

LIGHTING  
FOR MACHINE VISION

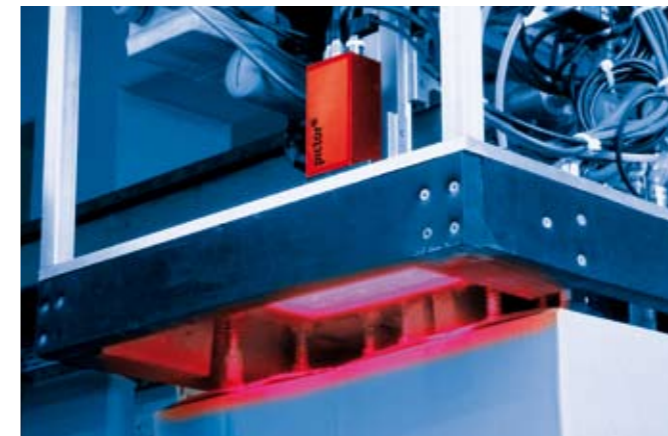
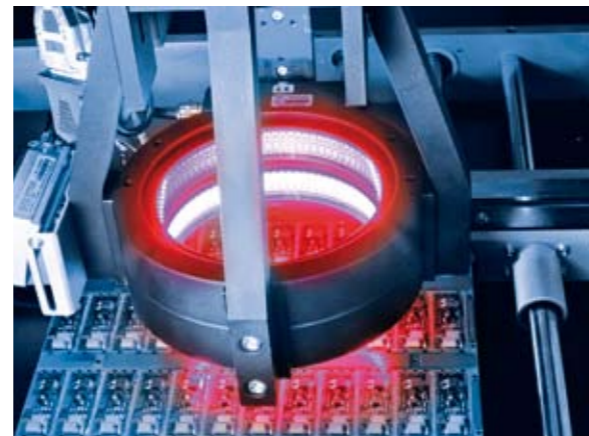
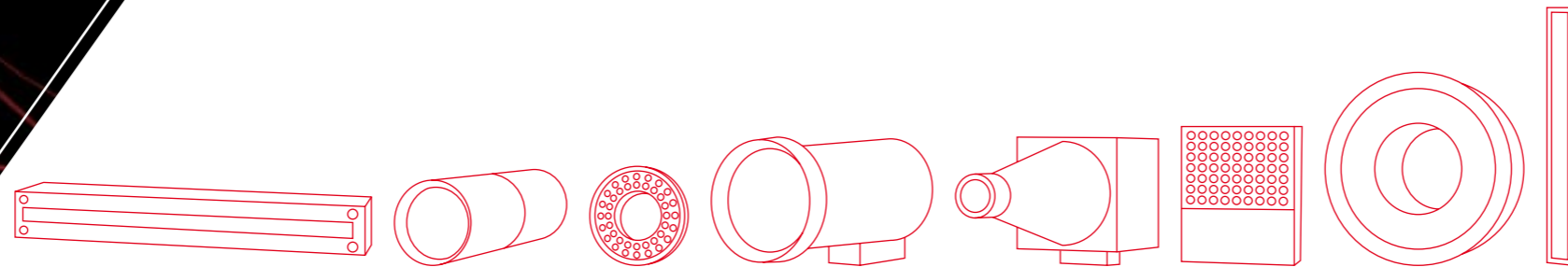
# The Challenge of Individuality.



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We use light to create individuality. Our solutions are adapted to scenarios which allow the light to freely explore widening dimensions of expression. Their purposeful variations of form and intensity bring the hidden meaning to light.

We as technology leaders develop, produce and globally distribute an optimally complementing, modular system of individual high-performance LED illuminations that are exactly attuned to our complex image processing systems such as vision sensors, intelligent cameras, multi-camera systems and precision optics.



# FOR EVERY APPLICATION THE RIGHT LIGHT.

vicolux® LIGHTING

The performance of image processing systems is decisively influenced by the form of lighting direction used. The right choice of lighting components is the key factor in determining the reliability of the overall system.

To solve the widest possible range of complex industrial tasks, the lighting must be optimally attuned to the optical and image processing systems. We meet this challenge and offer users a broad range of high-performance LED lighting systems for nearly unlimited combinations and illumination scenarios in a great variety of designs, wavelengths and functions.

### Security through Quality:

Besides individually powerful LED lighting units, our component system also consists of complex systems for machine vision and precision lenses allowing you to select the right components for your task and optimally configure your image processing system.

