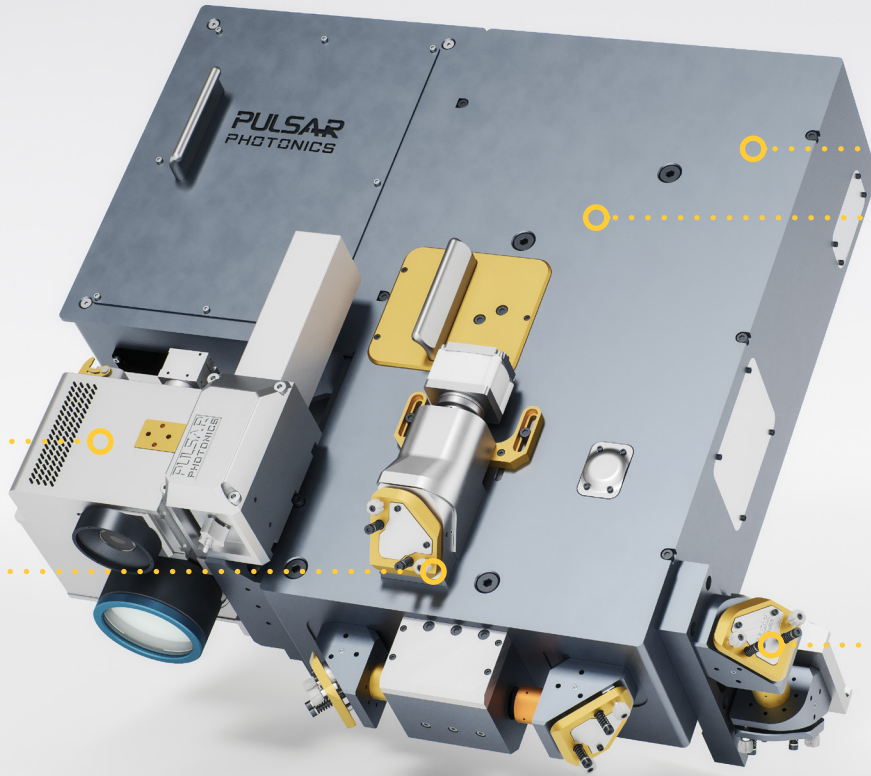


FlexibleBeamShaper FBS-G3

Dynamic beam shaping system

Galvanometerscanner:
SCANLAB intelliSCAN or excelliSCAN

Beam shaping module FBM-G3 with
Spatial Light Modulator



Beam bypass for laser
processing without SLM

Motorized beam alignment system

Integrated camera system for
inline monitoring of beam shapes

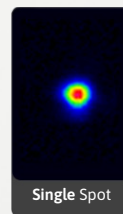
Beam shape on demand

The FlexibleBeamShaper (FBS) is a machine integrable beam shaping system for laser micromachining, that can generate any user defined beam distributions.

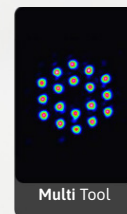
To achieve this, the FBS is equipped with an electronically controllable optical phase modulator. This allows the FBS to be used as a photonic tool magazine with predefined beam shapes on demand. In addition, the FBS is equipped with a SCANLAB galvanometer scanner, so the generated intensity distribution can be scanned over the workpiece. These tools combined in a single system open up new ways in laser micromachining:

faster, more flexible and more efficient.

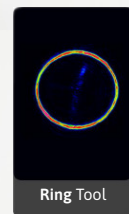
Digital tool change



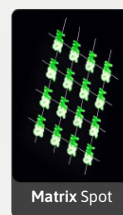
Single Spot



Multi Tool



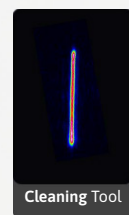
Ring Tool



Matrix Spot

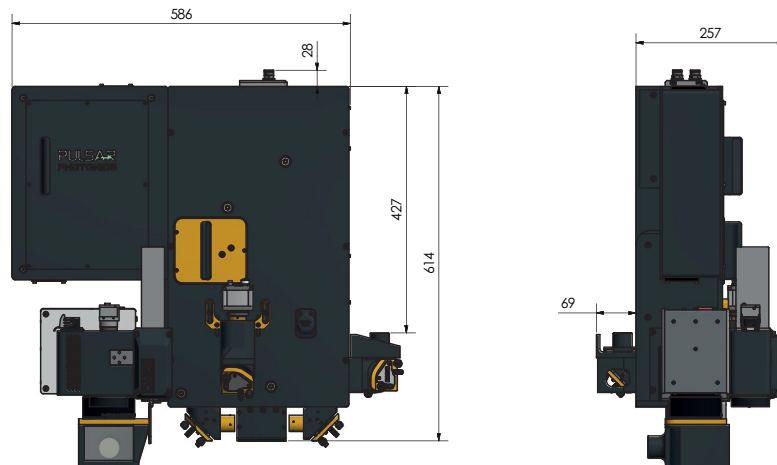


Custom Tool



Cleaning Tool

Technical drawing and technical data



- **Max. Dimensions:** (L x W x H): 650mm x 680mm x 340mm
- **Addressable field size with SLM:** approx. 4mm x 4mm @ f = 100mm



Wavelengths

- IR (1030nm-1070nm)
- VIS (515nm-532nm) on request, only for low power

Laser input

- Max. beam diameter: 6 mm
- TEM₀₀, M² ≤ 1.3

Suitable laser beam sources

- nanosecond / picosecond / femtosecond (>800fs) (low spectral bandwidth recommended)
- max. Power: 100 W (IR), <20W (VIS)
- max. Pulse energy: 500 µJ @ 1ps (IR)

Suppression of higher orders



Galvanometer scanner

- Type: SCANLAB intelliSCAN III 14 or excelliSCAN 14
- Focal lengths: 50mm-500mm (typ. 100mm)



Control software - Photonic Tools

- Software for adjustment, calibration and control of the system
- Camera-supported adjustment and calibration
- Software kit for creating complex profiles
- Generation of 2D and 3D distributions
- Digital tool-changing system



Optional components

- Switching between single beam and multiple beam processing
- Motorized alignment of laser beam into the module
- Coaxial camera
- Ext. Camera system for intensity measurement

manufactured by

PULSAR
PHOTONICS
a schunk company

distributed by

SCANLAB
innovators for industry

SCANLAB GmbH
Siemensstraße 2a
82178 Puchheim
GERMANY

info@scanlab.de
www.scanlab.de

SCANLAB and Pulsar Photonics collaborate in a sales and development partnership.