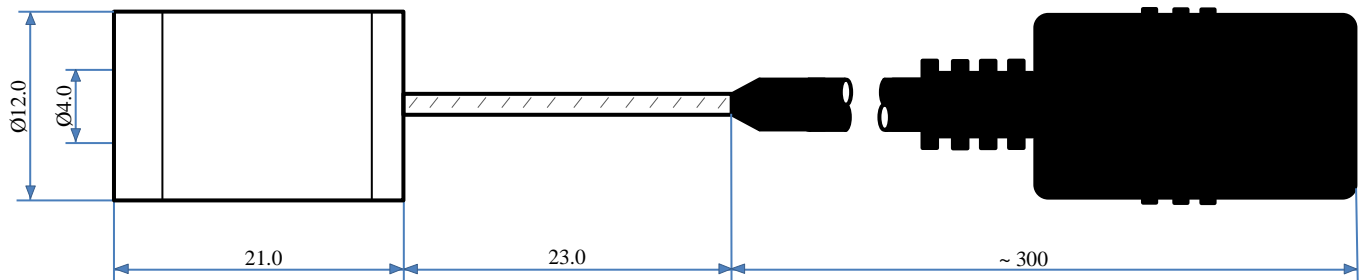
### Electro-Optical Characteristics (T<sub>CASE</sub> = 25°C)

Parameter	Values			Unit
	Min.	Typ.	Max.	
Peak Wavelength	440	450	460	nm
<b>Radiated Power</b>			<b>5</b>	<b>mW</b>
Beam diameter at aperture		2		mm
Beam divergence		1.0		mrad
Operating Current		80	140	mA
<b>Supply Voltage</b>	<b>2</b>		<b>5</b>	<b>VDC</b>
Material body	brass			
Material lens	acryl			
Dimensions	Ø 12 x 21 (44)			mm
Connector	IEC 60130-10, Type A, 5.5/2.1 mm			
MTTF	3000			h





## Outline Dimensions



all dimensions in mm

## Electrical Connection

(IEC 60130-10, Type A, 5.5/2.1 mm)



## 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 visible light which can be **hazardous to the human eye and skin**. It is classified as **CLASS 3R 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

#### LPS51C



- 100-240 VAC universal input voltage
- AC Europlug (CEE7/16)
- IEC 60130-10 Type A connector
- Output 5 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