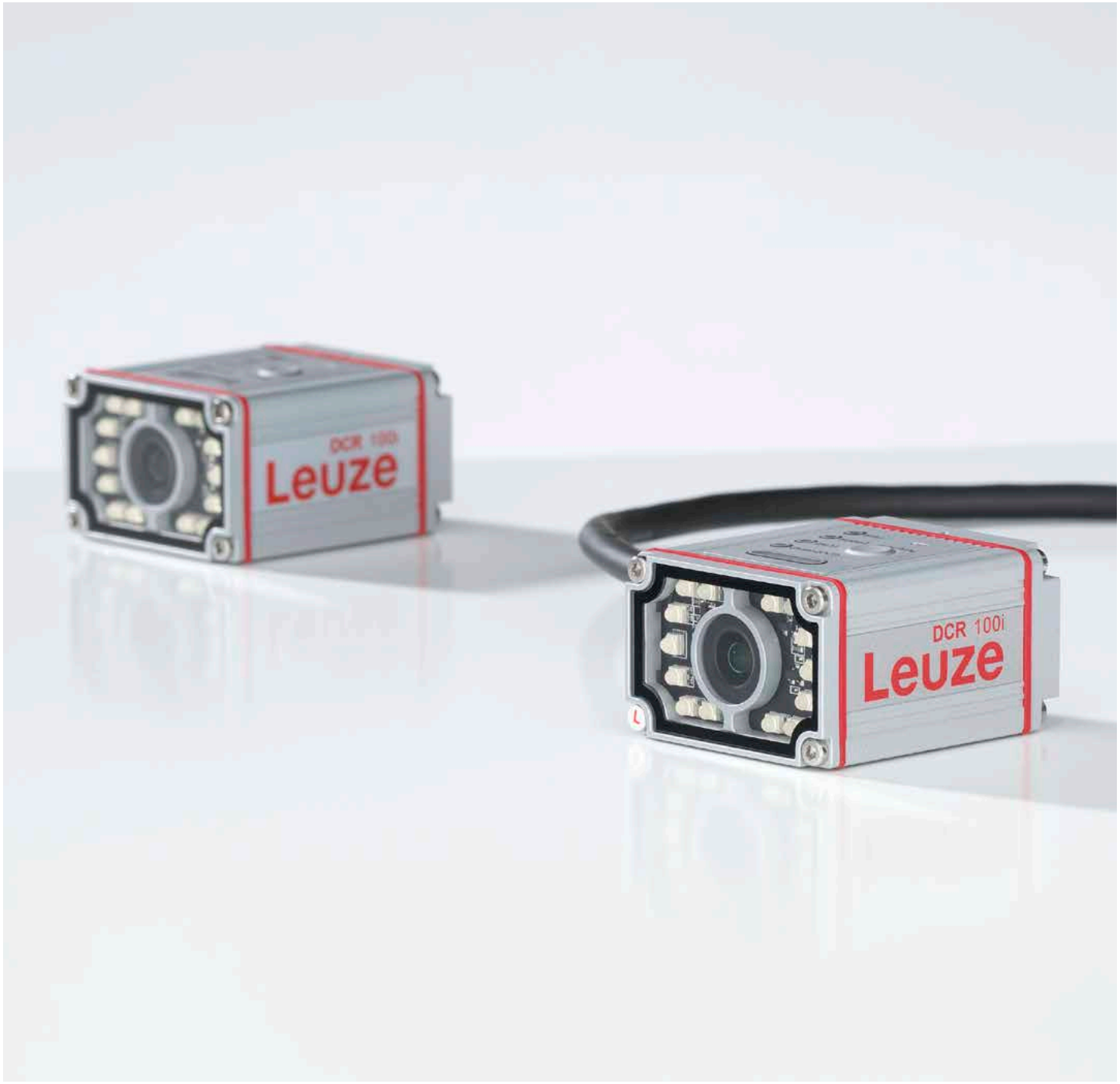
Leuze

DCR 100i

Compact code reader for 1D/2D identification



The Sensor People

Powerful DCR 100i code reader for fast and accurate 1D and 2D bar code scanning

The DCR 100i series code reader is developed for industrial requirements and enables fast and accurate capture of 1D and 2D bar codes. Thanks to its simple commissioning, intuitive software and powerful decoding algorithms, it can be seamlessly integrated and ensures reliable scanning in any environment.

