

# Products

## INLEAP® FASTLIGHT®

INLEAP® FASTLIGHT® is a pixel-based high-power laser beam steering solution for maximizing the productivity of laser processes.

### Advantages

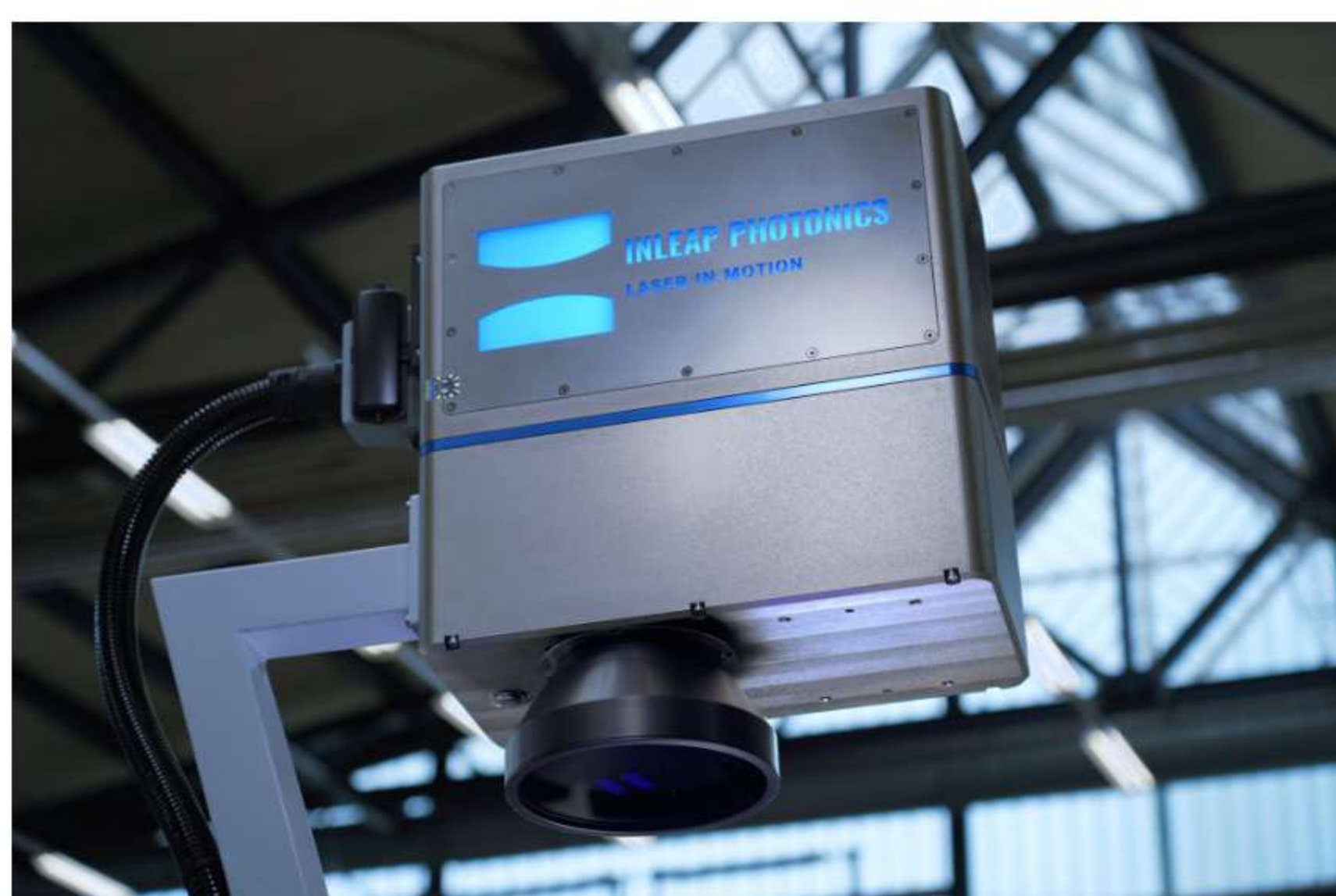
- + Easy to use like a galvanometer scanner
- + 2500x faster steering speed
- + Connects to commercially available laser sources (cw/pulsed)
- + Maximizes throughput and efficiency



