# LIDAR INSPECTION

Testing and quality assurance using conoscopy

DIOPTIC
creating optical solutions

- LIDAR SENSING RANGE VERIFICATION
- VALIDATION OF EMITTER RECEIVER ASSEMBLY
- DOWNSIZE AND ACCELERATE YOUR MEASUREMENT

## CONOSCOPY

**In the quality inspection of LCD displays, conoscopy is the best method to measure the angle characteristics precisely and fast. Based on our lenses we have now opened this technique for the LIDAR industry. Due to the special optical design, the rays of the LIDAR are completely received and focused in one plane without vignetting or stray light. It is therefore possible to assign an angle to an exact position in the focal plane. With an image sensor in the focal plane, the angle can then be measured precisely in the sub-mrad range. With a customer-specific target in the focal plane, entire LIDAR systems can be tested. We can already supply you with the measurement technology for your LIDAR systems of the future.**

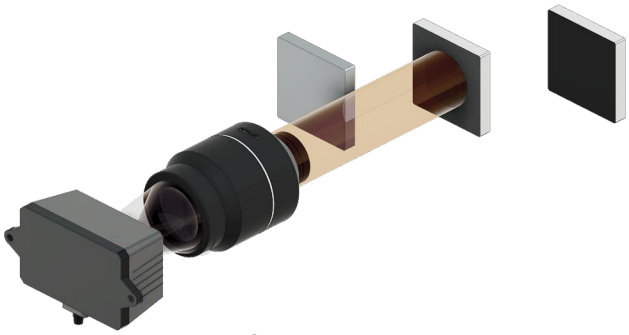
## EMITTER / RECEIVER TESTING

In order to reliably detect small objects at a distance of more than 100 meters, it must be ensured that transmitting and receiving units are optimally adjusted to each other.
Take advantage of our years of experience in designing complex optical systems and get a conoscope with precise beam steering and minimal pupil aberration, ensuring that corresponding angles of the transmitter and receiver unit actually impinge on the camera at the same pixel location.

Application for quality inspection

## RANGE TESTING RETHOUGHT

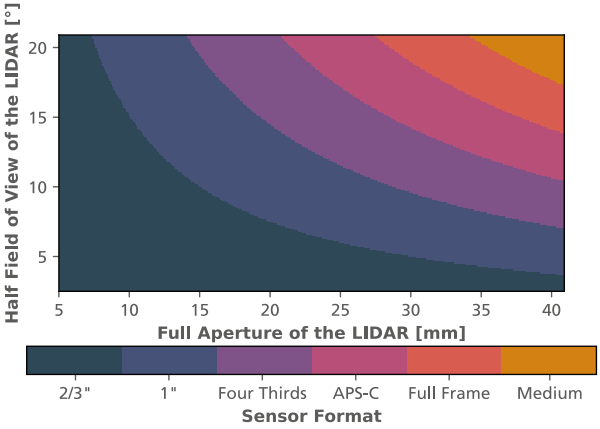
The verification of range sensitivity in end-of-line testing with a free-beam setup usually requires setups with unwieldy dimensions. Often such test facilities are **5 x 20 m** and larger.
Our innovative concept based on our conoscope lenses aims at a reduction of the range test. Using our lenses your test machine will be **2 x 5 m** or smaller.



Application for range testing

## PARAMETER SPACE

| | |
|---|---|
| Angular resolution | 0.04° |
| Field of view | ± 20° |
| Aperture | 40 mm |
| F-number | f/1.6 |
| Sensor format | Medium Format |
| Wavelength | 850 - 1550 nm |
| Working distance | 20 - 50 mm |



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