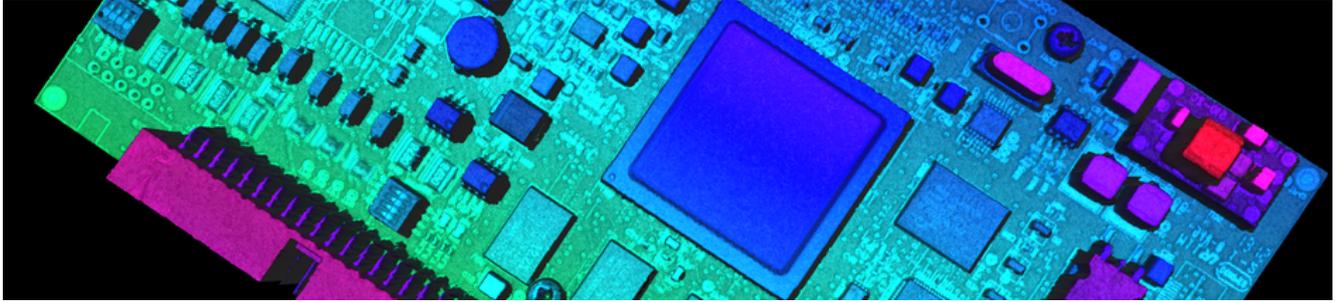# Ruler3000

The fastest way to high-performance 3D

3D MACHINE VISION

SICK
Sensor Intelligence.

Advantages


High-tech 3D machine vision made easy

The new 3D vision solution from SICK, Ruler3000, fits a wide variety of industrial needs. It is fast and offers high image quality. The 3D camera, built around the same CMOS sensor from SICK as the Ranger3 product family, offers superior image processing and reliable measurement results. Ruler3000 is easy to integrate and use. Its design is compact and the factory-calibrated camera has all the convenience features needed, including specific geometries for predefined fields of view.
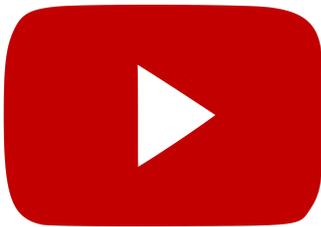
Ruler3000 delivers accurate measurement values down to 8 μm in height.
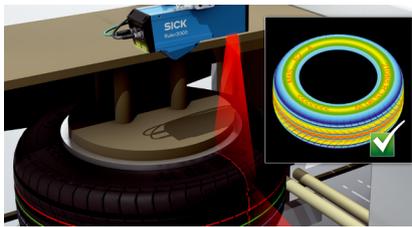
The high light sensitivity of Ruler3000 ensures accurate inspection even of very dark materials. Ruler3020 in particular has a field of view that is ideal for tire side wall applications.
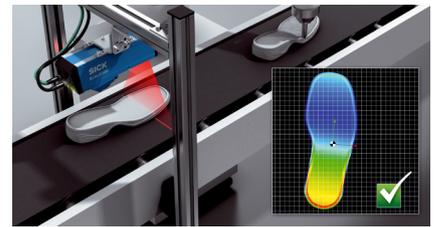
Ruler3000 can deliver millimeter-precise data as input to the robot, quickly and accurately guiding it through any dispensing application.

➕ **The new Ruler3000 3D camera from SICK is the perfect fit for a wide variety of applications in factory automation.**

Keep it simple

The Ruler3000 3D camera offers ease of use and simplified integration into systems and machines using industry standards such as GigEVision and GenICam as well as SICK's own API GenIStream. In every aspect, simplicity is a given: A suitable lens and laser are already designed into the sensor and software is provided for easy setup.

Ruler3020
Guaranteed field of view in mm (inch)

H

245.5
(9.67)

155
(6.10)

190 x 50
(7.48 x 1.97)

125
(4.92)

W

220
(8.66)
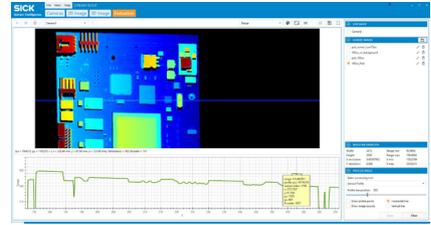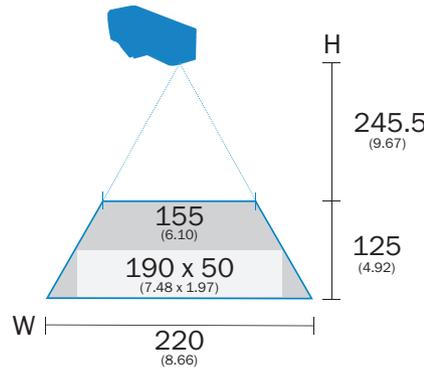
Ruler3000 comes factory-calibrated with a suitable laser and optics in a rugged housing. You can start the measuring directly.

