

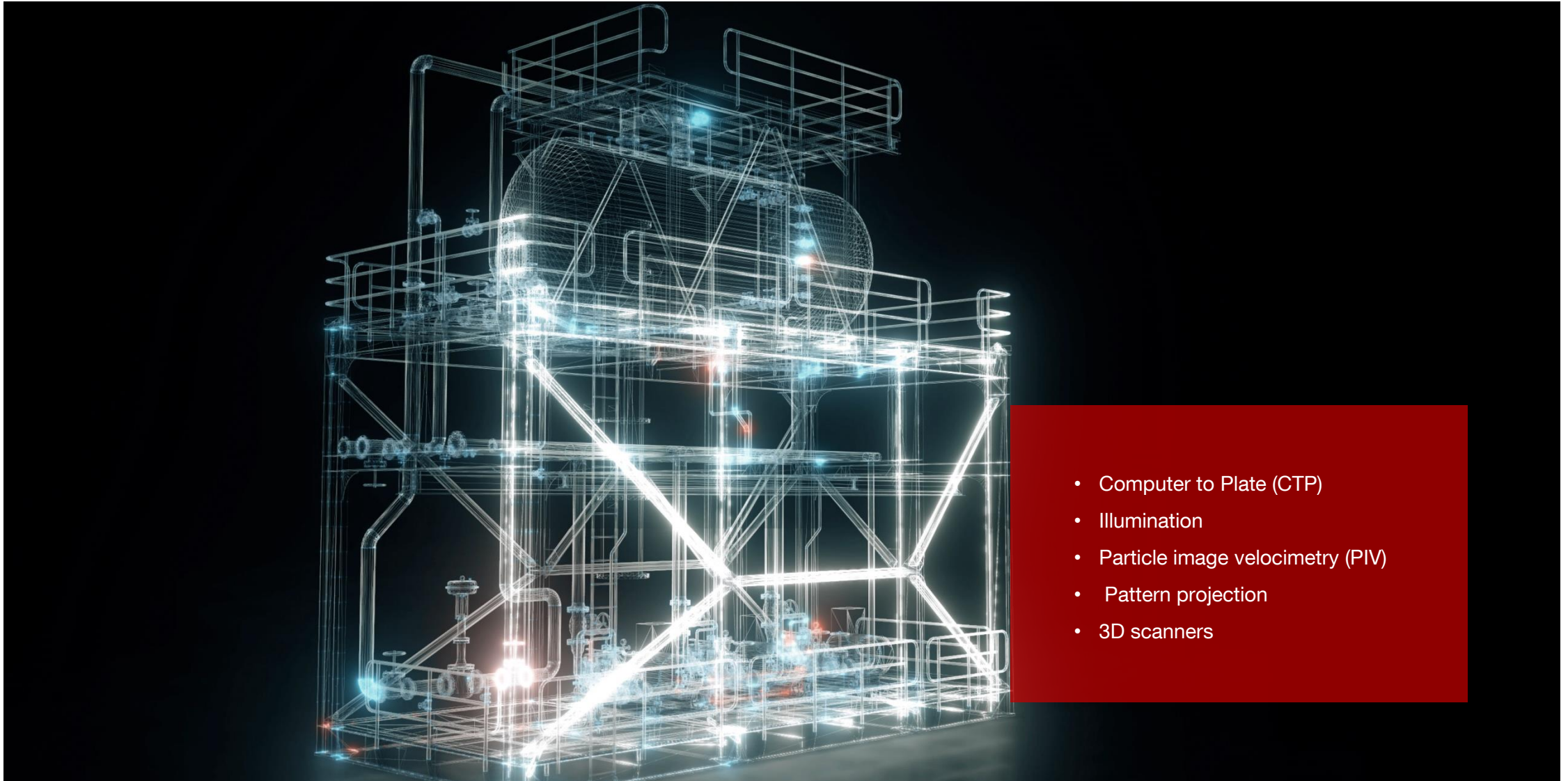


Industrial branches

Industrial

Imaging	In-process Sensing	Instrumentation	Material Processing	Optical Pumping
Diode laser sources for 3D scanning, radiography imaging, pattern projection and illumination in construction and industrial engineering	Laser technology that enables in-process, fast rate monitoring of efficient manufacturing processes	Laser sources that empowers measuring and testing tools	Laser technology that enables efficient transformation of different types of materials in manufacturing.	Diode laser technology that amplifies solid-state lasers through optical pumping

