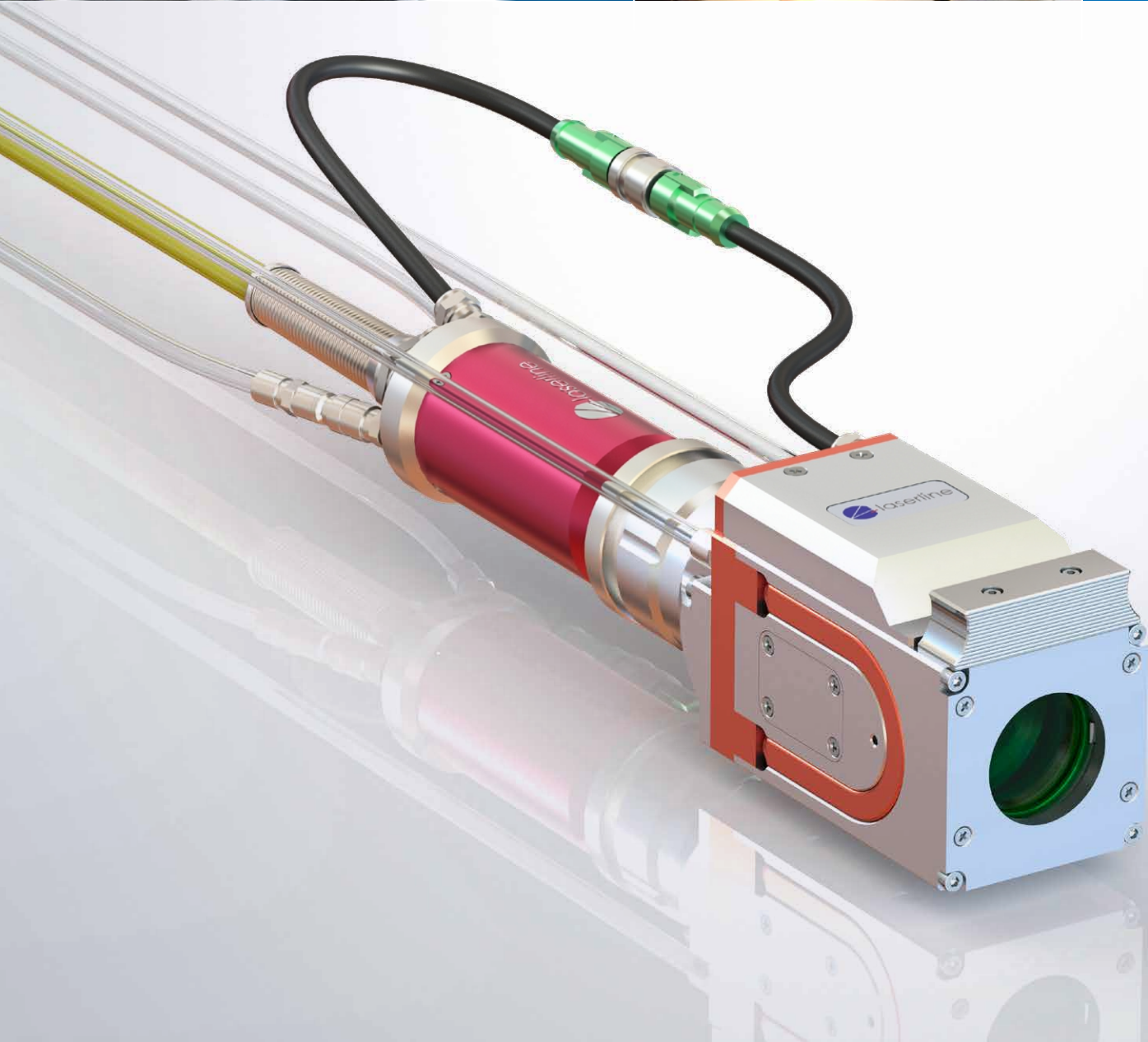


# OTC Optics Light Solution



Smart tools  
for materials  
processing



# Small Optics for Major Processing Tasks

Laserline stands for industry-compatible system solutions for laser material processing — from laser beam generation to the workpiece. Perfectly adjusted to certain processing optics, diode lasers guarantee a successful realization of our customers' applications.

## Robust in continuous operation

The processing optics of the OTC series are specifically designed for usage in a demanding industrial environment. Because of its robust design, the OTC series can also prove itself in permanent operation by its high reliability and longevity. The integration of an innovative cooling system provides an efficient heat dissipation and allows for usage even in difficult process conditions.

