VISION . ID
LIGHTING SYSTEMS

di-soric

WELCOME
TO DI-SORIC

- **100% owner-managed**
- **Headquarters**
  Urbach, Germany
- **Technology and production center**
  Lüdenscheid, Germany
- **Representatives and branch offices**
  in more than 40 countries
- **Certifications**
  IQNet, DQS - ISO 9001:2015, UL, RoHS

For over 40 years, di-soric GmbH & Co. KG has been producing and selling sensors featuring a wide variety of technologies. These sensors are used in industrial automation—primarily in assembly and handling technology, in the automotive, electronics and pharmaceutical industries and in packaging technology.

Other important cornerstones of our product range are innovative vision sensors and code readers, high-quality LED lighting for machines and image processing, and products from the segment of safety technology.

di-soric Solutions GmbH & Co. KG focuses on components, complete solutions developed on a customer-specific basis and vision system solutions that are ready to use immediately. Upon request, customers receive a comprehensively planned and implemented image processing system, including feasibility analyses, project planning and project implementation, system acceptance and a wide range of services after project completion.

We combine our resources to help our customers in precise, disruption-free and cost-effective production processes without problems—now and in the future.

OUR PROMISE
TO YOU:

SOLUTIONS.

To us, finding solutions means:

- Targeted consultation and technical expertise for efficient product solutions
- A very broad, high-performance product range
- "Engineered solutions" for exclusive complete solutions in industrial image processing

CLEVER.

To us, being clever means:

- Developing products with clear benefits
- Products that are easy to use thanks to clever functions
- Joint dialog for the most efficient and most suitable solution

PRACTICAL.

To us, being practical means:

- Solution expertise with the best possible functionality at affordable prices
- Cooperative and straightforward working relationships for mutual success
- Focus on the key issues for greater efficiency

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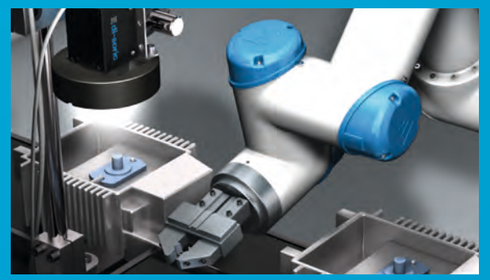
LIGHTING SYSTEMS FOR INDUSTRIAL IMAGE PROCESSING AND IDENTIFICATION



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tailored for our lighting systems
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Lights with switchable constant light

are suited for operation from a 24 VDC voltage source. They offer a constant light intensity across a wide voltage range.

Externally flashable lights

are suited for operation from a constant current source or a flash controller. They are the ideal solution for very short camera exposure times and therefore for very fast-running processes.

AREA
LIGHTING.

AREA LIGHTS ARE USED FOR BACKGROUND ILLUMINATION AND SHAPE TESTING.

They are used for background illumination of (partially) transparent objects and camera top view for detecting the shapes of objects whose contour must be monitored. Due to their high-quality construction, the lights themselves always remain contrast- and warp-proof, even at changing operating temperatures.

: IR : IR

Fill level checking and cover fit

Due to their high-quality construction, very good homogeneity and markedly higher brightness are achieved. Exposure time can thereby be reduced in high-speed production plants and the use of flash controls can be dispensed with.

Area lights

- Homogeneous bright light field with constant light intensity over the entire voltage range

standard

- Available light colors:
  Constant light: Infrared - Red - Green - Blue - White
  Flashable: Infrared - Red - White
- Border-free illumination in BE-F30 / BE-F50
- Adjustable light intensity in BEK-F
- Light areas of 30 x 30 mm to 200 x 200 mm as standard

in modular construction - also in individual sizes

- Standard sizes of 150 x 150 mm of 1250 x 1250 mm – optionally, individual sizes can be ordered with millimeter precision
- ProPExtruded aluminum section bar
- Camera cutout with Ø 50 mm optional
- External trigger input

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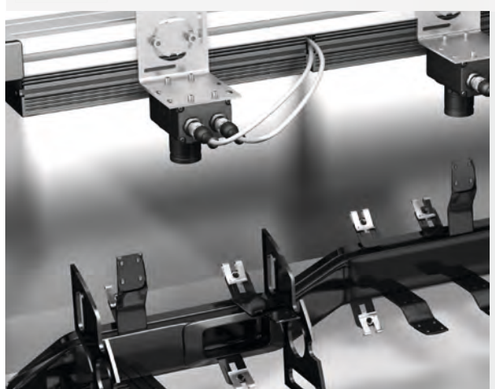
BAR-
LIGHTS.