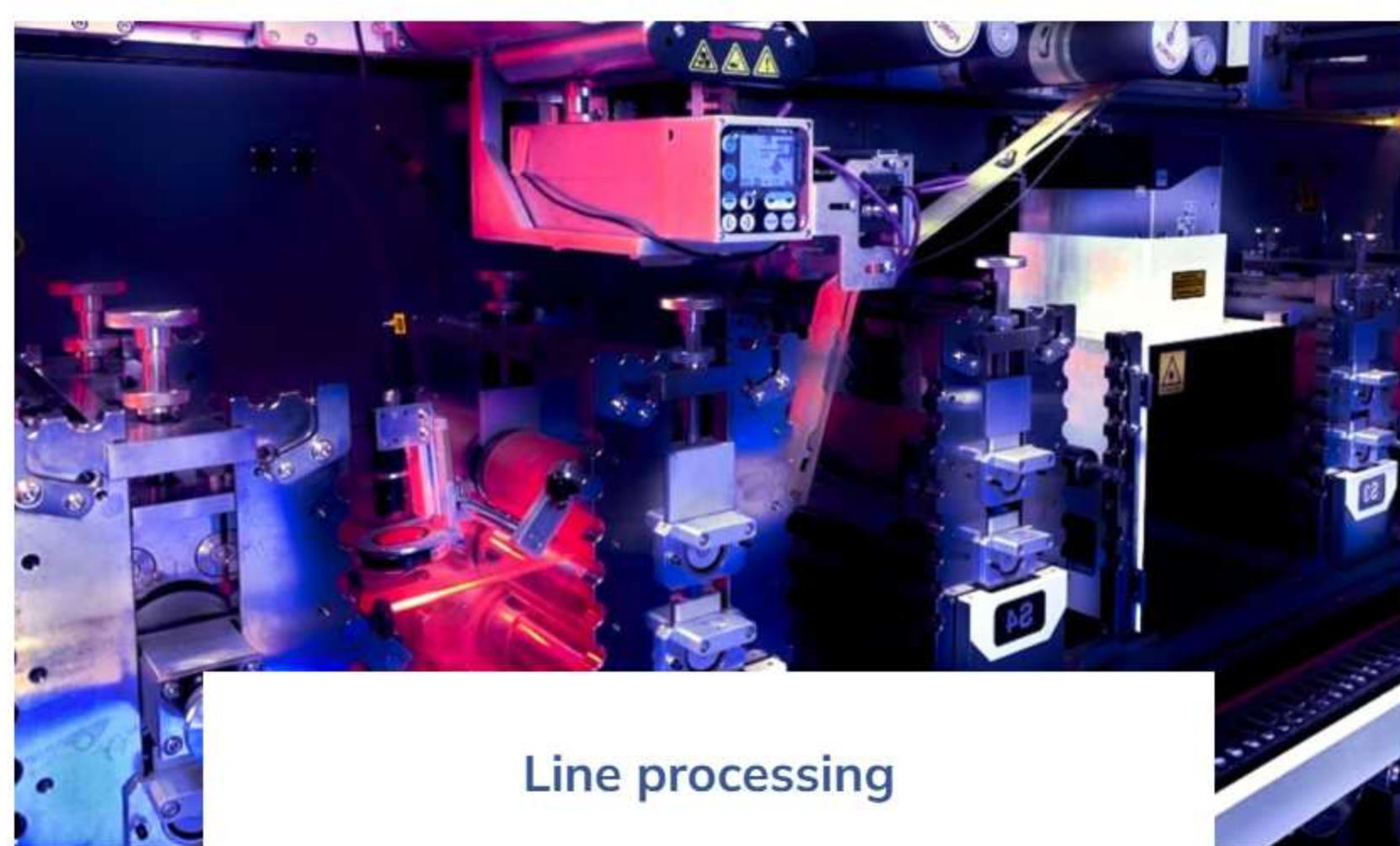
## INLEAP® FASTLIGHT®

### Operating principle

- + Pixel-based solid-state-technology
- + Sequential switching between pixels
- + Individual 1D or 2D pixel configurations
- + Dynamic power modulation



## INLEAP® FASTLIGHT® for seamless integration into your production!



### Line processing

INLEAP® FASTLIGHT® developed for

- ✓ One-dimensional processing
- ✓ Moving workpiece
- ✓ Highest manufacturing speeds
- ✓ Roll-to-roll/sheet manufacturing