Thanks to the guaranteed field-of-view concept, commissioning is easy. You can quickly move from the lab to the factory floor.

The included software components, Stream Setup and the API GenIStream, are especially designed with simplicity in mind.

Ruler3000 enables you to easily solve complex inspection and measurement tasks.

Setting a new standard for high-speed 3D

With ever-increasing needs for faster manufacturing processes, more accurate quality control, and shorter delivery times, each part must keep up to the speed with the others. The new 3D streaming cameras from SICK not only keep up, they exceed the pace – creating new opportunities in the area of machine vision for machine builders and system integrators in a wide range of industrial applications.
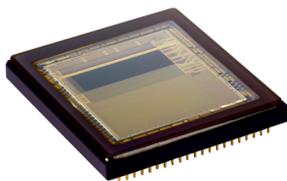
SICK CMOS 3D sensor.

Faster and more precise shape, volume, and position measurements with 3D cameras from SICK.

Superior 3D performance with Rapid On-Chip Calculation technology (ROCC).

Highly accurate with an unmatched measurement speed, the new generation of 3D cameras support machine vision system integrators worldwide.

SICK LifeTime Services

SICK's services increase machine and plant productivity, enhance the safety of people all over the world, provide a solid foundation for a sustainable business operation, and protect investment goods. In addition to its usual consulting services, SICK provides direct on-site support during the conceptual design and commissioning phases as well as during operation.

The range of services not only covers aspects like maintenance and inspection, but also includes performance checks as well as upgrades and retrofits. Modular or customized service contracts extend the service life of plants and therefore increase their availability. If faults occur or limit values are exceeded, these are detected at all times by the corresponding sensors and systems.

Consulting and design
Application-specific advice on the product, its integration and the application itself.

commissioning and maintenance
Application-optimized and sustainable — thanks to professional commissioning and maintenance by a trained SICK service technician.

service contracts
Extended warranty, SICK Remote Service, 24-hour helpdesk, maintenance, availability guarantees and other modular components can be individually combined on request.

Technical data overview

Technology	3D line scanning
Scan/frame rate	46,000 3D profiles/s, In reduced ROI 7,000 3D profiles/s, full format
Scatter measurement	✓
Reflectance measurement	✓
3D measurement	✓
Light source	
Internal lighting	Laser, Visible, Red, 660 nm, ± 15 nm
Factory calibrated	✓
Enclosure rating	IP65, IP67
Configuration software	Stream Setup
Ethernet	✓, UDP/IP

Product description

Highly accurate with an unmatched measurement speed, the new generation Ruler3000 3D cameras will be the number one choice for machine vision system integrators and industrial applications. Being powered by the unique 3D CMOS sensor from SICK tailored for superior image processing, their measurement results are very reliable. The factory-calibrated sensor extracts the true 3D shape of an object, regardless of its contrast or color. Ruler3000 delivers accurate measurement values down to 8 µm in height. Thanks to the guaranteed field-of-view concept, commissioning is easy. GigE Vision and GenICam compliance ensures cost-effective integration.

At a glance

- SICK's CMOS sensor with ROCC technology for superior 3D performance
- 3D profiles at up to 7 kHz full format
- Easy commissioning with guaranteed FOV concept
- GigE Vision and GenICam compliant
- Accurate 3D, reflectance, and scattered light measurements in one device
- Modular industrial design, IP65/67

Your benefits

- Factory calibration shortens integration time
- The unique CMOS sensor enables fast 3D measurement speed for increased throughput
- Guaranteed field of view simplifies commissioning
- Suitable for batch size one and flexible production thanks to reliable and accurate measurements on dark and shiny surfaces
- High light sensitivity for 3D inspection with laser class 2
- Standardized and cost-effective software integration with GigE Vision and GenICam
- Scalability by sharing software and feature set with Ranger3 3D vision cameras

Fields of application

- Assembly verification of tablets and cell phones in the electronics industry
- Quality control of tire side walls
- Glue dispensing application in footwear manufacturing
- Packaging and in-line food quality control
- Robot inspection

Ordering information

Other models and accessories ➜ www.sick.com/Ruler3000

Sub product family	Working distance	Laser class	Window material	Type	Part no.
Ruler3020	245.5 mm ... 370.5 mm	2	Float glass, anti-reflective coated	V3DU3-020RM21A	1106166

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

WORLDWIDE PRESENCE:

Contacts and other locations –**www.sick.com**

SICK AG | Waldkirch | Germany | www.sick.com

SICK
Sensor Intelligence.