Advantages for you

- **Reliable code reading** thanks to the 1.3 MP CMOS imager
- **Flexible reading distances** within the reading field thanks to manually adjustable focus
- Supports reading of **DPM codes**
- **Easy setup** thanks to integrated trigger and teach buttons
- **Compact, robust design** with protection class IP64

Four focus areas available:

Focus ranges

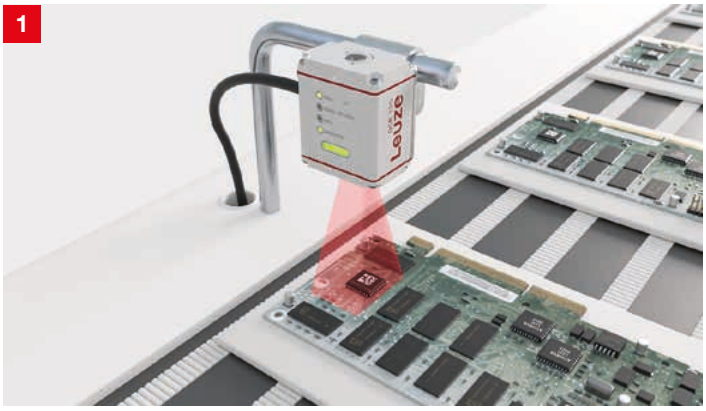
	Range	0 50 100 150 200 250 300 350 400 450 500 550 600	Module thickness
HHD (hyper high density – very short operating range):	40 – 120 mm		0.08 – 0.18 mm
HD (high density – short operating range):	60 – 300 mm		0.08 – 0.33 mm
SR (standard range):	70 – 460 mm		0.127 – 0.33 mm
LR (long range):	70 – 550 mm		0.127 – 0.33 mm

Applications

Precise reading of DPM codes on electronic components

Requirement: In the electronics industry, reading small, sophisticated DPM codes on integrated circuits (ICs) and printed circuit board assemblies (PCBAs) is critical for traceability and quality control.

1

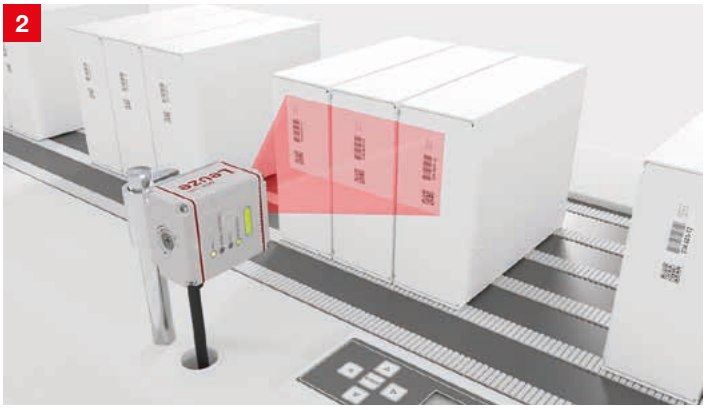


Solution: The DCR 100i code reader features DPM decoding and a manually adjustable focus, enabling reliable capture of small codes.

Multiple code reads on packaging

Requirement: Each secondary packaging box is labeled with both a 1D and a 2D code. For quality assurance, both codes must be captured simultaneously in a single scanning process before the box group is packaged.

2

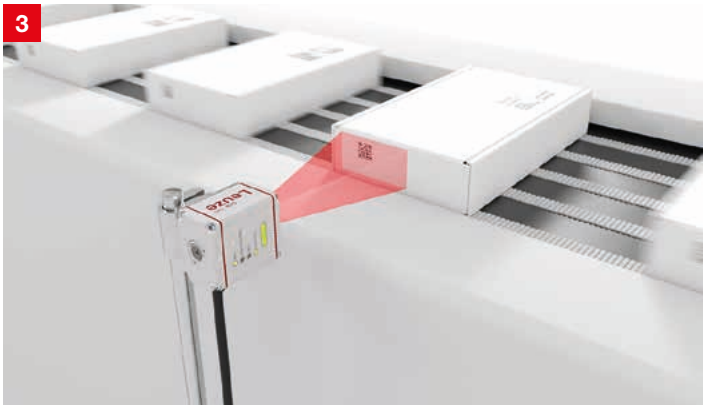


Solution: The DCR 100i code reader can read multiple bar codes and 2D codes simultaneously on packaging. Its imager is optimized for vertical mounting and provides a wide horizontal field of view as well as optimized reading rates.