Laser technology for Imaging



- Computer to Plate (CTP)
- Illumination
- Particle image velocimetry (PIV)
- Pattern projection
- 3D scanners

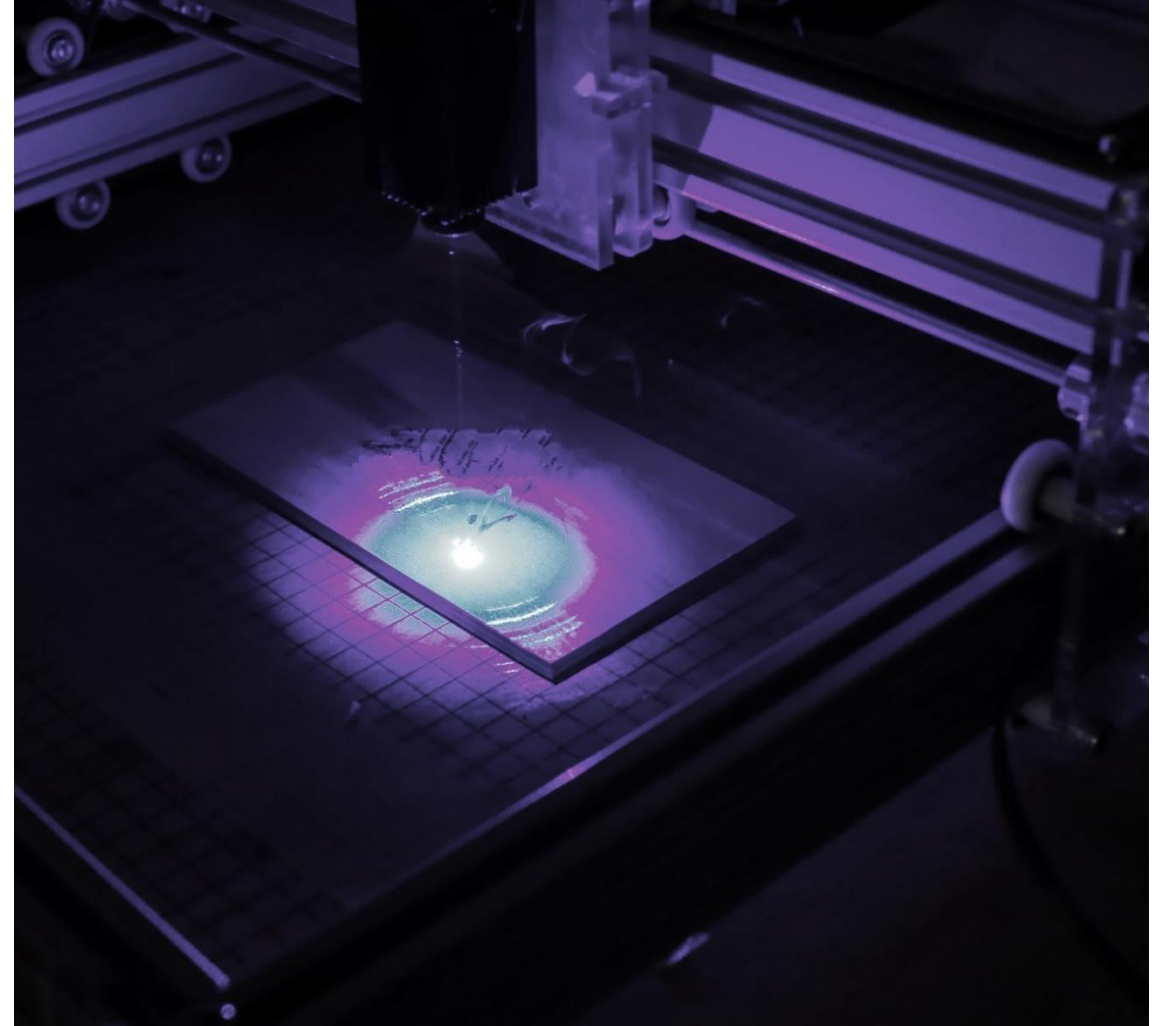
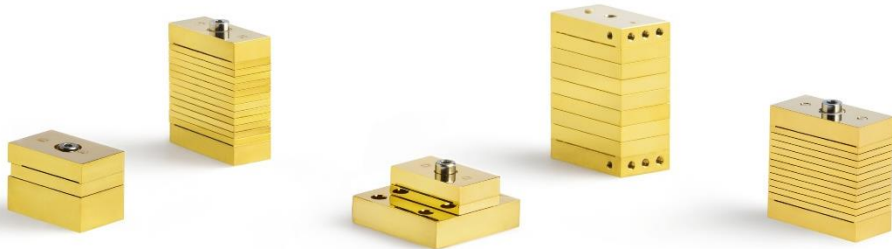
Laser technology for Imaging