[Learn more](#)

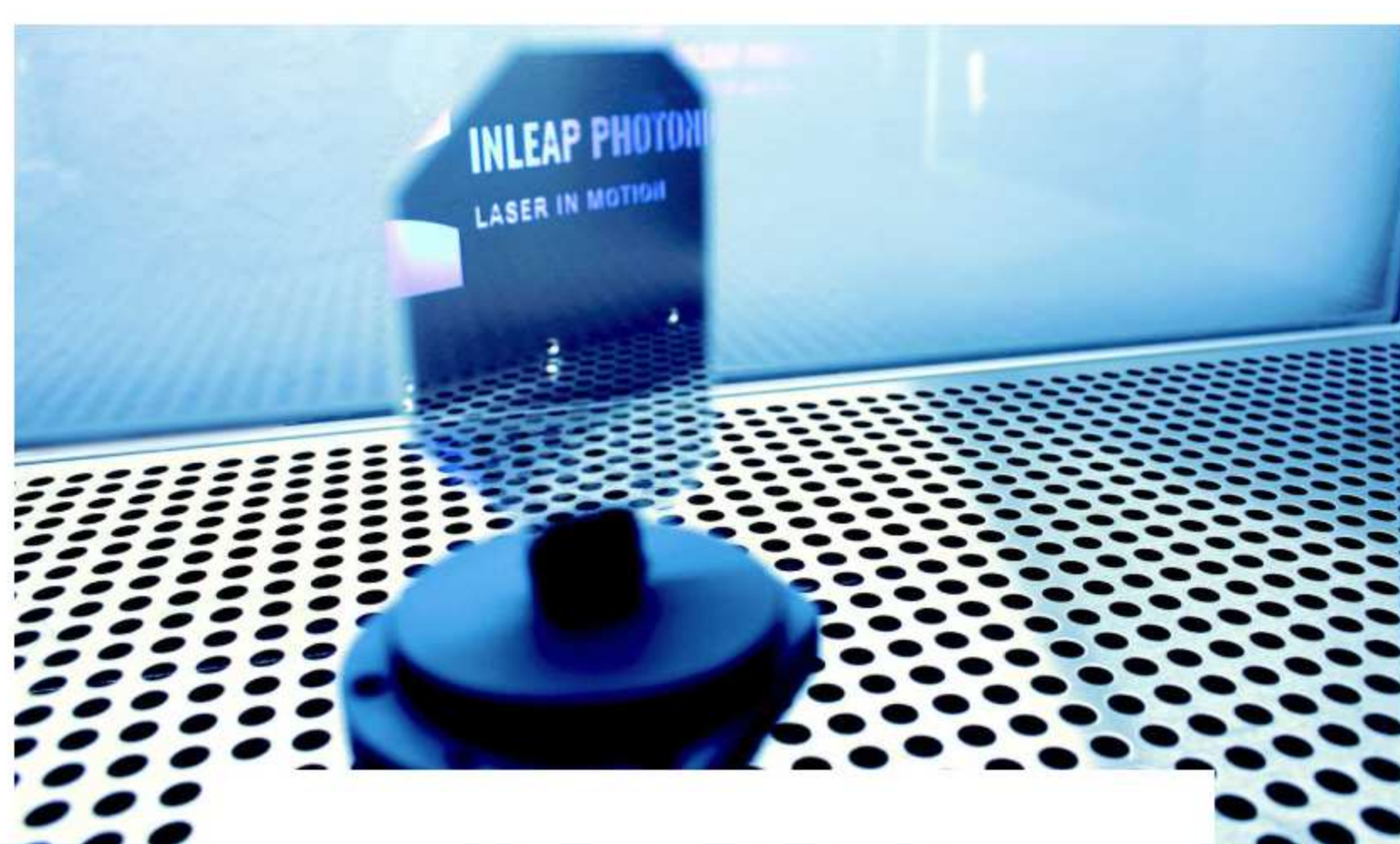


### Area processing

INLEAP® FASTLIGHT® developed for

- ✓ Two-dimensional processing
- ✓ Large and multiple processing areas
- ✓ Maximizing productivity
- ✓ Additive Manufacturing