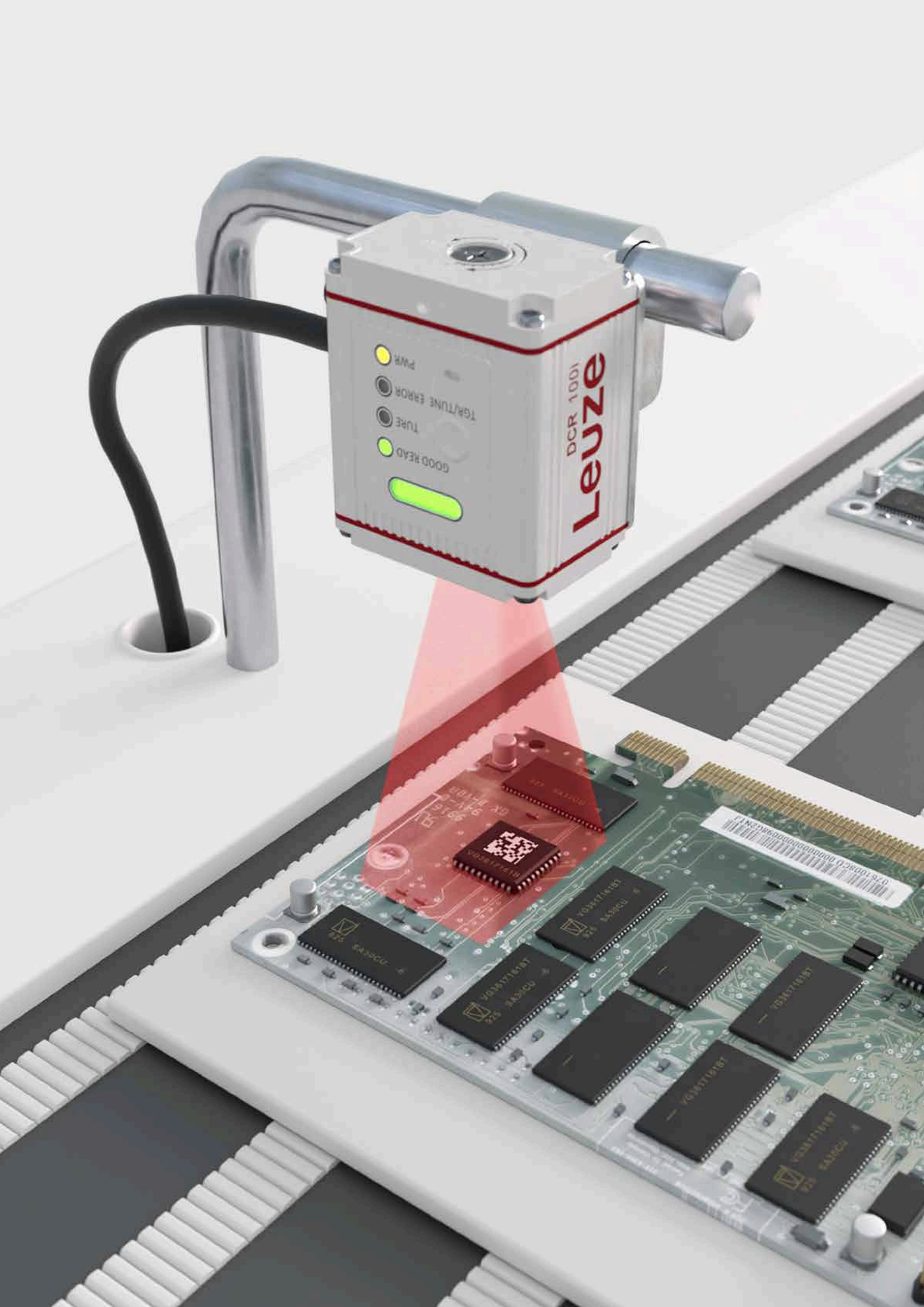
Precise code reading on moving packaging

Requirement: In the packaging industry, accurate reading of codes on moving boxes is essential. All code orientations and types must be accounted for to ensure reliable tracking and quality control.