Diode lasers (405 nm - 1550 nm)

Monocrom offers diode lasers that are used in many demanding high-speed imaging applications including 3D scanning, radiography imaging, offset printing, and particle imaging velocimetry.

Wavelength: 405 nm - 1550 nm

Indicated for: pattern projection, illumination, PIV, 3D scanners, CTP



In-process Sensing technology



- Sorting in free fall
- Quality control
- Classification

In-process laser Sensing technology

Diode Lasers (405 nm - 1550 nm)

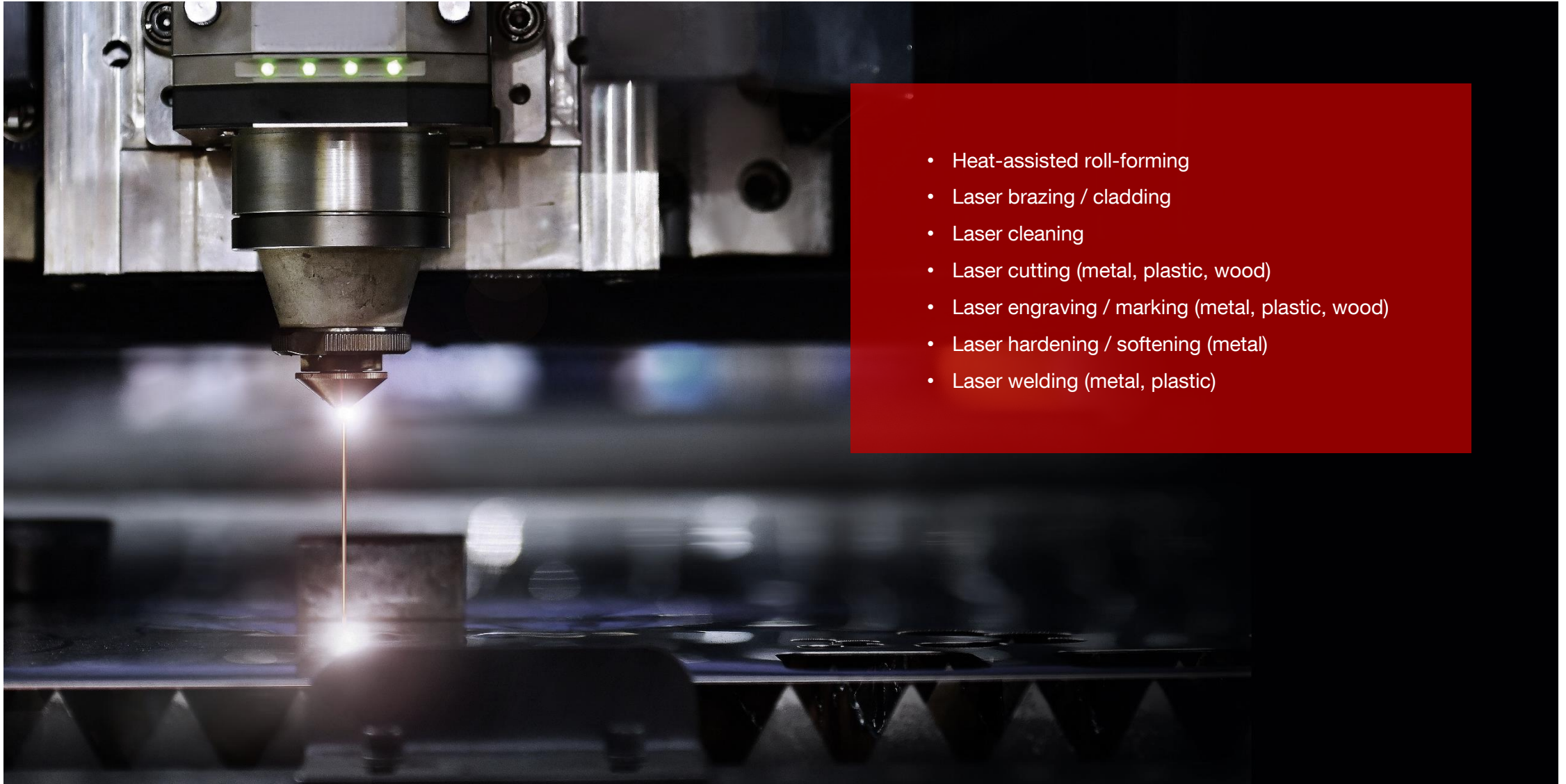
Monocrom offers laser sources for real time monitoring in efficient industrial production lines. Our components are mainly used in the food industry for sorting and classification of fruits, vegetables and grains.

