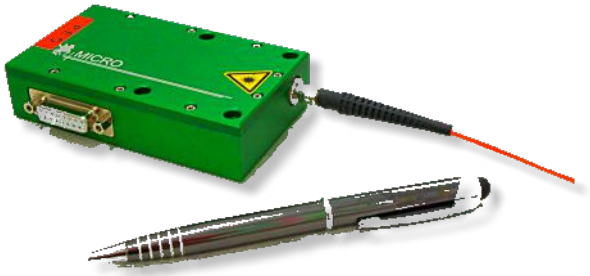
PEGASUS
LASERSYSTEME



PEGASUS MICRO-RGB-F

PL.M.450.525.638-F50

Fiberpigtailed high power RGB module:

- 3-color laser diode module
- Wavelengths 450 nm, 525 nm, 638 nm
- Integrated TEC
- Compact industrial housing

Applications:

Optogenetics
Activate and deactivate cellular behaviour.

Spectroscopy
Excitation of chromophores and fluorophores.

Industrial laser display
Multicolor display system with single laser source.

DNA sequencing
High throughput with high laser power.

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OPTICAL			
Wavelengths / power *	450 nm / 500 mW	525 nm / 500 mW	638 nm / 500 mW
Power stability	< +/- 2 % (over 1 h)		
Fiber core diameter **	50 µm (multimode)		
Numerical aperture NA	0.22 +/- 0.01		
Fiber connector	SMA905		
Fiber length	1 m		
ELECTRICAL			
Modulation	Independent modulation for each channel with adapted driver		
Max. current of integrated TEC	+/- 2.0 A (cooling / heating)		
NTC	10 kOhm at 25°C		
MECHANICAL			
Dimension laser head	105 x 60 x 25 mm^3		
Weight laser head	340 g		
ENVIRONMENTAL			
Cooling	via baseplate		
Operating temperature	10 - 35°C		
Warm-up time	< 5 min		
Laser class (EN 60825-1)	4		

Note:
All specifications are given at 22°C constant environment temperature.
*** Other combinations on request.**
**** 100 µm, 200 µm or 400 µm on request.**

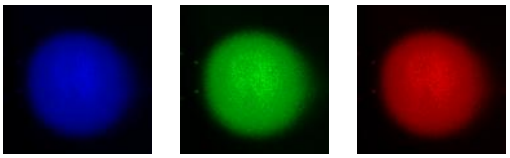
www.pegasus-lasersysteme.de **Phone:** +49(0)5407-3123-0 **Fax:** +49(0)5407-3123-6 **Email:** info@pegasus-lasersysteme.de

Beam shape

The diode laser module has 3 integrated color channels with 450 nm (blue), 525 nm (green) and 638 nm (red). All channel outputs are combined and coupled into one 50µm multimode fiber with standard SMA905 connector, leading to round output beam shape with similar parameters for all 3 colors and even for multiline operation.

Via separate, independent intensity control of each channel, any color can be adjusted for maximum contrast to the projection surface.

Beam shape at fiber output



450 nm
500 mW

525 nm
500 mW

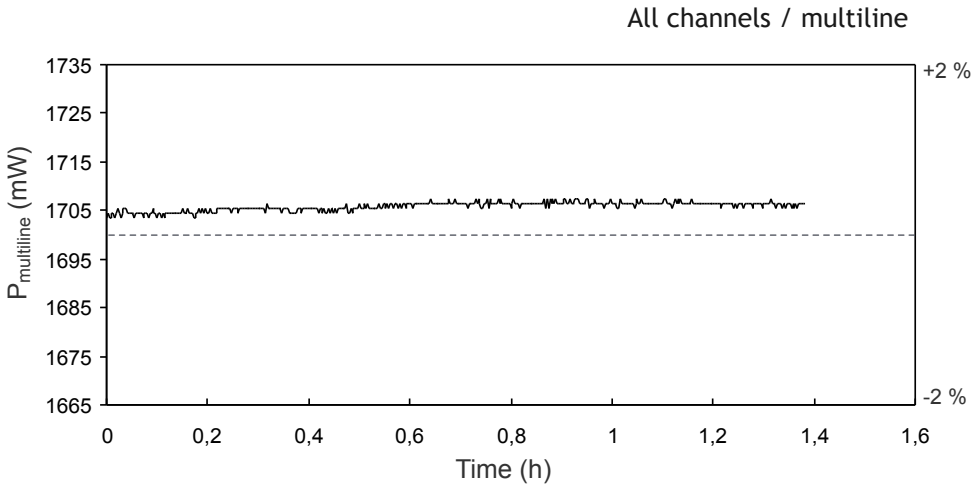
638 nm
400 mW

Power stability

Special combining and fixation technology ensures highly reliable and hands-free operation. The integrated TEC guarantees a constant output performance, even for changing environment temperatures.

Constant LD temperature of 25°C ensures a superior lifetime. The laser maintains a power stability typ. < 2 % over 1 h. Additionally, the wavelengths of the integrated LD's remain constant.

Typical output power stability over 1.4 h
(after warm-up, under constant environment)



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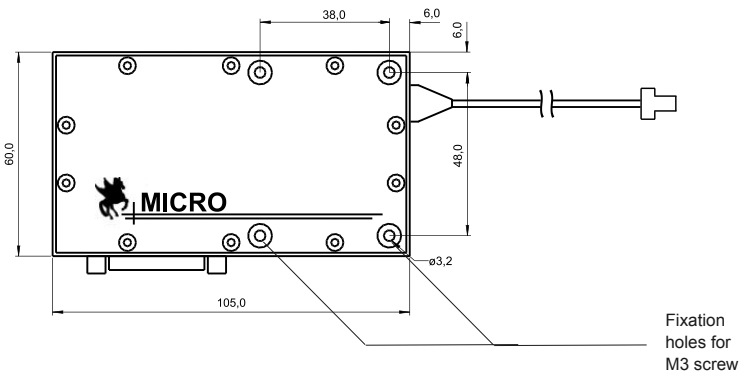
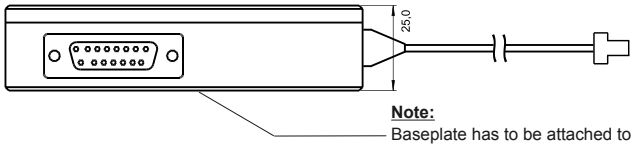
Mechanical dimensions

Top view



Side view



Note:
Baseplate has to be attached to external heat sink!

15 PIN connector

Pin 1	TEC+	Pin 9	TEC-
Pin 2	NTC (housing)	Pin 10	LD- (CH “Red”)
Pin 3	NTC (housing)	Pin 11	LD+ (CH “Red”)
Pin 4	NTC (baseplate)	Pin 12	LD- (CH “Green”)
Pin 5	NTC (baseplate)	Pin 13	LD+ (CH “Green”)
Pin 6	---	Pin 14	LD- (CH ”Blue”)
Pin 7	NTC (baseplate)	Pin 15	LD+ (CH “Blue”)
Pin 8	NTC (baseplate)		

Adapted driver solutions

OEM version

PL.LD.12V.4C1T-01
12 VDC power supply

Benchtop version

PL.LD.230V.4C1T-01
230 VAC power supply

PEGASUS follows a policy of cotinuous product improvement and reserves the right to change any specifications without notice.

All products comply the warranty of 1 year. (2 years on request)

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