

MNx Ultra-Compact Microchip Series



The MNx series are our most compact microchip lasers and cover the mid-IR to visible part of the spectrum. They integrate the pump diode, the micro-cavity and even the second harmonic generation crystal in a package less than 7 cm long. The 1064nm engine produces sub-nanosecond pulses with several kW peak power, achieving over 50% second harmonic generation efficiency at 532 nm.

APPLICATIONS

- Super-continuum generation
- Marking
- Raman spectrometry
- Ranging

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TECHNICAL SPECIFICATIONS

	MNP-08E-100	MNG-03E-100	
Wavelength	1064nm	532nm	
Repetition Rate	>5kHz	>5kHz	
Constant Pulse width range (FWHM) ⁽¹⁾	<1ns	<0.75ns	
Output power ⁽²⁾	>40mW	>15mW	
Output energy	>8µJ	>3µJ	
Peak Power	>8kW	>4kW	
Short term (10min) power stability ⁽³⁾	<±1%	<±1%	
Long term (6 hrs) power stability ⁽³⁾	<±3%	<±3%	
Beam profile	Gaussian TEM00	Gaussian TEM00	
Full angle divergence Horizontal@1/e ² Vertical@1/e ²	12±2 mrad 14±2 mrad	10±2 mrad 9±2 mrad	
M ²⁽⁴⁾	<1.3	<1.3	
Beam ellipticity ⁽⁵⁾	<1.3	<1.3	
Polarization	Linear PER>20dB	Linear PER>20dB	
Package dimensions	68x41x29mm	68x41x29mm	
Package weight	250g	250g	
Options (table p3)	Μ	-	

NOTES

- (1) Measured with 1Ghz photodiode and 1GHz/10GS/s oscilloscope.
 (2) Measurement performed with an OPHIR thermal power sensor (OPHIR 3A-FS-SH).
 (3) For temperature variation < ± 3°C and < 3°C/hour, stability is measured with calorimeter detector band [DC, 2Hz]
 (4) Mean average value M = √(XY), X and Y being respectively the major and minor axis of the ellipse
 (5) Beam ellipticity is calculated as the ratio of the main axis far field divergence



COMPLEMENTARY INFORMATION & OPTIONS

Environment Parameters				
Operating Temperature Range	0-50°C			
Maximum Laser Head Baseplate Temperature	<50°C			
Maximum Power Consumption	<40W			
Laser Head Thermal Dissipation	<10W			
Storage Temperature	0-50°C			
Shock of 11ms according to IEC 68-2-27, non operating	25g			
Vibration 5Hz to 500Hz sinusoïdal according to IEC 68-2-6	2g			

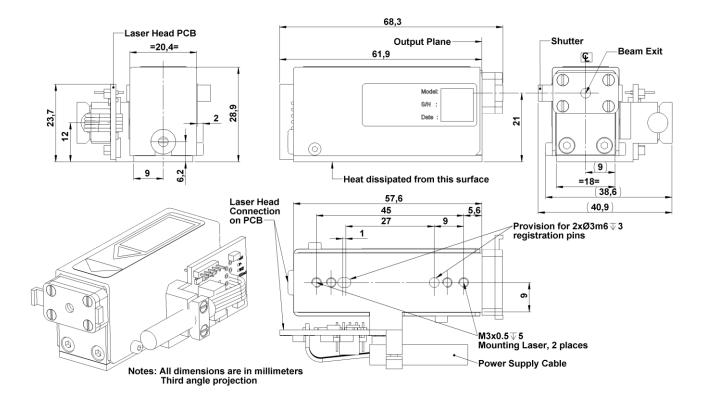
Certification					
Laser classification according to IEC 60825-1:2007	3B				
CDRH	Yes, if used with a -DR1 controller				
RoHS	Yes				

Options				
Multimode fibering (M)	Contact factory for availability			

Available Controller Types					
Model	Туре	Input Power	CDRH		
MLC-03A-DR1	Desktop	100-240 V AC	Yes		
MLC-03A-MR1	Module	12 V DC	No		
MLC-03A-BR1	Board	12 V DC	No		



CDRH LASER HEAD MECHANICAL DRAWINGS: MNP-08E-100, MNG-03E-100



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