



RedChip 1500M

1.54 μm MINIATURIZED HIGH POWER MODE-LOCKED CHIPLASER

The **RedChip series** of lasers are compact, high efficiency laser platforms capable of operating at wavelengths from $<1000\text{nm}$ to $>3000\text{nm}$. Based on the unique combination of specialty ZBLAN glass and laser inscribed waveguides, the chip laser brings performance characteristics normally only available in solid-state solutions to the size and economy regime of diode and fibre lasers.

Chiplaser technology enables compact footprints and high wall efficiencies over a range of wavelengths, requires no active cooling and delivers TEM₀₀ mode with near-perfect mode-quality, and low variance in space, time and energy.

The **RedChip 1500M** is a passively mode-locked chip laser designed for applications that require:

- Ultrashort pulses ($<100\text{fs}$)
- High Peak-Power
- Highest focusability
- Eye safe output
- Compact / low mass packages
- Long term reliability
- High-power efficiency
- No service requirements

Ideal Applications include:

- Aerospace
- Bio-photonics
- OPO pumping
- Supercontinuum generation
- Frequency combs

Features

Standard

- Waveguide chip laser technology
- Sealed, nitrogen back-filled cavity
- Long-lifetime telecom-grade pump diodes
- Ambient/passive air-cooled design

Optional

- Analog power control
- Pulse Energy Monitor
- Sync-out
- AC/DC power supply
- Custom mount points
- Custom I/O locations
- OPO options under development
- please enquire

Specifications

Optical

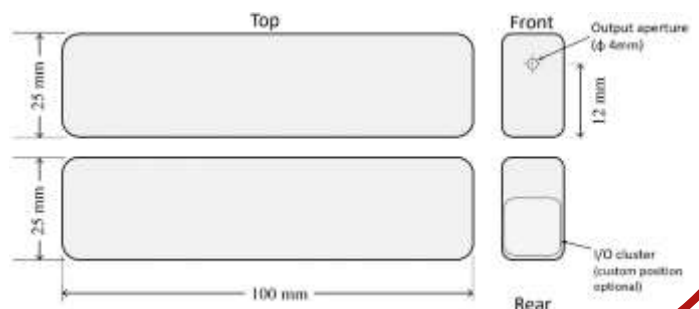
Wavelength	$1540 \pm 10 \text{ nm}$
Bandwidth (FWHM)	$>25 \text{ nm}$
Average Power (max)	$>10 \text{ mW}$
Pulse Energy (max)	$>100 \text{ pJ}$
Pulse Duration (typ)	$<100 \text{ fs}$
Energy stability (rms)	$\leq \pm 0.5 \%$
Repetition Rate Range	$>0.5\text{-}1.5 \text{ GHz}$
Beam Diameter ($1/e^2$)	1.0 mm
M^2	<1.1

Electrical

Voltage	5 VDC ($12, 24\text{VDC}$ optional)
Current	$<1 \text{ A}$

Physical

Dimensions (LWH)	$100 \times 25 \times 25 \text{ (mm)}$ -smaller form factors available
Mass	100 g
Heat Dissipation	$<1 \text{ W}$



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