### vicolux® lightings are characterised by:

- Mechanically and electrically robust design
- Rapid mounting
- Easy set up
- Precise lighting direction
- Reliable performance in industrial use
- Long life cycles
- High quality standards and delivery reliability
- Worldwide availability



Ring lights



Area lights



Bar lights



Line lights



Telecentric lights

# STATE-OF-THE-ART ILLUMINATION DESIGN.

PERFECT INTEGRATION OF ELECTRONIC CONTROLS, HIGH-PERFORMANCE LIGHT SOURCE AND PRECISE LIGHTING DIRECTION

Our vicolux® lightings prove their quality through maximum brightness and even light distribution.

Wavelengths in the ultraviolet-to-infrared spectrum which typify industrial image processing tasks are supported. This guarantees maximum visibility of whatever specific feature you want the machine vision system to recognise and process.

### Lighting for every scenario

by implementing the widest possible range of techniques in the form of ring, area, bar or line illuminations.

- Incident and transmitted light
- Bright and dark fields
- Diffuse, direct and telecentric lighting direction

### Rapid mounting and set up

thanks to uniform design with defined attachment and adjustment points and wide-range power supply of 10 to 30 VDC.

### Individually adjustable

Integrated controllers ensure a wide variety of operating modes for exposures from 1µs to infinity

- „Controlled“  
Fast switching for long life time
- „Highly stabilised“  
Stable brightness independent of temperature changes
- „Power flash“  
Maximum brightness during the shortest possible exposure times
- „Adaptive“  
Individual brightness settings for each LED



Shadow free lights



Spotlights



Fibre optic lights

### Customised configuration

through use of modular LED segments for widely varying lighting geometries.

### Ample supply of accessories

for optimal lighting solutions

- Optical filters
- Mounting adaptors
- Beam moulding optics
- Coaxial mirror adapter
- Wavelength testers

### Long life time

Thanks to compact, industry-proven construction and intelligent temperature management.

## RELIABILITY AND PRECISION:

vicolux® lightings by Vision & Control have proven their value in thousands of different applications across a wide range of industries:

- Automotive
- Mechanical engineering
- Electronics
- Plastics industry
- Printing industry
- Packaging industry
- Robotics
- Pharmaceuticals
- Food industry

ILLUMINATION TYPE	PRODUCT VIEW	SERIES	ILLUMINATION SCENARIO			
			incident light		back light	
<b>ring lights</b>						
coaxial		RK		≡ / ≈		≡ / ≈
radial		RR	≡ / ≈		≡ / ≈	
angle		RW	≡			
<b>area lights</b>						
standard		AL + FAL	≡	≡	≡	≡
		DL + FDL	≈	≈	≈	≈
rimless		FALRL	≡	≡	≡	≡
		FDLRL	≈	≈	≈	≈
light with inspection aperture		FALKD		≡		
		FDLKD		≈		
modular		mod. FAL	≡	≡	≡	≡
		mod. FDL	≈	≈	≈	≈
modular light with inspection aperture		mod. FALKD		≡		
		mod. FDLKD		≈		
polarized		PAL	≡	≡		

<b>bar lights</b>						
standard		LAL	≡	≡	≡	≡
		LDL	≈	≈	≈	≈
four-side		QLAL	≡	≡	≡	≡
		QLDL	≈	≈	≈	≈
<b>line lights</b>						
focused		ZAL		≡		
<b>telecentric lights</b>						
		TZB				+
		TZB with ABE		+		
<b>shadow free lights</b>						
		SF + RD		≈		
<b>spotlights</b>						
		SPOT	≡	≡	≡	
<b>fibre optic lights</b>						
		FLQ	≡	≡	≡	≡

Explanation: ≡ directed ≈ diffuse + telecentric



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Current information, data sheets and  
3D CAD data on our extensive port-  
folio of systems, lighting and optics  
for industrial image processing  
are available at

[www.vision-control.com](http://www.vision-control.com).

• **camat**® Vision Sensors

• **pictor**® Intelligent Cameras

• **vicosys**® Multi-Camera Systems

• **vcwin**® Operating Software

• **vicolux**® Lighting

• **vicotar**® Optics

**Individual configuration - optimal performance:  
The Vision & Control component system**

Experienced machine builders, OEMs and system integrators worldwide  
rely on components and systems by Vision & Control. Wherever flexibility,  
speed, reliability and suitability to industrial uses are highest priorities,  
our products are the first choice.

We guarantee competent consulting, convincing quality and best service.

Jellyfish have populated the oceans for over 500 million years. Deep-sea jellyfish glow radiantly in brilliant colours. They have extremely specialised forms and functions and can travel up to ten kilometres per hour. Their tentacles project stinging threads with breath-taking rapidity. They have some of the fastest reflexes of all living creatures.