[Learn more](#)

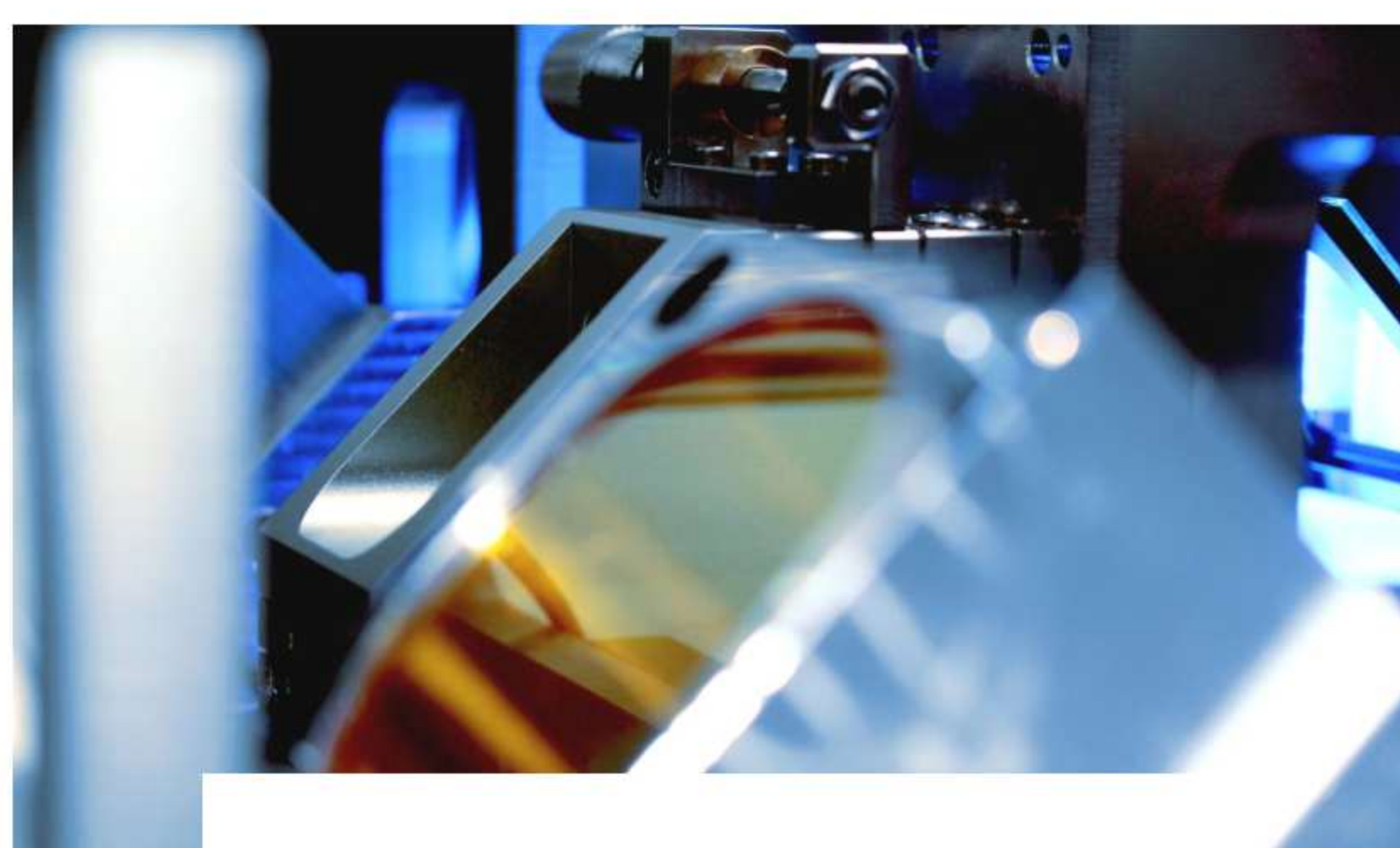


### Compatible add-ons

INLEAP® FASTLIGHT® in combination with galvanometer or polygon scanner

- ✓ Combining the best of two worlds
- ✓ Highest flexibility
- ✓ Large 2D-field
- ✓ Maintaining highest production speed

[Learn more](#)



