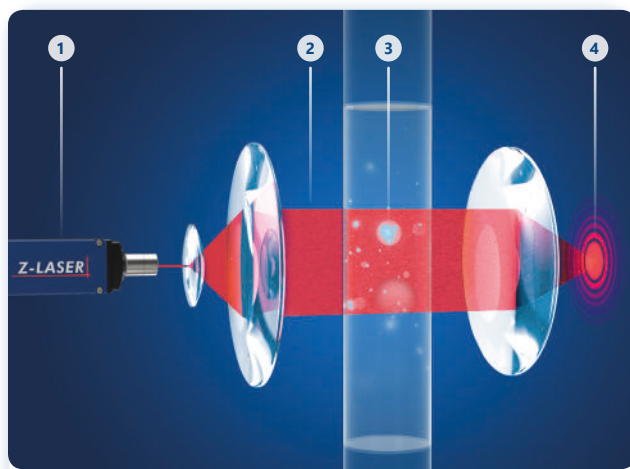


Particle inspection

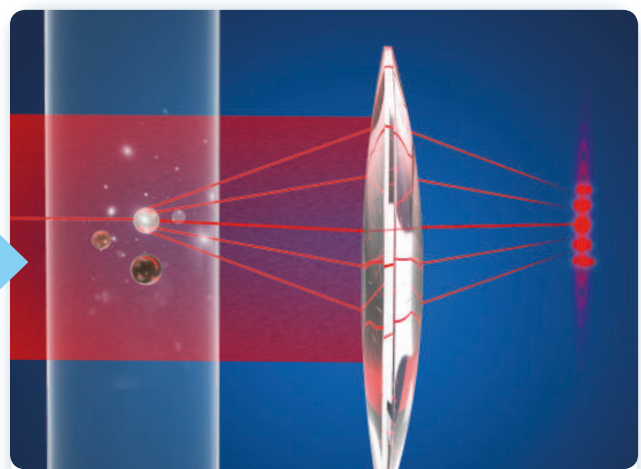
Stray light reduced laser projection
for a reliable qualification and
quantification of particles

Systems based on scattered light particle measurement are used in the qualification and quantification of particles, e.g., in clean rooms, medical facilities, and automotive exhaust gas measurement systems.

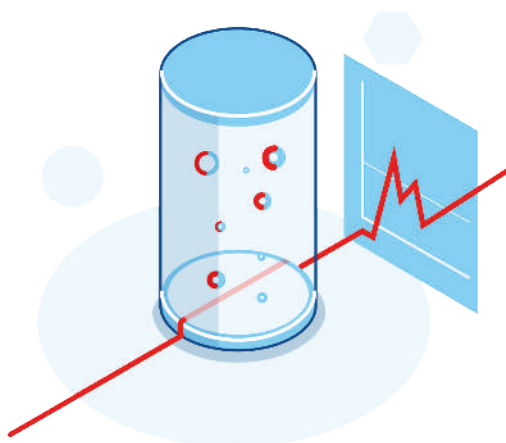
In this application a defined amount of air or sample material is passed through a laser beam. The light scattering which is caused by organic or non-organic particles lead to conclusions regarding size and amount of such particles.



Laser diffraction analysis:
 Particles (3) pass through the light beam (2) of the laser (1), creating diffraction patterns (4).



Laser diffraction analysis:
 Small sample particles are analyzed.



A stray light reduced laser projection must be ensured to avoid incorrect measurements and interpretations. A stable output power and wavelength is also essential to achieve accurate results.

