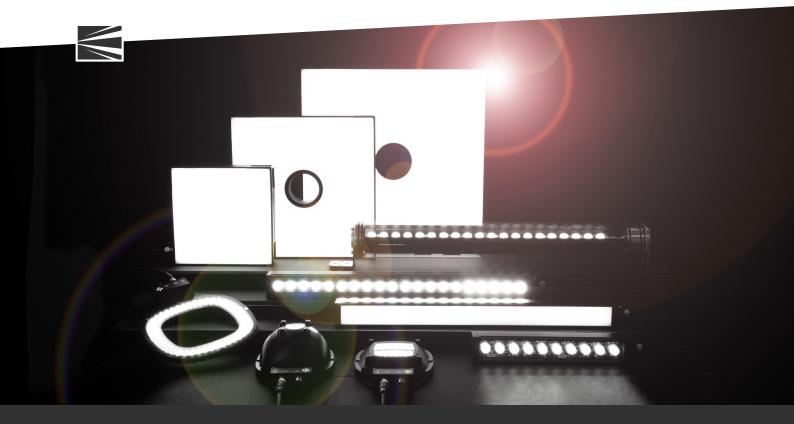


# Lighting Up Machine Vision. Illumination Technology





## **Bar Lights**

wenglor LED bar lights are a linear array of LEDs with excellent brightness and homogeneity balance across many situations, such as creating a darkfield effect to illuminate shiny parts or to create a brightfield effect to flood an area with powerful illumination.

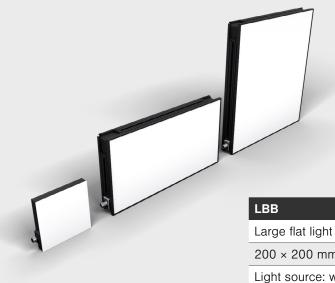
LBA	LBD	LB9
Bar light	Bar light diffuse	Bar light IP69K
from 125 mm to 500 mm	from 125 mm to 500 mm	from 125 mm to 500 mm
Light source: white, red, infrared	Light source: white, red, infrared	Light source: white, red, infrared
Degree of protection: IP65	Degree of protection: IP65	Degree of protection: IP69K



#### **Ring Lights**

Ring lights are normally positioned around a machine vision camera's optical axis, giving the image a high-intensity brightfield effect. wenglor has a range of ring light products suitable for homogeneously illuminating at both large and small working distances.

LMLX	LMRX	ZVZF1
Low angle light	Modular ring light	Ring light
Inner Ø: 80 mm or 130 mm	Inner Ø: 80 mm or 130 mm	Inner Ø: 50 mm
Light source: white-infrared and red-cyan	Light source: white-infrared and red-cyan	Light source: white, red, infrared
Degree of protection: IP65	Degree of protection: IP65	Degree of protection: IP67



## Flat Lights

Backlights or flat lights are often used to create silhouettes around components to generate robust black-on-white contrast. They can also be used to work closely to samples as a highly diffuse direct LED illumination – meaning they can be a powerful tool for illuminating reflective surfaces.

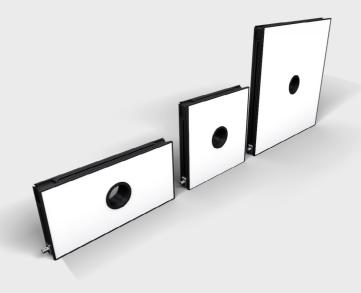
LBB	ZVZF3 & ZVZF4
Large flat light	Compact flat light
200 × 200 mm to 500 × 500 mm	60 × 60 mm to 180 × 180 mm
Light source: white, red, infrared	Light source: white, infrared
Degree of protection: IP40	Degree of protection: IP67



#### **Dome and Dome Lights**

Dome lights are excellent for the inspection of uneven surfaces. The highly diffuse lighting from a dome is also perfectly suited for the inspection of metals and shiny parts. wenglor dome lights use some novel features such as hole aperture adapters to assist with complex feature inspection.

ZMRG	LMDX
Dome and low angle accessories for modular ring lights	Dome light
	Inner Ø: 80 mm or 130 mm
	Light source: white-infrared and red-cyan
	Degree of protection: IP65



#### **Flat Dome Lights**

Flat dome lights are most often used as top lights or area lighting to homogeneously illuminate large areas. The housing is constructed like an LED flat light with a camera hole in the center. Flat domes are typically used at double the size of the field of view to perfectly illuminate many types of surfaces.

LFD
Large flat dome light
200 × 200 mm to 500 × 500 mm
Light source: white, red, infrared
Degree of protection: IP40

### **Spot Lights**

Spot illumination is typically a highly focused light source, perfect for creating contrast on specific features from various working distances. wenglor spot lights are designed to be easily integrated whilst providing bright and homogeneous illumination for image processing.

ZVZF2	
Spot light	
M18 housing	
Light source: white, red, infrared	
Degree of protection: IP67	





#### Accessories

The accessories for illumination technology include mounting devices and angle changers to provide a complete illumination system for industrial image processing.

ZBAG	ZMRX001 & ZBBX001 & ZBAZ001
Angle changer for bar lights	Mounting brackets
Beam angle from $\pm$ 7° to $\pm$ 25°	Material: aluminum



### **Illumination Kit**

The illumination kit enables testing of illumination products in various applications in order to create machine vision solutions rapidly.

#### The illumination kit contains

Bar lights and angle changers

Modular ring light with dome and low angle accessories

Flat dome light

Mounting accessories, power supply unit and cable









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