Wavelength: 405 nm - 1550 nm

Indicated for: in-process quality control, sorting in free fall



Laser technology for Material Processing



- Heat-assisted roll-forming
- Laser brazing / cladding
- Laser cleaning
- Laser cutting (metal, plastic, wood)
- Laser engraving / marking (metal, plastic, wood)
- Laser hardening / softening (metal)
- Laser welding (metal, plastic)

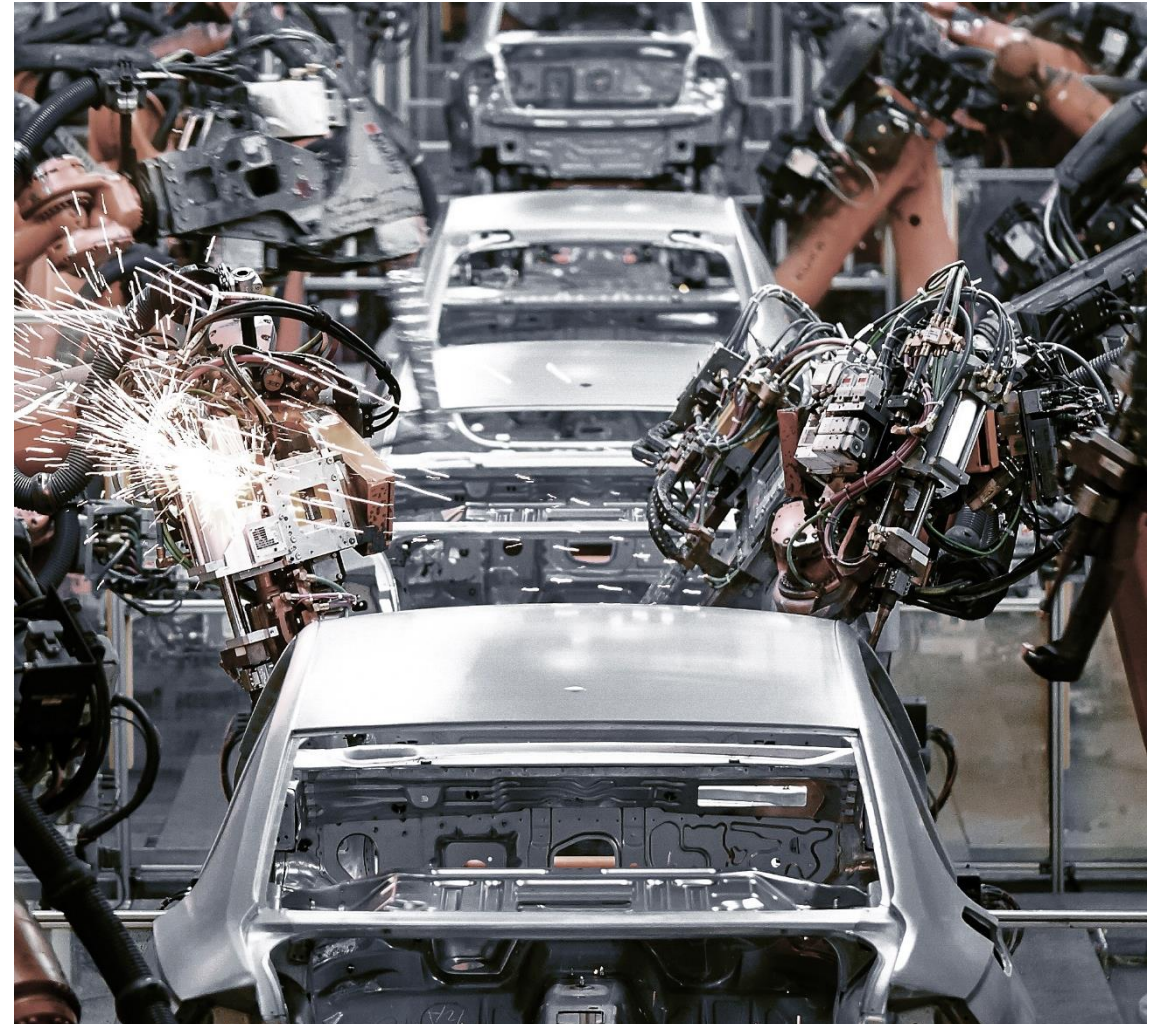
Heat-assisted Roll-forming technology

Direct diode lasers 780 nm up to 1060 nm

Monocrom offers direct diode laser sources for heat-assisted bending of ultra-high strength steel (UHSS), increasingly used to form automotive components, such as, car seats, bottom sill reinforcements, door beams, roof bows among others. The process of hot roll-forming is suitable for light weight applications and shows multiple advantages compared to other conventional bending techniques.