### Metrology

INLEAP® FASTLIGHT® in combination with optical metrology solutions

- ✓ Process monitoring
- ✓ Data acquisition and processing
- ✓ Product traceability
- ✓ Quality control

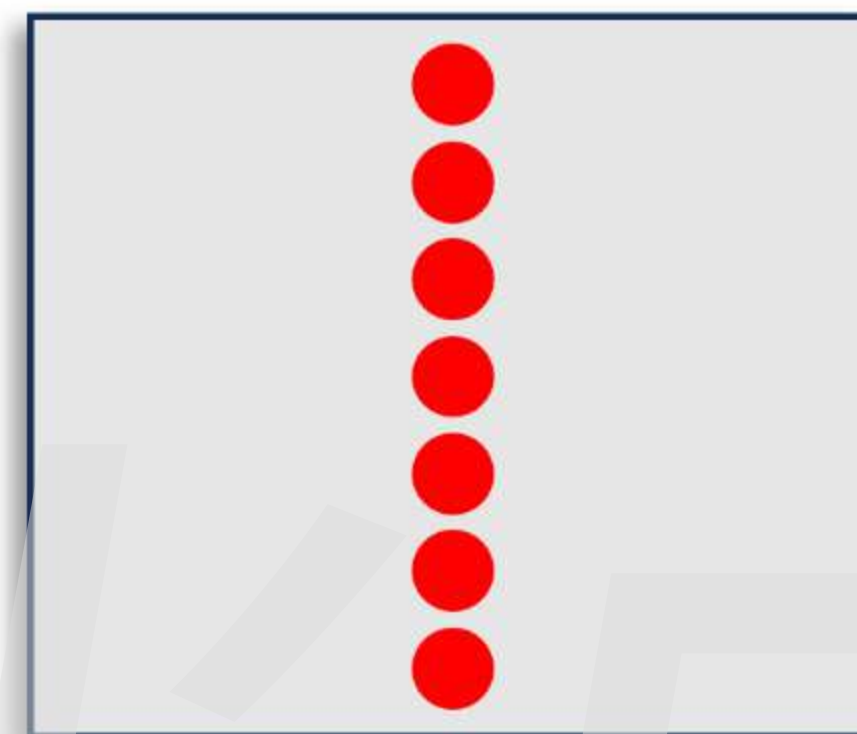
[Learn more](#)

# Line processing

## INLEAP® FASTLIGHT®

### Line processing specifications

- ✓ 1D-Pixel-Array with up to 1000 pixels
- ✓ Spot diameter down to 50  $\mu\text{m}$
- ✓ Jump speed up to 200 000 m/s at 100 mm pixel-array-length
- ✓ Laser power up to 2000 W (cw), at 1070 nm



