EXTERNAL LIGHT SOURCES FOR STEREOMICROSCOPES
KERN Pictograms

360° rotatable microscope head
Monocular Microscope
For the inspection with one eye

Binocular Microscope
For the inspection with both eyes

Trinocular Microscope
For the inspection with both eyes and the additional option for the connection of a camera

Abbe Condenser
With high numerical aperture for the concentration and the focusing of light

Halogen illumination
For pictures bright and rich in contrast

LED illumination
Cold, energy saving and especially long-life illumination

Incident illumination
For non-transparent objects

Transmitting illumination
For transparent objects

Fluorescence illumination
For the inspection with one eye

Fluorescence illumination for compound microscopes
With 100 W mercury lamp and filter

Fluorescence illumination for compound microscopes
With 3 W LED illumination and filter

Phase contrast unit
For a higher contrast

Darkfield condenser/unit
For a higher contrast due to indirect illumination

Polarising unit
To polarise the light

Infinity system
Infinity corrected optical system

Zoom magnification
For stereomicroscopes

Parallel optical system
For stereomicroscopes, enables fatigue-proof working

Integrated scale
In the eyepiece

SD card
For data storage

USB 2.0 digital camera
For direct transmitting of the picture to a PC

USB 3.0 digital camera
For direct transmitting of the picture to a PC

WLAN data interface:
For transmitting of the picture to a mobile display device

HDMI digital camera
For direct transmitting of the picture to a display device

PC software
To transfer the measurements from the device to a PC.

Automatic temperature compensation
For measurements between 10 °C and 30 °C

Protection against dust and water splashes IPxx
The type of protection is shown by the pictogram.

Battery operation
Ready for battery operation. The battery type is specified for each device.

Battery operation rechargable
Prepared for a rechargable battery operation

Mains adapter
230V/50Hz in standard version for EU.
On request GB, AUS or USA version.

Power supply
Integrated in microscope. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.

Package shipment
The time required to manufacture the product internally is shown in days in the pictogram.

C-Mount
Adapter for the connection of a camera to a trinocular microscope

FPS
Frames per second

H(S)WF
High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)

LWD
Long Working Distance

N.A.
Numerical Aperture

SLR camera
Single-Lens Reflex camera

SWF
Super Wide Field (Field number at least Ø 23 mm for 10× eyepiece)

W.D.
Working Distance

WF
Wide Field (Field number up to Ø 22 mm for 10× eyepiece)

Abbreviations
Why you should choose a KERN microscope now!

For 175 years, KERN & SOHN has been synonymous with high precision weighing and measuring technology. This claim is the driving force for the development of our microscope and refractometer ranges.

Thanks to consistent customer focus paired with smart ideas and the latest available technology we are proud to be suppliers of high-quality, durable top microscopes and refractometers, which help you to be as efficient as possible in your daily work.

When developing our microscopes we have concentrated on the very best optical quality and have used only high-quality glass and the latest technologies to achieve this. The high-quality Philips halogen and modern LED illumination produce razor-sharp images with high contrast and which will impress you with their brilliant true-colour display – you must have noticed this yourself.

**Your advantages:**

- all mechanical parts have been designed for a long service life
- special attention has been given to the ergonomy of our microscopes, as this allows the user to work for several hours in a comfortable position which does not cause fatigue
- our microscopes are fully-equipped and can be used immediately
- Highlight for 2020: die KERN camera software – you will be amazed at how user-friendly and intuitive it is, a high-quality tablet camera as well as a comprehensive range of calibration services for refractometers
- and much more...

Use our practical “Check list for microscopes and refractometers”, which may help you to quickly determine specifications for the future instrument. Together with our KERN product specialist you can choose the right product for you.

If there is no suitable product in the standard range, for example, then we will of course configure an individual microscope for you.

Our aim is to develop a market-driven product solution, so with our microscope and refractometer range, the saying holds true: good quality at a competitive price! This is what we stand for and work towards, every day!

With our current 2020 product range you can benefit from improved quality and a clear reduction in price, which we have been able to achieve through more efficient production methods and increased global sales of our microscopes and refractometers and of course we pass this straight on to you

Do you have any questions about our range of microscopes and refractometers?

Your KERN customer consultants are available at any time to help you further.

I hope that you enjoy working efficiently with our KERN Optics products.