Particle measurement / inspection in clean rooms

- ✔ Single-mode
- ✔ Very high output power stability
- ✔ Very little stray light
- ✔ $M^2 \sim 1.05$
- ✔ Standard: FC/PC connector (APC, SMA and many more upon request)
- ✔ Thermoelectric cooling (no wavelength drift) upon request
- ✔ Compact design upon request
- ✔ Single failure-proof upon request

ZQ1

Compact high-performance laser

The structured light laser series ZQ1 has been developed for the most demanding measurement applications in the market. Wherever a high output power, exceptional beam performance, and industrial-suited design is needed, the ZQ1 series is the right choice. The user can easily adjust the right working distance for the application with its manual focus option



IP 67



Manually focusable



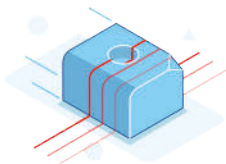
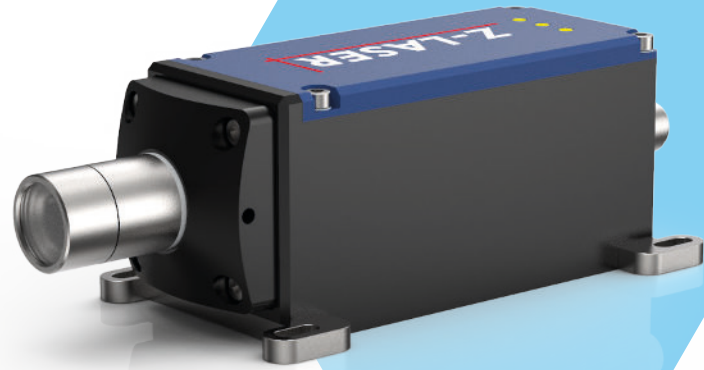
Active cooling integrated



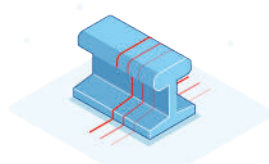
High Process Reliability



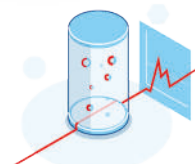
Output Power up to 1,7 W



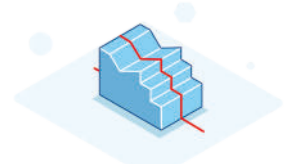
Machine Vision



Road and rail inspection



Analytics



3D-Measurement

Z-Fiber

High-end laser with active cooling

The projection quality is superior to any available free-space solution in the market. The laser along with its intelligent monitoring functions enables a high stability in performance. The integrated active cooling system supports an extended lifetime and stable operation. The laser can be integrated efficiently in a sophisticated machine vision, medical or life science setup due to its communication interfaces (RS-232 & I²C).



IP 67



Increase Of Work Quality



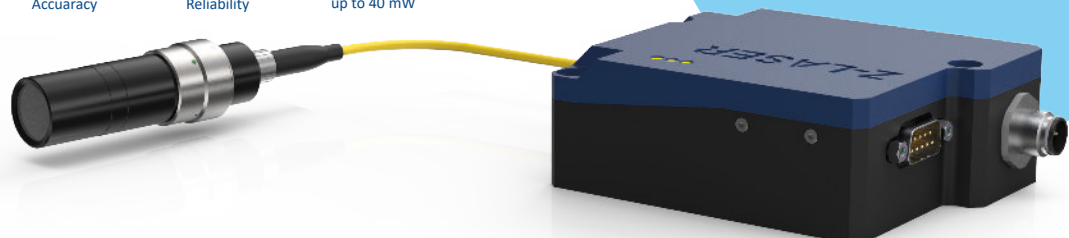
Boresight Accuracy



High Process Reliability



Output Power up to 40 mW



„Quality is when customers return to us
- not lasers.“

- Kurt-Michael Zimmermann,
Founder Z-LASER GmbH

Our mission is to develop laser sources and laser projectors of the highest quality for our customers. Since founding Z-LASER in 1985 in Freiburg, we supply the industry with top functional and easy-to-use laser systems.

Z-LASER is a socially responsible company that cares about the well-being of people and its environment. A significant part of the energy requirement is gained through the in-house solar system. Furthermore, we only supply civil applications.

Lasertechnology
from Freiburg
made in Germany

Contact us.
We would be happy
to advise you!



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