AVAILABLE IN LENGTHS FROM 100 MM UP TO 500 MM, AS WELL AS ALL APPLICATION-RELEVANT COLOR TEMPERATURES.

Our barlights are used for a light-intense, homogeneous illumination of the objects examined in the most varied applications for surface and outline detection.

: IR : IR



Positioning parts

The different beam angles of the LEDs enable a very precise alignment toward the examined object. Due to the extremely high brightness, an optimal image is created and precise inspection is made possible.

- For light-intense and homogeneous illumination
- Available light colors:
  Constant light: Infrared - Red - Green - Blue - White
  Flashable: Infrared - Red - White
- Border-free illumination in BE-A30 / BE-A50
- Beam angle in High Power LED: 30°, uniformly 120° in SMD-LED
- Extremely high illuminance up to 1200 kLux

Light surface lengths:

- BE-A: 30 / 50 mm
- BE 1-A: 65 / 130 / 240 mm
- BEK-A: 96 / 296 / 396 / 496 mm

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SPOT-
LIGHTS.

SPOT LIGHTS ARE USED FOR TARGETED ACCENTUATION OF THE OBJECTS EXAMINED

They are perfectly suited for confined installation spaces in the most varied applications for surface and contour detection. Our spot lighting systems are available with various beam angles and in all application-relevant color temperatures.

: IR UV

Checking for features and completeness

Spot lights create a very homogeneous, bright spot light field and contribute to a reduction in individual differences in brightness between the objects examined.

:

- Cone-shaped light beam for external or spot illumination
- Available light colors:
  Infrared - Red - Blue - White - Ultraviolet
  M12 spot in red and white colors
- Different beam angles:
  7° / 14° / 30° - Infrared - Red - Blue - White
  14° / 25° - UV
  25° - M12 Spot
- Constant level of light intensity over the entire voltage range
- Universal trigger input

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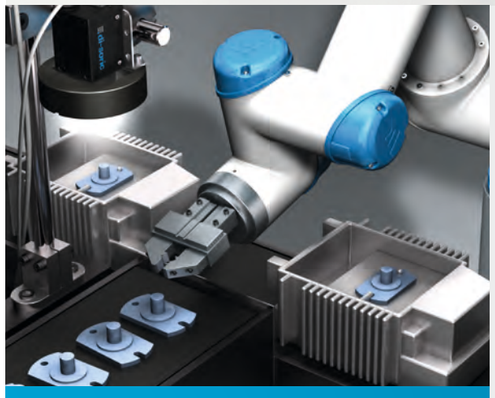
RING-
LIGHTS.

OUR RINGLIGHTS ARE USED FOR SHADOW-FREE ILLUMINATION OF THE OBJECTS EXAMINED.

They ensure symmetrical light around the camera lens and are used for surface and outline detection. They are available with various beam angles, in all application-relevant color temperatures and with installed diffusers and polarizers.

: IR



Robot guidance

Ringlights enable very stable pictures, since the extremely bright light concentration in the center of the camera field of view reduces the influence of a minimal position or inclination differences of the object examined.

:

- Homogeneous and bright illumination in a ring around the camera lens
- Available light colors:
  Constant light: Infrared - Red - Green - Blue - White
  Flashable: Red - White
- Compatible with common S- and C-Mount lenses
- Constant level of light intensity over the entire voltage range
- Light intensity can be adjusted
- Extremely high illuminance due to its very modern high-power LEDs (e.g. 60.5 kLux in BE-R30-F1-K-CLR)
- Universal trigger input
- Long life thanks to intelligent thermal management
- Lights of adjacent sizes can be assembled into a unit of a max. of three ringlights (with optional connector set)

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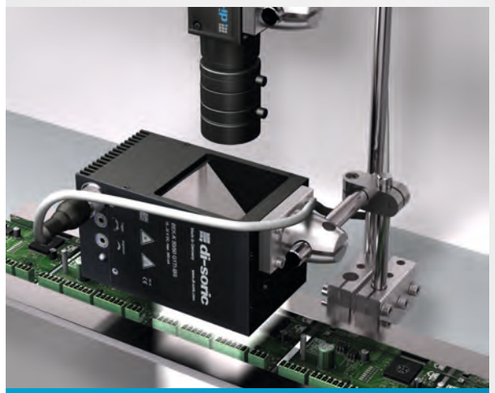
COAXIAL
LIGHTS.

