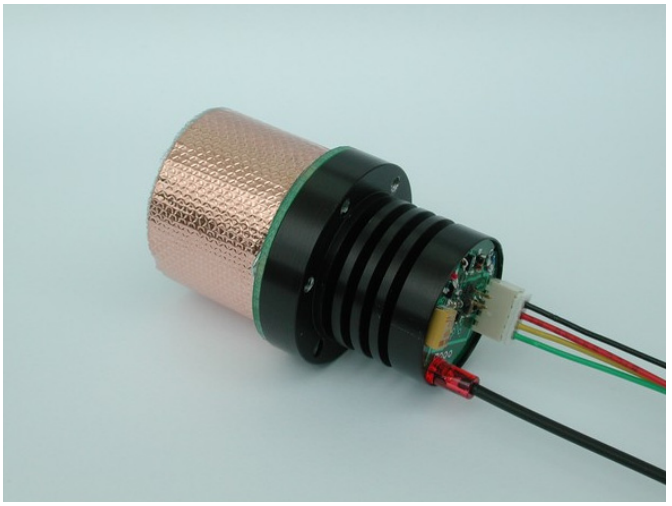
Thermoelectrically Cooled Red LASER Modules

WLTECxxx-xx

These thermoelectrically cooled red light emissive modules are composed of a LASER diode, a Peltier element, an electronic driver and a collimation optic system, all packaged in a mixed aluminum/ceramic body. Each device features an anti-reflex treated high quality glass lens, assuring a good collimation and a limited diffraction. Output power is stabilized over the entire temperature range.

Their microprocessor based temperature control system maintains a user definable constant diode temperature, allowing the use of these lasers in applications demanding longer lifetime, consistency and wavelength stability. The setpoint temperature is adjustable via two input lines and is automatically saved in an internal FLASH memory. A simple monitor serial link can be realized with a plastic fiber and a **WLIO1M** adapter.



Features

- High quality LASER diode
- High quality glass lens
- Stabilised output power
- Over-temperature protection
- Extended laser diode lifetime
- Excellent wavelength and power stability

Applications

- Spectroscopy
- Microscopy
- Medical
- Particles detection
- Distance measurement
- Frequency stabilisation of laser modules

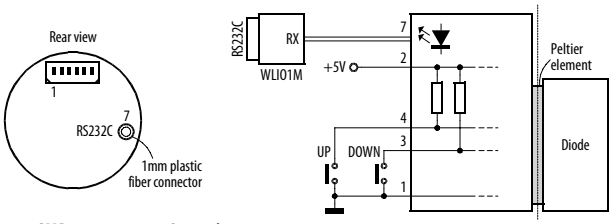
Technical specifications

Supply voltage	+5V±10% / 1A max.
Output power†	1 ÷ 15 mW
Wavelength†	635 ÷ 670 nm
Beam‡	collimated, 4x2 mm
Divergence	0,4 mrad max.
Boresight	5 mrad typical
Operating temperature	15 ÷ 35°C
Temperature setpoint	15 ÷ 35°C in 0.1 up/down increments
Temperature stability	±0.05°C
Weight	TBD

†See the ordering codes

‡Fibred and other options are available on request

Connections



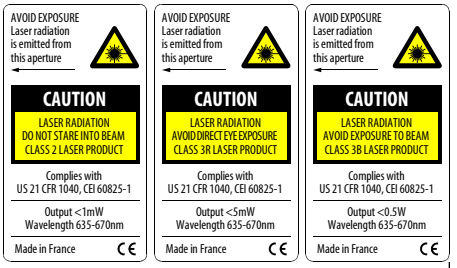
1	**GND**	Ground.
2	**+5V**	Power supply.
3	**DOWN**	Setpoint decrement input, active on the rising edge. A short pulse decrements the setpoint by 0.1°C, a pulse longer then 1s by 1°C.
4	**UP**	Setpoint increment input, active on the rising edge. A short pulse increments the setpoint by 0.1°C, a pulse longer then 1s by 1°C.
5	**RESERVED**	Must be left floating.
6	**RESERVED**	Must be left floating.
7	**RS232C**	ASCII data output, 115200 Baud, 8 data bits, 1 stop bit, no parity. An **WLIO1M** adapter is required.

Ordering codes

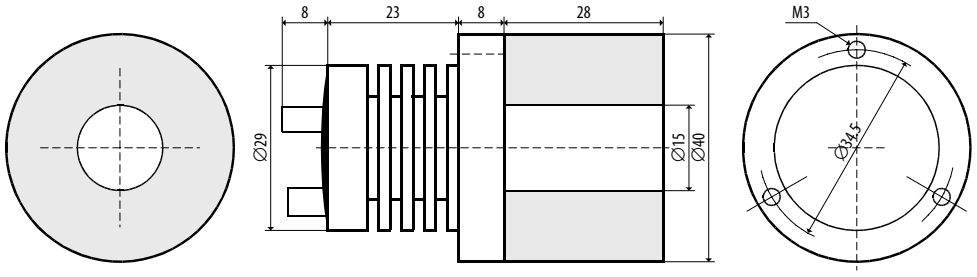
WLTEC<u>**xxx**</u>**-**<u>**xx**</u>

635	- 635 nm
650	- 650 nm
670	- 670 nm

1	- 1 mW
2	- 2 mW
3	- 3 mW
5	- 5 mW
10	- 10 mW
15	- 15 mW



Mechanical data



Dimensions in mm