Albert Sauter, Managing Director

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**Your advantages**

**fast**

- 24 hour dispatch service for products in stock – order today, on its way tomorrow
- Sales & service hotline from 8:00 am to 5:00 pm

**reliable**

- Up to 3 years warranty
- Certified QM system DIN EN ISO 9001

**versatile**

- One-stop shopping: from microscope through to refractometer – everything from one supplier
- Quick as a flash, find the product you want with the “Quick-Finder” at www.kern-sohn.com

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**Order hotline**

+49 7433 9933-0

**Service hotline**

+49 7433 9933-199

**Online shop**

www.kern-sohn.com

**E-mail order**

info@kern-sohn.com

**Fax Order**

+49 7433 9933-146

**Our team of consultants will assist you**

from Monday to Friday from 8:00 am to 5:00 pm

**www.kern-sohn.com**

Information on current product availability, product data sheets, user instructions, useful knowledge, technical glossary and much for you to download, practical topic areas, which will guide you to the right product in your industry as well as a microscopes and refractometers search engine.
7 External light sources for stereomicroscopes

Ring illumination and cold light sources
Ring illumination KERN OZB-IR

Professional illumination units guarantee outstanding, uniform and strong illumination

Features

- Choose your favourite external illumination here to achieve maximum flexibility and greatest possible ease of use in stereo microscopy
- These professional illumination units provide a quality of light at a high, constant intensity at all times
- Regardless of whether your choice is space-saving ring lights or cold light sources using optical fiber, our range is all you can wish for
- With the OZB-A7101 polarisation ring illumination unit, you also have an excellent component which has been specially optimised for observing shiny surfaces

<table>
<thead>
<tr>
<th>Model</th>
<th>Illuminance</th>
<th>Inner Ø</th>
<th>Colour temperature</th>
<th>Brightness adjustable</th>
<th>Illumination by segments</th>
<th>Polarising filter</th>
<th>Price excl. of VAT €</th>
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<tbody>
<tr>
<td>OZB-A4571</td>
<td>3W-LED</td>
<td>60</td>
<td>7000 – 11000</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>90,–</td>
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<tr>
<td>OZB-A4572</td>
<td>3W-LED</td>
<td>60</td>
<td>6500 – 7000</td>
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<td>✓</td>
<td>✓</td>
<td>140,–</td>
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<td>OBB-A6102</td>
<td>4,5W-LED</td>
<td>63</td>
<td>approx. 7600</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>135,–</td>
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<tr>
<td>OZB-A7101</td>
<td>4,5W-LED</td>
<td>62</td>
<td>6500 – 7000</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>590,–</td>
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</tbody>
</table>

= Included with delivery  ○ = Option

Fiber illumination KERN OZB-IF

Features

- With the OZB-A4516 20 W-LED goose neck illumination unit with focusable light beam, you can adjust the illumination to suit your needs. Spot or scattered radiation means that you can achieve the very best illumination of your sample.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Length</th>
<th>Illuminance</th>
<th>Colour temperature</th>
<th>Brightness adjustable</th>
<th>Price excl. of VAT €</th>
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<tbody>
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<td>Dual fiber LED unit</td>
<td>300</td>
<td>6W</td>
<td>5600 – 6300</td>
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<td>Dual fibre LED cold light source</td>
<td>540</td>
<td>20W</td>
<td>6400</td>
<td>✓</td>
<td>620,–</td>
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</tbody>
</table>

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![Application example](image-url)
1769
Ancestor Johann Jakob Sauter built the Hahn inclination scale out of iron, a foundation stone for weighing for the balance industry in Southern Germany.

1844
KERN is founded – precision balances are produced.

1863
A proud Gottlieb Kern with his staff.

1880
Pharmaceutical balance with Aesculap.

1923
Inflation – KERN wages are paid with self printed currency.

1980
The electronic balance ousts mechanical devices.

1994
Accredited DKD laboratory (ISO 17025).

2000
New premises in Balingen.

2002
Existing QM system certification in accordance with DIN EN ISO 9001:2000 standards.

2007
Approval for the manufacture of medical products (DIN EN 13485 and 93/42/EEC).

2008
Authorisation for initial verification by the manufacturer (2009/23/EC).

2009
Approval for the manufacture and sale of height rods (DIN EN 13485 and 93/42/EEC).

2012
Verification point for non-automatic balances and test weights.

2014
Expansion of the product range to include optical instruments (microscopes and refractometers).

2015
Inauguration of Ziegelei 2.0 with computer-controlled high-bay warehouse.

2017
Come with KERN into the digital future: Expansion of the model ranges compatible with Industry 4.0, as well as the related services.

2019
Significant anniversary year! 25 years of accredited DKD laboratory. 175 years of KERN & SOHN. 250 years of balance manufacture in the Sauter family-owned company.

2020
Construction of Ziegelei 3.0, extension of administration building.