Our experience with high-power diode lasers and our far more extensive knowledge of their applications have influenced the construction of the OTC optics series. The result is an optics series that is ideally tailored for our diode lasers, which is at the same time optimized for welding and cladding applications.





## Compact and flexible

The compact design of the OTC processing optics allows for an easy and tremendously flexible integration with systems that are quite different. The cooling system of the optics and the optional sensor package are completely integrated into the processing optics and do not require additional assembly space. Because of its monolithic construction and a consistent avoidance of interfaces within the optics, the OTC series can prove itself with its high reliability and low weight.

Specifically designed for highly dynamic applications, and for usage in small handling systems or for integration into systems with low assembly space, the OTC series offers excellent features.

## Analysis in real time

With the available sensor package, you can keep an eye on the condition of the optics at any time. Sensors that are integrated for monitoring deliver your data directly to the laser control, thereby allowing for a central evaluation and visualization. Furthermore, the intelligent optics offer via additional digital services a decentralized and subordinated condition monitoring. In this way, you can constantly check the most important function values.

## Tailored designs

To be able to use the advantages of the monolithic design and meet thereby the most diverse process demands of our customers, the OTC processing optics is available in three different designs. Each can be flexibly configured with regard to focal lengths and additional components. Version OTC-3 B2 can even fit into the tightest of spaces with dimensions of 173 x 60 x 60 mm.

To connect cameras or sensors, versions OTC-3 S2 and OTC-3 A2 offer interfaces that allow for a coaxial process observation. Here, version OTC-3 A2 additionally has a 90° deflection of the laser beam. An LLK-D fiber connector holder and a quick-change protection glass are part and parcel of the standard equipment in all versions.



## Optics Series OTC

### OTC construction shapes

OTC Optics	OTC-3 B2	OTC-3 S2	OTC-3 A2
Design	Straight	Straight	Angled (90°)
Process sensor interface	No	Yes	Yes
Numerical aperture	NA 0,2		

### Mechanical specifications

Weight*	Approx. 1.7 kg	Approx. 2.6 kg	Approx. 2.6 kg
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### Optical specification

Max. laser power	12 kW
Focal length collimation	50 – 80 mm
Focal length focus	100 – 500 mm
Wavelength range	900 nm – 1100 nm
Fiber optic cables' receiver	LLK-D (Auto)
Protection glass	Quick-change protection glass

### Operational conditions

Ambient temperature	10 – 45°C
Operating temperature optic	Maximal 50°C
Humidity	Non-condensing
Active water cooling	Recommended for 500 W cw or more

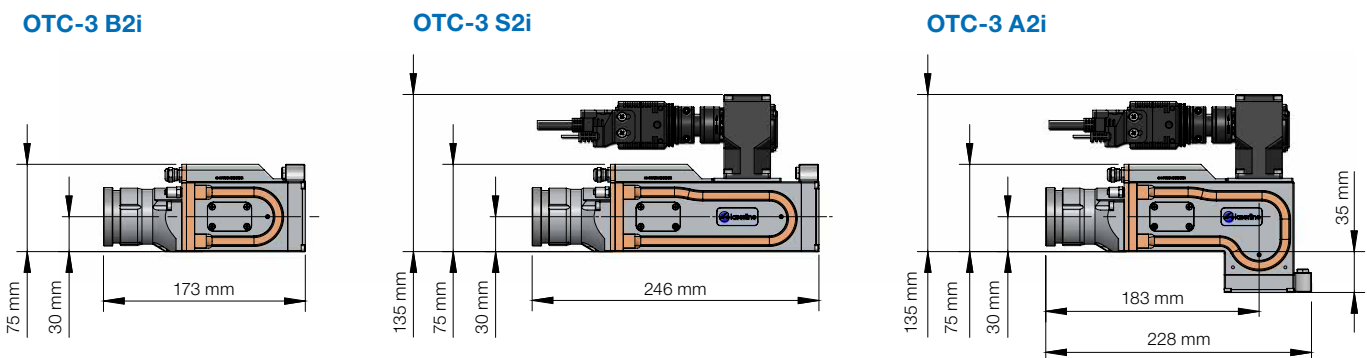
### Options

Interfaces for process monitoring	-	C-Mount, SM1, M40x1,5
Additional components	Crossjet, powder nozzle	CMOS camera, pyrometer, crossjet, powder nozzle

### Condition Monitoring

OTC Optics version	OTC-3 B2i	OTC-3 S2i	OTC-3 A2i
Condition monitoring package	Sensor package, evaluation electronics, data interface to laser		

\*without sensor package



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