



RedChip 1500P

1.54 μm MINIATURIZED HIGH POWER PULSED 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, requires no active cooling and delivers TEM₀₀ mode with near-perfect mode-quality, and low variance in space, time and energy.

The **RedChip 1500P** is a passively Q-switched chip laser designed for applications that require:

- High Peak Power
- Highest focusability
- Eyesafe output
- Compact / low mass packages
- Long term reliability
- High-power efficiency
- No service requirements

Ideal Applications include:

- Aerospace
- Mid-range LiDAR
- OPO pump

IR counter-measures



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Features

Standard

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

Optional

- Pulse energy monitor
- Sync-out
- Custom integrated OPO module
- AC/DC power supply
- Custom mount points

Specifications

Optical

Wavelength	1540 nm
Average Power (max)	$>75\text{ mW}$
Pulse Energy (max)	$>12\ \mu\text{J}$
Pulse Duration (typ)	$<10\text{ ns}$
Energy stability (rms)	$<\pm 0.5\ \%$
Repetition Rate (max)	$>5\text{ kHz}$
Beam Diameter ($1/e^2$)	1.0 mm
M^2	<1.1

Electrical

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

Physical

Dimensions (LWH)	40x20x20 (mm)
Mass	100 g
Heat Dissipation	$<1\text{ W}$