3



Solution: The DCR 100i features an imager that captures 120 images per second (for conveyor speeds up to 2 m/s) and includes powerful integrated illumination. It captures bar codes on moving objects quickly and accurately, reduces reading errors and increases throughput in demanding applications.


PWR
TGR/TUNE ERROR
TUNE
GOOD READ
DCR 100i
Leuze

Highlights

Adjustable focus for flexible working distance

The DCR 100i's adjustable focus allows it to adapt to different distances, code sizes and surfaces, ensuring sharp images, high reading rates and scalable performance in any application. Four focus areas available:

- HHD (hyper high density – very short operating range): 40 – 120 mm, at module width 0.08 – 0.18 mm
- HD (high density – short operating range): 60 – 300 mm, at module width 0.08 – 0.33 mm
- SR (standard range): 70 – 460 mm, at module width 0.127 – 0.33 mm
- LR (long range): 70 – 550 mm, at module width 0.127 – 0.33 mm

Automatic setting for easy setup

The DCR 100i includes an automatic mode that adjusts exposure, illumination, and decoding settings directly on the device – no PC required – ensuring fast, accurate, and reliable reading in any environment.

Wide range on interface options

The DCR 100i series provides Ethernet connectivity and supports industrial protocols – including Modbus and TCP / IP – as well as RS 232, ensuring seamless integration with any automation system.

Overview of technical data

	Optical data	Electrical data	Mechanical data
Features	Imager: CMOS (Global Shutter)	Supply voltage: 12–28 V	Dimensions: 44 (W) × 53 (D) × 29 (H) mm
	Resolution: 1080 × 1280 (1.3 megapixels)	Operating current: 500 mA ±10% (typical), 1000 mA ±10% (max.)	Lens cover material: Glass
	Frame rate: 120 fps	Interfaces: Ethernet TCP/IP / Modbus TCP, RS 232	Metal housing: Aluminum
	Decoding speed: Continuous reading mode: < 1 m/s Trigger mode: < 2 m/s	Digital input: 1 x trigger input	Fastening: 2 x M3 thread
	Reading range: 40 – 550 mm	Switching output: 2 x output (good read / no read)	Mounting device: BT DCR 100
	Field of view: 29° (H) x 34° (V)	Cable connection: – Single plug 0.3 m cable with M12 12-pin A-coded (socket) – Double plug 0.3 m cable with 1. M12 12-pin A-coded connector 2. M12 4-pin D-coded (socket)	Protection class: IP64
	Light source: LED, red		
	Laser class: 1 (IEC 60825-1:2014), red		

Our product range at a glance

Switching sensors
- Optical sensors
- Inductive sensors
- Capacitive sensors
- Ultrasonic sensors
- Laser scanners
- Fiber optic sensors
- Fork sensors
- Light curtains
- Special sensors

Measuring sensors
- Distance sensors
- Positioning sensors
- 3D sensors
- Laser scanners
- Light curtains
- Bar code positioning systems
- Fork sensors

Safety
- Safety Solutions
- Safety Laser Scanners
- Safety Light Curtains
- Single and Multiple Light Beam Safety Devices
- Safety Radar Sensors
- Secure Locking Devices, Switches and Proximity Sensors
- Safety Controllers and Relays
- Machine Safety Services

Identification
- Bar Code Identification
- 2D-Code Identification
- RF Identification

Data Transmission
- Optical data transmission systems

Network and Connection Technology
- Connection technology
- Modular connection units

Industrial Image Processing
- Light section sensors
- Industrial IP cameras
- Vision sensors

Accessories and add-on products
- Signaling devices
- Mounting systems
- Reflectors

How to contact us

Leuze electronic GmbH + Co. KG
In der Braike 1, 73277 Owen, Germany
T +49 7021 573-0
F +49 7021 573-199
info@leuze.com
www.leuze.com

en 01-2025/11 1491