Wavelength: 780 nm /1060 nm

Indicated for: metal and steel roll-forming, hardening and softening



Laser technology for Marking and Engraving

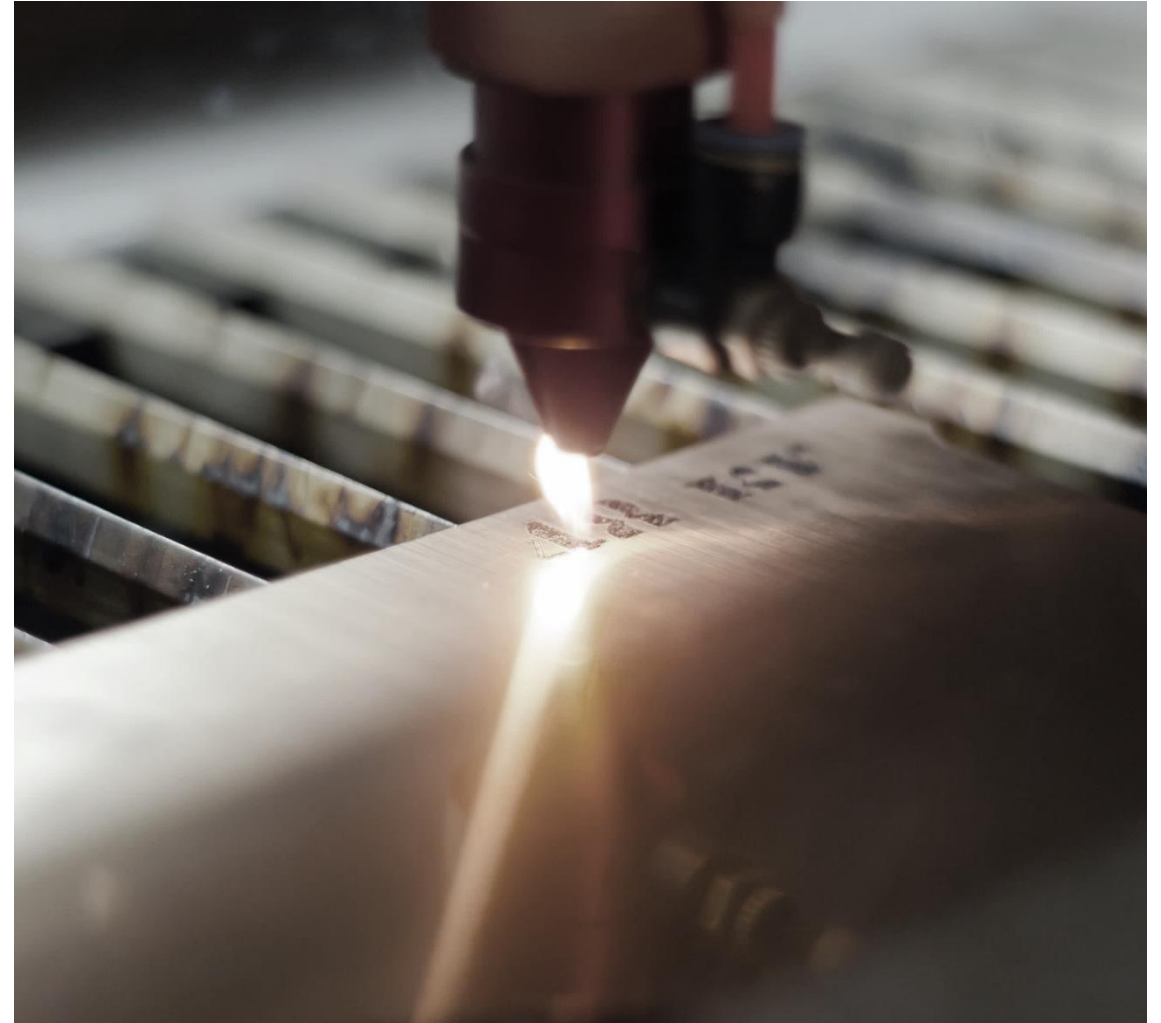
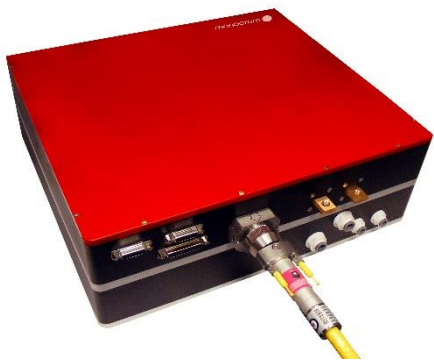
Industrial Lasers > Material Processing > Marking and Engraving

Mark FLEX Direct Diode Laser 2100 nm

Monocrom offers reliable direct diode laser sources for marking and engraving of different types of materials such as fabrics, cardboard, wood and plastics.

Wavelength: 2100 nm

Indicated for: laser marking and engraving



Laser technology for Thermal treatment

Chill FLEX Direct Diode Lasers

Monocrom offers direct diode laser sources for Laser heating that is commonly used in heat-assisted micro-forming processes. Our products enable a tool for the direct shaping or forming of metallic components by using the beam as a localized and highly controllable heat source.

- needed temperature can be achieved by control of laser power
- short processing time
- material properties can be manipulated by controlling the down cooling time

Wavelength: any wavelength available

Indicated for: hardening , softening, direct shaping or forming of metallic components



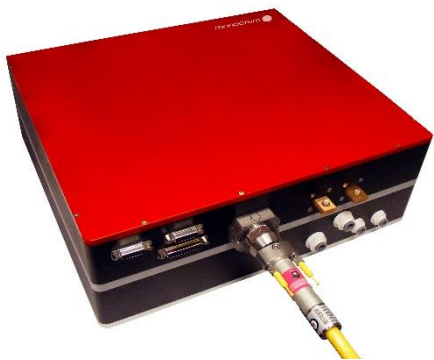
Laser technology for Cutting

Cutt FLEX Direct Diode Lasers

Monocrom offers diode laser sources for use in industrial cutting of polymers, fabrics and wood. Lasers enable optimization in material processing applications due to its ability to perform complex and precise cuts quickly and with less energy consumption.