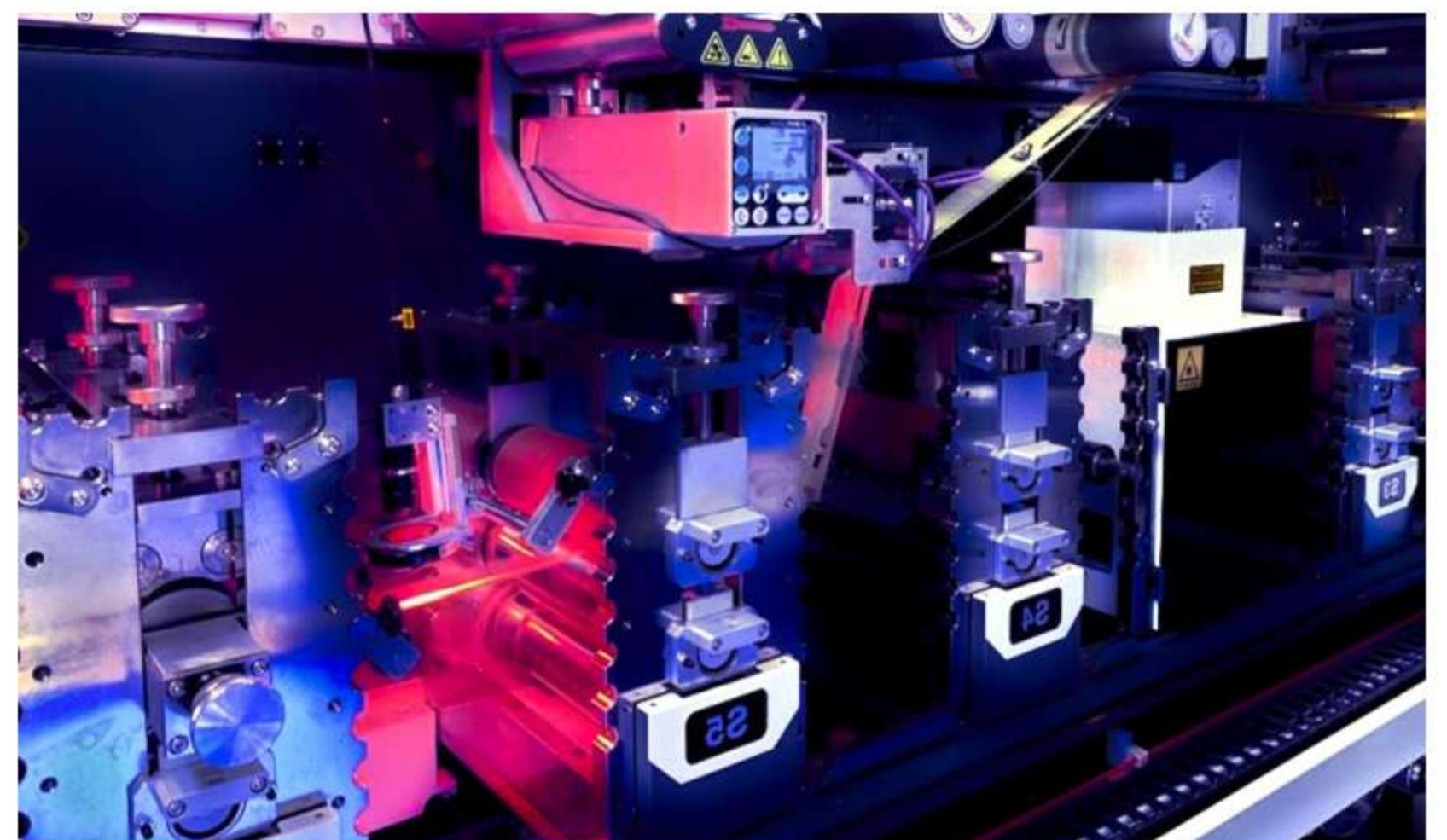
Exemplary line processing configuration

### Line processing applications

- + Notching and welding of foils for battery cell manufacturing
- + Cutting of coil and sheet material
- + Thermal processing for semiconductor and solar cell production
- + Laser-induced breakdown spectroscopy (LIBS) for chemical analysis

Explore new possibilities for your application!

