

Order number/ Artikelnummer FP-MVpulse
Module/ Bezeichnung FP-MVpulse Produktdatenblatt

Basic properties/ Allgemeine Eigenschaften:

Spectral range/ Wellenlänge	450nm,520nm, 640nm, 660nm, 785nm
Output power/ Ausgangsleistung	640nm, 660nm, 785nm:10mW-100mW 450nm,520nm: 10-80mW (peak power)
Operating voltage/ Versorgungsspannung	640nm, 660nm, 785nm:4,5-30V 450nm,520nm: 10-30V
Current consumption/ Stromverbrauch	< 200mA @5V (supply current)
Operating temperature/ Betriebstemperatur	450nm,520nm,640nm: 0° to +50°C 660nm,785nm: 0° to +60°C (housing temperature)
Storage temperature/ Lagertemperatur	-20°C bis +60°C
Modulation/ Modulation	digital high/low active, 0 - 20kHz, pulse length and duty cycle limited, higher frequency on request, dimmable on request
Power stability/ Leistungsstabilität	≤ 5% (after warm up at 25°C)
peak power increase compared to cw mode in same laser class	5x @ pulse length<0.38ms, off time between pulses >3.1ms 3x @ pulse length<2.9ms, off time between pulses >12ms 2x @ pulse length<15ms, off time between pulses > 30ms higher frequencies on request
Wavelength stability:	<0.25nm / °C

Beam properties/ Optische Eigenschaften:

Beam profile/ Strahlcharakteristik	laser line with uniform power distribution (FOV on request)
Focus distance/ Fokussabstand	adjustable by pin tool (see instruction manual for details) FIX are prefocused in manufactory
Boresight deviation/ Strahlrichtungsfehler	≤10 mrad (≤3 mrad as option)
Pointing stability/ Punktstabilität	≤10μrad/°C (improved pointing stability as option)
Fan angle/ Öffnungswinkel	5, 10, 15, 20, 30, 45, 60, 75, 90 deg.
Line thickness/ Liniendicke	Standard, DL, DLE, DLSE, TS1, TS2
Line intensity variation/ Homogenität	± 20 % (opt. ± 10 %) related to average power (within 80% of the line)
Line straightness/ Geradheit	± 0,1 % (±0,05 as option)

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Mechanical properties/ Mechanische Eigenschaften:

Housing material/ Gehäusematerial	Aluminum (blue anodised; potential free)
Housing size/ Abmessungen	ST-F: $\varnothing=19 \times 80 \text{ mm}$, ST-FIX: $\varnothing=19 \times 65 \text{ mm}$ (without M12 connector) 2H: (OH=MVnano-F/FIX: $\varnothing 11,5 \times 40 \text{ mm} / \varnothing 11,5 \times 29 \text{ mm}$) + electronics: $\varnothing 19 \times 42 \text{ mm}$, connected by 150mm wire
Pin defintion/ Anschlussbelegung	M12 conector: Pin1: +VDC, Pin3: GND, Pin2: dig. modulation wire: brown: +VDC, blue: GND: black: dig. Modulation
Laser class/ Laserklasse	2 (DIN EN 60825-1:2014)