SHADOW-FREE, AXIAL ILLUMINATION OF THE OBJECTS EXAMINED.

Surface reflections are reliably suppressed. They are available in all application-relevant color temperatures and are distinguished by features such as trigger inversion and brightness adjustment. Coaxial lights are suited for operation from a 24 VDC voltage source and are brightness stabilized for a wide voltage range.

: Red Green Blue White



Traceability during assembly

The coaxial light ensures uniform and high-contrast illumination of uneven electronic components with a surface that has, in part, a highly reflective surface.

- Ideal for reflective, metallic or shiny objects
- Available light colors: Red - Green - Blue - White
- Homogeneous illumination thanks to anti-reflective protective screen
- Integrated current regulation
- Constant level of light intensity over the entire voltage range
- Universal trigger input
- High efficiency
- Light intensity can be adjusted
- Robust metal housing

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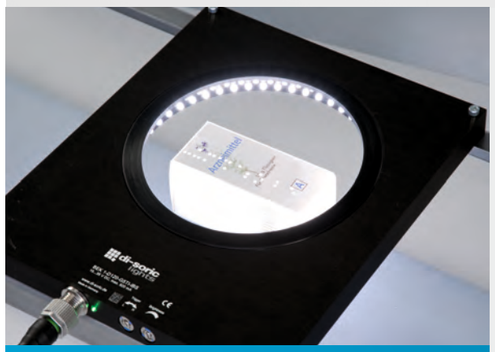
DARK FIELD
LIGHTS.

FOR INCREASING CONTRAST OF SURFACE FEATURES OR DEFECTS – FOR EXAMPLE, FOR QUALITY MONITORING.

In these lighting systems, a transverse light injection to the camera viewing direction takes place. They are available in all application-relevant color temperatures and are distinguished by features such as trigger inversion and brightness adjustment.

: IR Red Green Blue White



Checking Braille writing on pharmaceutical packaging

Due to the flat beam angle, the surface properties of an examined object are accentuated in a high-contrast manner. Elevations such as Braille on the surface of packaging are illuminated in a uniform and high-contrast manner and can thus be detected with certainty and reliability.

- Certain detection of changes in surfaces due to a flat angle of incidence
- Available light colors: Infrared - Red - Green - Blue - White
- In the sizes Ø 70 and Ø 120
- Constant level of light intensity over the entire voltage range
- Homogeneous illumination
- Universal trigger input
- High efficiency
- Light intensity can be adjusted

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DOME
LIGHTS.

SPHERICAL DOME LIGHTS GUARANTEE AN EXTREMELY DIFFUSE LIGHTING SCENARIO.

Shadowing from rugged or scratched surfaces is thus suppressed to the greatest extent possible. The camera application can thus represent contrasts and product features which are in focus in a much more process-stable manner than with point or area-type lights.

Code reading and checking

Due to extremely diffuse and uniform illumination, shadows and light effects on curved and reflective surfaces can be largely reduced. Reliable inspection of metallic components or decoding of data matrix code on uneven surfaces can thereby be made possible.

- Monochrome or color RGB light with separately controllable colors
- Extremely homogeneous, diffuse illumination
- Very compact design
- High light intensity
- Robust design
- Customizable adaptation in diameter of optical camera opening

ACCESSORIES
FOR LIGHTING.

TAILORED ACCESSORIES FOR VISION AND ID LIGHTING SYSTEMS.

Not only the quality of the lights plays a role in the creation of a good image, but also the accessories, which can ensure stable mounting, the proper angle, more diffuse light and much more, when putting your objects being tested in the best light.

Electrical accessories

Various adapters, distributor boxes and controllers are available as accessories for the operation of our multitude of different lighting for industrial image processing.

Optical accessories

di-soric offers the most varied accessories for changing characteristics of light.

This also includes filters, diffusers and pole discs for barlights and ringlights.

Mechanical accessories

The tailored bracket systems and adapters from di-soric are designed for safe and adjustable mounting of the most varied lighting.

The complete set of accessories can be found at www.di-soric.com

SOLUTIONS. CLEVER. PRACTICAL.

di-soric
GmbH & Co. KG

Steinbeisstrasse 6
73660 Urbach
Germany

Phone: +49 71 81 98 79-0
Fax: +49 71 81 98 79-179

info@di-soric.com
www.di-soric.com

di-soric
International

di-soric GmbH & Co. KG | Germany
di-soric Solutions GmbH & Co. KG | Germany
di-soric Austria GmbH & Co. KG | Austria
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