

## RedChip 1500ML

1.54  $\mu\text{m}$  MINIATURISED 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 to solid-state solutions to the size and economy regime of diode and fibre lasers.

Chip laser technology enables compact footprints and high wall efficiencies, requires no active cooling and delivers TEM<sub>00</sub> mode with near-perfect mode-quality, and low jitter in space, time and energy.

The RedChip 1500ML is a passively Mode-locked chip laser designed for applications that require:

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

**Ideal Applications** include:

- Aerospace
- Bio-photonics
- Custom OPO stage can be integrated
- Frequency combs

## Features

### Standard

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

### Optional

- Analog power control
- Sync-out
- AC/DC power supply
- Custom mount points
- Custom I/O locations

## Specifications

### Optical

Wavelength	$1540 \pm 10 \text{ nm}$
Bandwidth	$>25 \text{ nm}$
Average Power (max)	$>15 \text{ mW}$
Pulse Energy (max)	$< 150 \text{ pJ}$
Pulse Duration (typ)	$< 100 \text{ fs}$
Energy stability (rms)	$< \pm 0.5 \%$
Repetition Rate Range	$> 0.5\text{-}1.5 \text{ GHz}$
Beam Diameter ( $1/e^2$ )	$1.0 \text{ mm}$
$M^2$	$<1.1$

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

Dimensions (LWH)	$80 \times 25 \times 15 \text{ (mm)}$
Mass	$100 \text{ g}$
Heat Dissipation	$< 1 \text{ W}$

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