Contact us

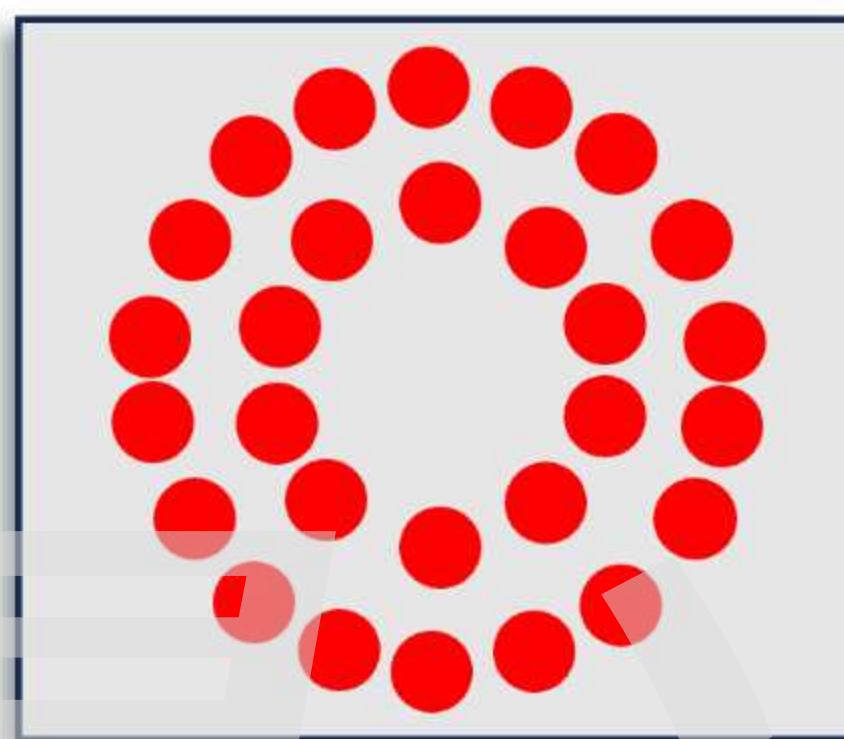


# Area processing

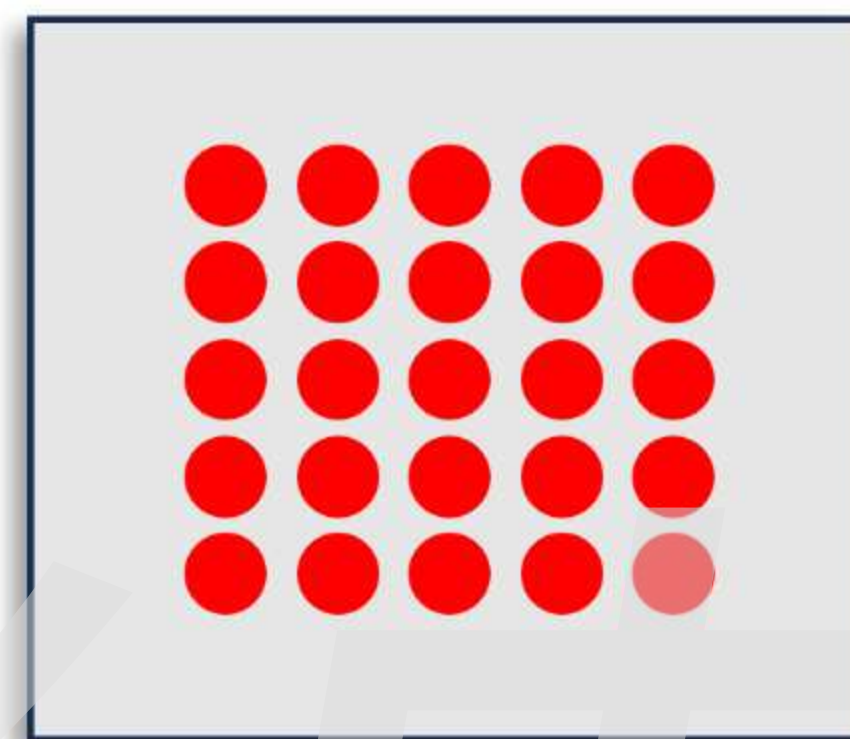
## INLEAP® FASTLIGHT®

### Area processing specifications

- ✓ 2D-Pixel-Array with up to 1000 pixels
- ✓ Spot diameter down to 50  $\mu\text{m}$
- ✓ Jump speed up to 200 000 m/s at 100 mm pixel-array-length
- ✓ Laser power up to 2000 W (cw), at 1070 nm



Exemplary area processing configuration



Exemplary area processing configuration

### Area processing applications

- + Laser annealing for semiconductor manufacturing
- + Can-to-cap and tab welding for battery cell manufacturing
- + Welding of hairpins for stators in electrical motors
- + Additive Manufacturing using Laser Powder Bed Fusion (LPBF)

Explore new possibilities for your application!

