

FLEXPOINT® Machine Vision Lasers MVmicroline Series

The FLEXPOINT® MVmicroline lasers generate lines with a line width down to 5 µm at a preset working distance. Several power levels and wavelengths are available.

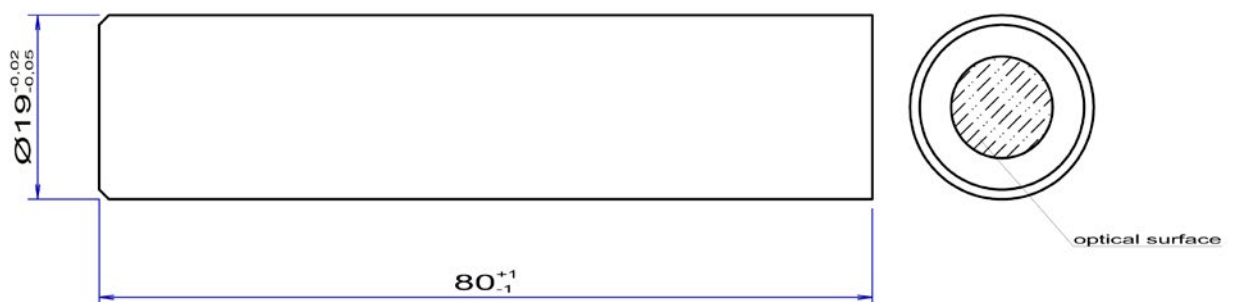
All MVmicroline lasers produce lines with uniform intensity distribution. Applications are inspection of microelectronics, high resolution 3D measurements, bio photonics and other machine vision applications.

Features

- uniform line intensity
- line width < 5 µm
- industrial grade housing
- 4.5 - 30 VDC supply voltage
- universal tool for industrial inspection and 3D triangulation



cable not included



Specifications

Basic Properties:

Spectral range	405 / 445 / 520 / 635 - 640 / 650 - 660 nm, other wavelength on request, (stability: $\leq 0,25$ nm/°C)
Output power	<1 mW to 150 mW (wavelength dependent)
Operating voltage	4.5 VDC - 30 VDC (reverse voltage protection), 10 - 30 VDC for 520 nm
Current consumption	<200 mA @ 5 VDC
Operating temperature	-20°C to +60°C (case temperature, wavelength dependent)
Storage temperature	-20°C to +60°C
Modulation	digital (0 - 10 kHz, active low), higher frequency on request, dimmable
Power stability	$\leq 5\%$ (after warm up at 25°C)

Beam Properties:

Beam profile	uniform micro laser line
Working distance	25/50/100/200 mm (user specified working distance on request)
Line thickness ($1/e^2$)	$\leq 5 \mu\text{m}$ @ 25 mm / $\leq 10 \mu\text{m}$ @ 50 mm / $\leq 18 \mu\text{m}$ @ 100 mm / $\leq 30 \mu\text{m}$ @ 200 mm (thickness in the middle of the line)
Depth of Field (Rayleigh length)	40 μm @ WD 25 mm / 160 μm @ WD 50 mm / 600 μm @ WD 100 mm / 1 mm @ WD 200 mm
Boresight deviation	≤ 10 mrad (optional: ≤ 3 mrad)
Pointing stability	$\leq 10 \mu\text{rad}/^\circ\text{C}$
Fan angle	5° / 10° (user specified fan angles on request)
Line intensity variation	$\pm 20\%$ (within 80% of the line)
Line straightness	$\pm 0,1\%$

Mechanical Properties:

Housing material	Aluminum (anodized), potential free, Protection class: IP54/IP67 (optional)
Housing size	$\varnothing 19 \times 80$ mm (excl. Connector)
Connector	M12 connector (2 m cable as option) Pin 1: + Pin 2: digital modulation (option) Pin 3: GND Pin 4: power adjustment (option)

Ordering Code FLEXPOINT® MVmicroline Series

