脈衝式固態雷射
Pulsed Solid-State Laser

PowerChip系列脈衝雷射

Integrated, High Peak Power Picosecond PowerChip

Applications

- Materials processing
  - Inscribing glass
  - Via drilling printed circuit boards
  - Micromachining
- MALDI-TOF
- Microdissection
- Laser Induced Fluorescence (LIF)
- Time Resolved Fluorescence
- Laser Induced Breakdown Spectroscopy (LIBS)
- Light Detection and Ranging (LIDAR)

Teem Photonics' PowerChip series are ultra high peak power, high repetition range passively Q-switched MicroChip lasers capable of producing hundreds of picoseconds and several tens of microJoules pulses at kilohertz repetition rates with excellent beam quality. Furthermore, the PowerChip is a completely integrated platform which includes the laser head, power supply and air cooling in a compact, rugged, turnkey package.

Infra Red 1064nm, Green 532nm, Ultra Violet 355nm

Model	PNP-M08010	PNP-M10005	PNG-M02010	PNG-M04005	PNV-M01510	PNV-M02510	PNV-M05005
Wavelength (nm)	1064		532		355		
Peak Power (kW)	225	275	60	110	45	70	135
Average Power (mW)	90	55	25	45	18	28	25
Repetition rate (kHz)	1	0.5	1	0.5	1	1	0.5
Pulse Width (ps)	400	400	400	400	400	400	400
Energy/Pulse (μJ)	90	110	25	45	18	28	55

Optional features

- Fixed frequency choices
  - Can operate at up to 3 fixed repetition rate frequencies, set at factory
- Triggerable by user
  - External trigger, with TTL compatible input on Sub-D connector
- Manual controls for CDRH compliance

Features & benefits

Ultrashort pulses
As low as 400ps duration

High peak power
Achieving 275kW per pulse

Excellent beam quality
Gaussian beam, TEM_{00}, $M^2 \leq 1.3$

kHz repetition rate
Flexible from 10Hz to 1kHz.

Integrated system
All in one package including power supply and cooling

Synchronization output
Photodiode monitoring of laser emission

Licensed Technology
Exclusive license on Passively Q-switched picosecond microchip laser: US Patent 5394413

Low power consumption
Requires typically 25W during normal operation thanks to its optimised design and efficient diode pumping.

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