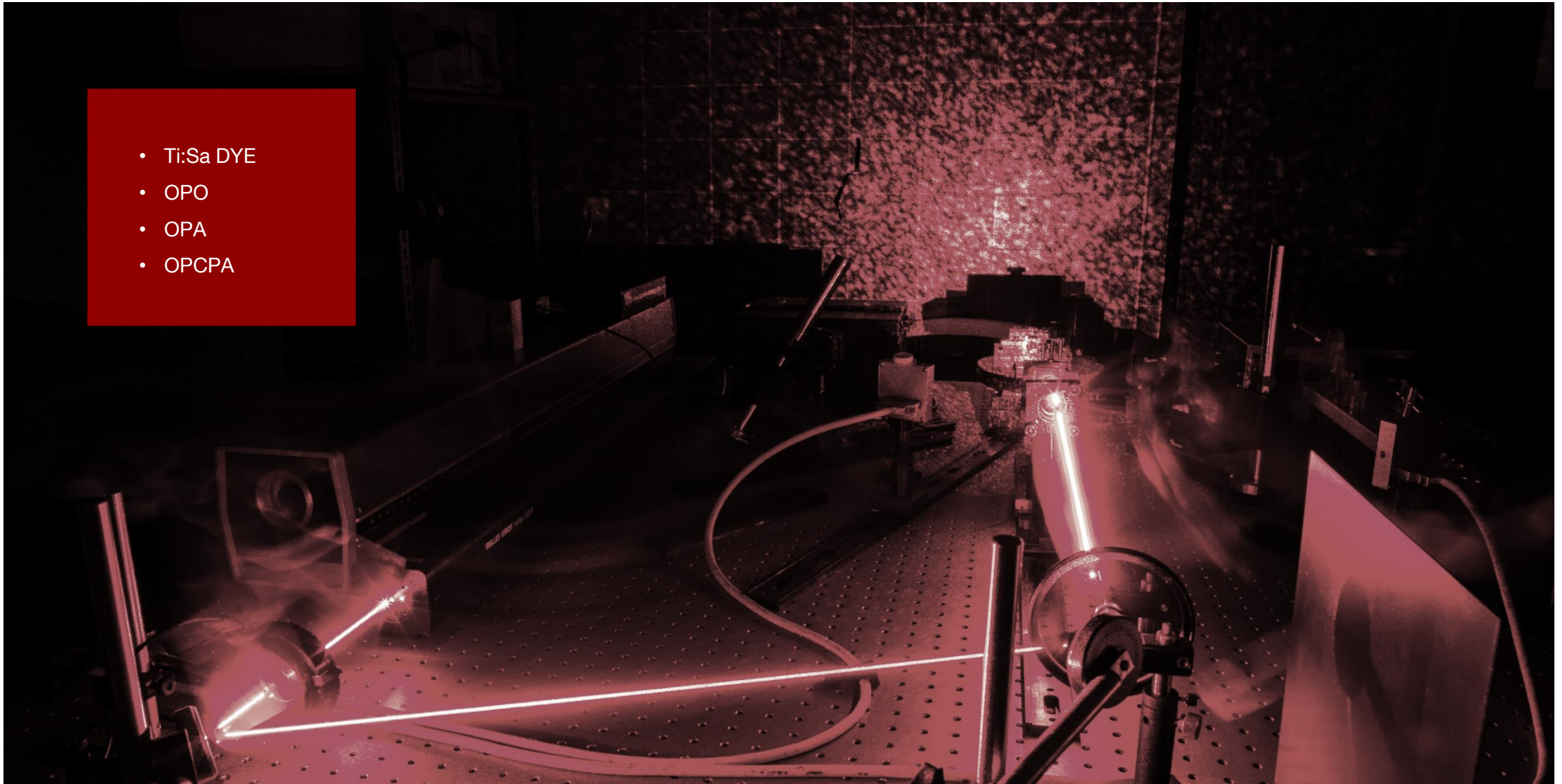
Wavelength: 405 - 2900 nm

Indicated for: Cutting of plastic, wood and fabrics



Laser technology for Optical Pumping

- Ti:Sa DYE
- OPO
- OPA
- OPCPA



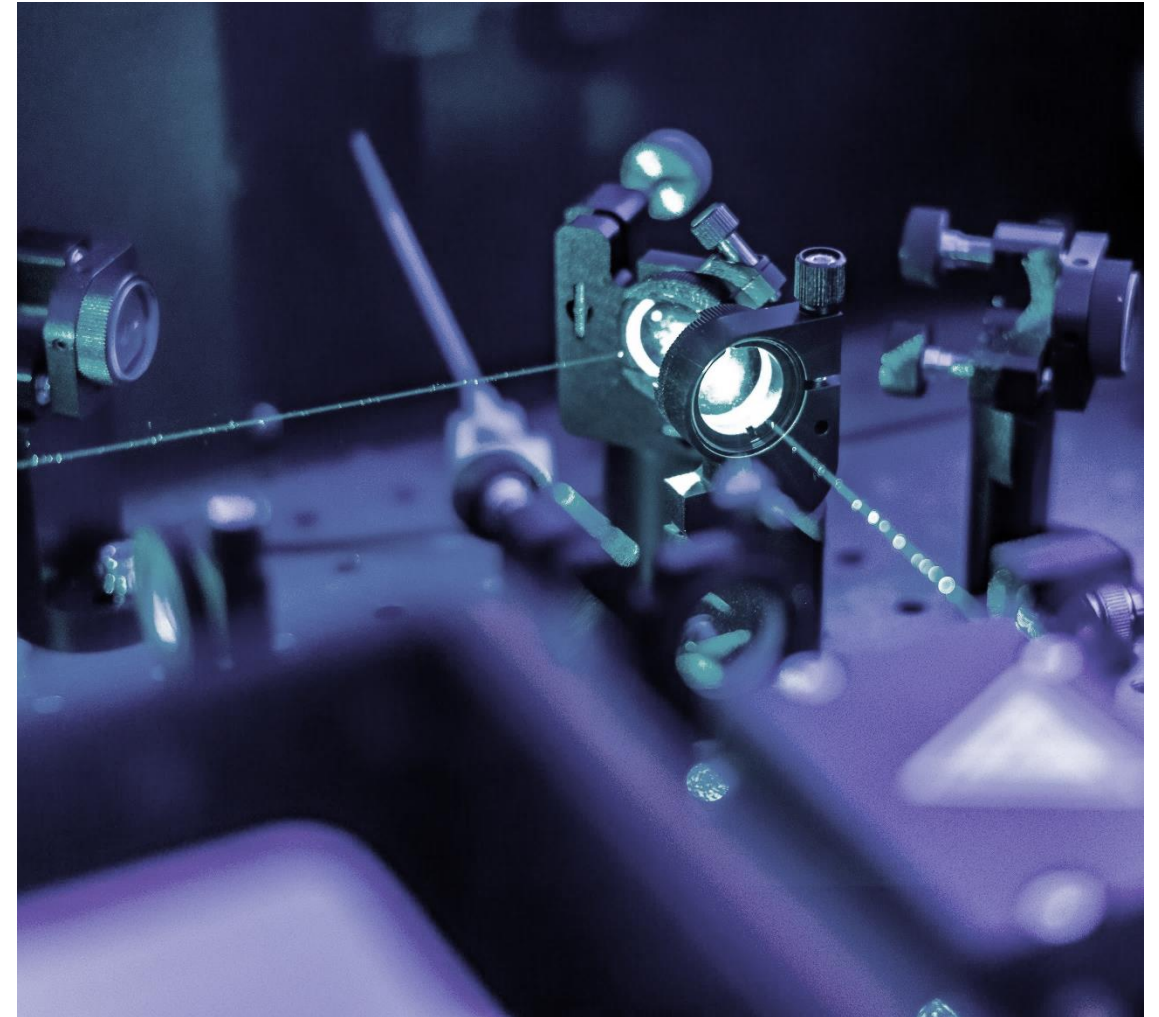
Laser technology for Optical Pumping

Pumping Sources CW

Monocrom offers a wide variety of pumping solutions involving single emitters, emitter arrays (laser bars and mini-bars) and laser bar arrays (vertical and horizontal stacks)

- **Wavelength:** 808nm/880nm/915nm for Neodymium doped materials
915nm/940nm/946nm for Ytterbium doped materials
960/1450nm for Erbium doped materials
785 nm (Tm:YAG)

Indicated for: Ti:Sa DYE, OPO, OPA, OPCPA



Thank you! Visit us at www.monocrom.com

