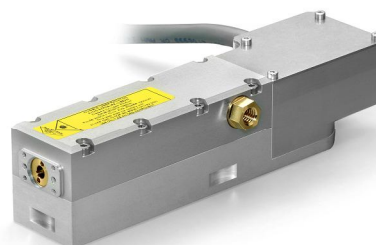


High Peak Power Higher Repetition Rate Sealed Q-switched 1064 Microchip Laser

SNP series

The Teem Photonics 1064nm **Q-switched MicroChip lasers** produce sub nanosecond microJoule pulses at kilohertz repetition rates. These lasers are housed in compact, turnkey packages.

Licensed previously to Nanolase by MIT in the 1990s, the MicroChip laser is now licensed to Teem Photonics, which acquired the Microlaser business in 2005.



Photographs of an OEM SNP-20F-GM1 version.

Application:

- Gemstone marking
- Supercontinuum generation
- Laser seeding for fiber amplification
- Ranging

Performance:

Parameter	SNP-40F-x00	SNP-40F-GM1	SNP-30F-GM1	SNP-20F-x00	SNP-20F-GM1
Wavelength (nm)	1064	1064	1064	1064	1064
Energy/Pulse (μJ)	> 4	> 4	> 7.5	> 7	> 7
Average power (mW)	>140	>140	>220	>140	>140
Pulse width (FWHM) (ns)	< 1	< 1	< 1	< 1	< 1
Repetition rate (kHz)	>35	>35	>25	>19	>19
Power stability over six hours ¹	< ± 3 %	< ± 3 %	< ± 5 %	< ± 3 %	< ± 3 %
Waist radius at 1/e ² (μm) (10 % accuracy)	Horizontal: 52 Vertical: 48	Horizontal: 52 Vertical: 48	Horizontal: 50 Vertical: 60	Horizontal: 52 Vertical: 48	Horizontal: 52 Vertical: 48
Waist position inside the laser from the output plane (mm)	29.5 ± 1	29.5 ± 1	29.5 ± 1	29.5 ± 1	29.5 ± 1
Beam divergence (full angle at 1/e ²) (mrad) ²	Horiz: 13 ± 5 Vert: 14 ± 5	Horiz: 24 ± 5 Vert: 20 ± 5	Horiz: 27 ± 6 Vert: 22 ± 4	Horiz: 13 ± 5 Vert: 14 ± 5	Horiz: 26 ± 5 Vert: 22 ± 4
Beam profile	Gaussian	Gaussian	Gaussian	Gaussian	Gaussian
Polarization ratio	>100:1	>100:1	>100:1	>100:1	>100:1
Base plate operating temperature range (°C)	0 to 50	0 to 50	0 to 50	0 to 50	0 to 50
Storage temperature range (°C)	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60
Warranty	12 months from the date of shipment or 5000 hours whichever occurs first				

1. After 10 to 15 minutes warm-up and temperature variation of $\pm 3^\circ\text{C}$ and $< 3^\circ\text{C}/\text{hour}$, long term stability is measured with a calorimeter - detector band [DC, 5 Hz].

2. Preliminary data

Microchip lasers SNP series are Class IV Laser Sources.

Features and Benefits:

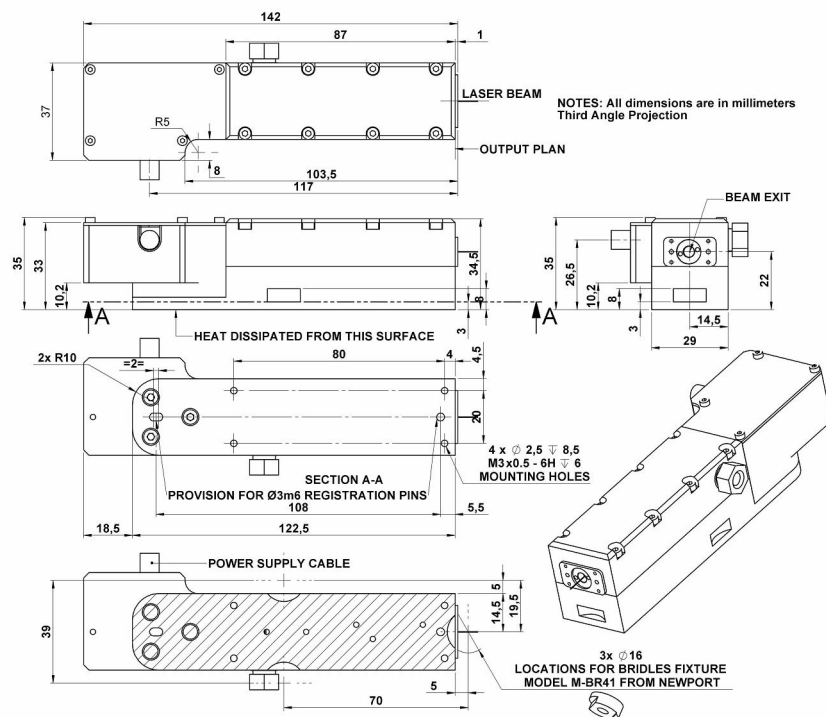
- 1064nm wavelength
- High repetition rate and peak output power version
- Sealed package



- Short pulses (~ 1 ns)
- Gaussian beam profile ($M^2 < 1.2$)
- Highly reliable in humid environmental conditions

► Mechanical footprint:

CDRH Microchip Sealed IR 1064 nm Laser Head
(Same footprint for the OEM model without the shutter)



► Laser Controller:

Controller Model	Description	Input Power	CE	CDRH
MLC-03A-DR0 r1	Desktop	100-240 V AC	Yes*	Yes*
MLC-03A-MR0 r1	Module	12 V DC	No	No
MLC-03A-BR0 r1	Board	12 V DC	No	No

*: if used with CDRH laser head.

► Patent information:

Patent # WO95/22186, Passively Q-Switched Picosecond Microlaser.

► Ordering:

To place an order or obtain additional information, please contact a sales representative:

Representatives contact: [Europe](#) – [Asia](#) – [US](#)

Email: sales@teemphotonics.com

Ordering code:



λ (nm)	RR(kHz)
P	40
(1064)	30
	20

Packaging:

000: OEM

100: CDRH

GM1: higher divergence
model

Others: specific model