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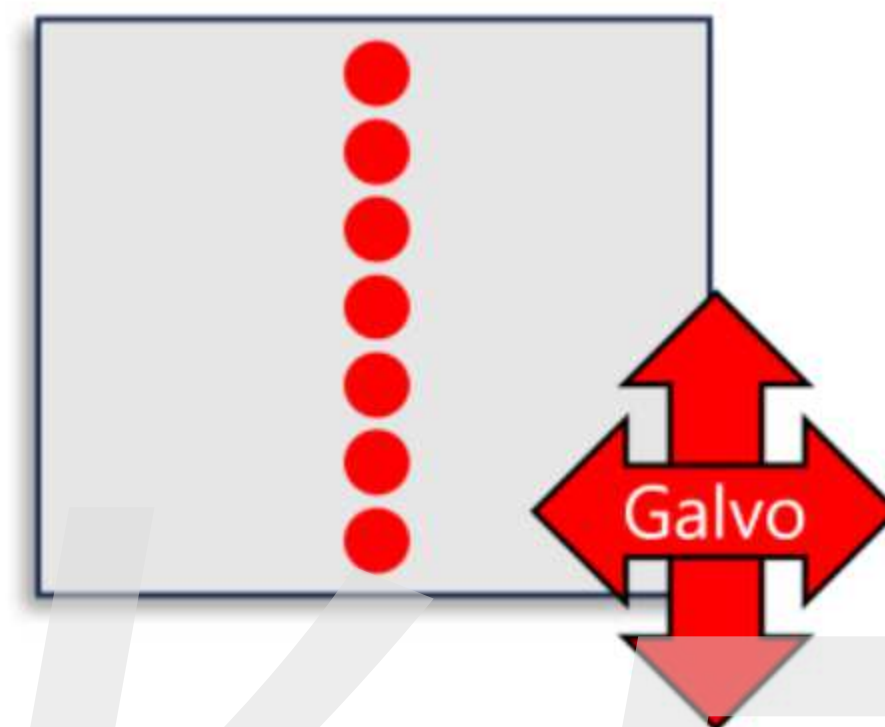


# Compatible add-ons

## INLEAP® FASTLIGHT®

### Compatible add-on specifications

- ✓ Galvanometer and polygon scanner
- ✓ Commercial available (telecentric) f-theta lenses
- ✓ Expanded field size
- ✓ Increased process flexibility



Exemplary compatible add-on specifications

### Compatible add-on applications

- + Additive Manufacturing using Laser Powder Bed Fusion (LPBF)
- + Surface texturing and functionalization
- + Welding of thin foils
- + Laser annealing for semiconductor manufacturing

Explore new possibilities for your application!

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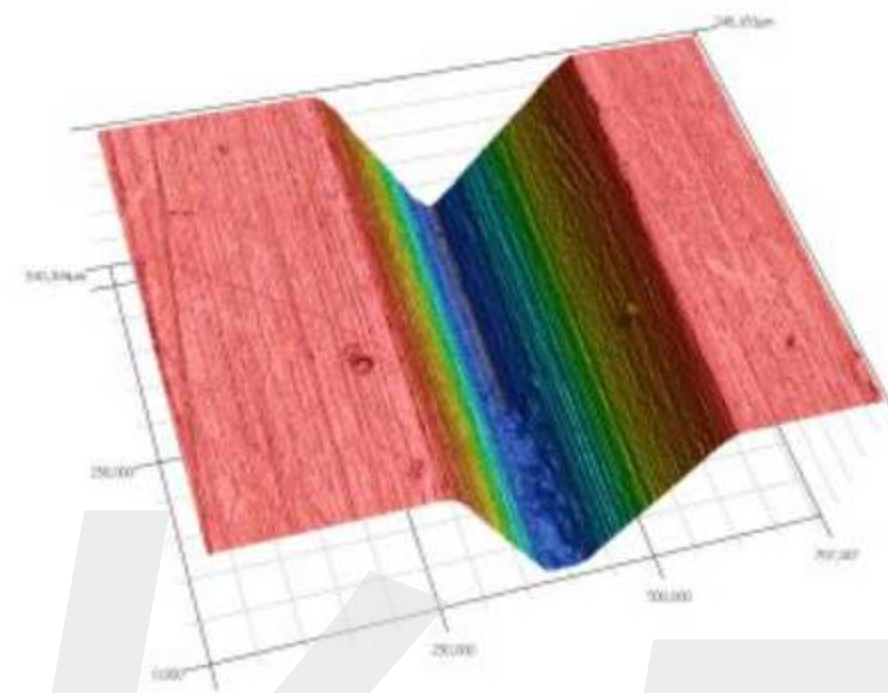


# Metrology

## INLEAP® FASTLIGHT®

### Metrology specifications

- ✓ Pyrometer and spectrometer integration
- ✓ VIS, NIR and SWIR camera integration
- ✓ High-speed imaging and monitoring
- ✓ Thermal imaging of process zone



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### Metrology applications

- + Inline quality monitoring and control
- + Closed loop process control
- + Melt pool characterization
- + Condition monitoring of process optics

Explore new possibilities for your application!

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