



IBCLK catalogue





ISCON - LED Illumination for Machine Vision

ISCON products feature high light intensity, a wide array of available models and sizes as well as excellent build quality. Thanks to many years of experience in the machine vision industry, ISCON provides consultancy in terms of selecting the best illuminator model. ISCON also ensures user safety by adhering to stringent standards concerning electrical device safety. In order to guarantee high light intensity and long operation time, ISCON illuminators exclusively use the highest quality LEDs. A durable aluminium casing ensures increased resistance to mechanical damage and fire protection. Beside the highest quality and safety, ISCON also ensures express order processing. To maintain high quality of our illuminators, each product is subjected to many hours of stress tests before being delivered to the customer. ISCON products are fully manufactured within the European Union and bear the CE certificate.

ISCON illuminators are designed to operate in industrial machine vision systems. Using the correct illuminator in a machine vision system allows any physical property of an object to be inspected, including size, shape or inscription. Thanks to high light intensity, ISCON illuminators perform excellently in vision systems with a short illumination time of the inspected object. A wide array of models, light colour and additional accessories ensures versatility of ISCON illuminators, which allows them to perform perfectly in all types of vision systems. At the client's request, it is possible to design and manufacture custom illuminators, tailored to specific requirements of a machine vision system.

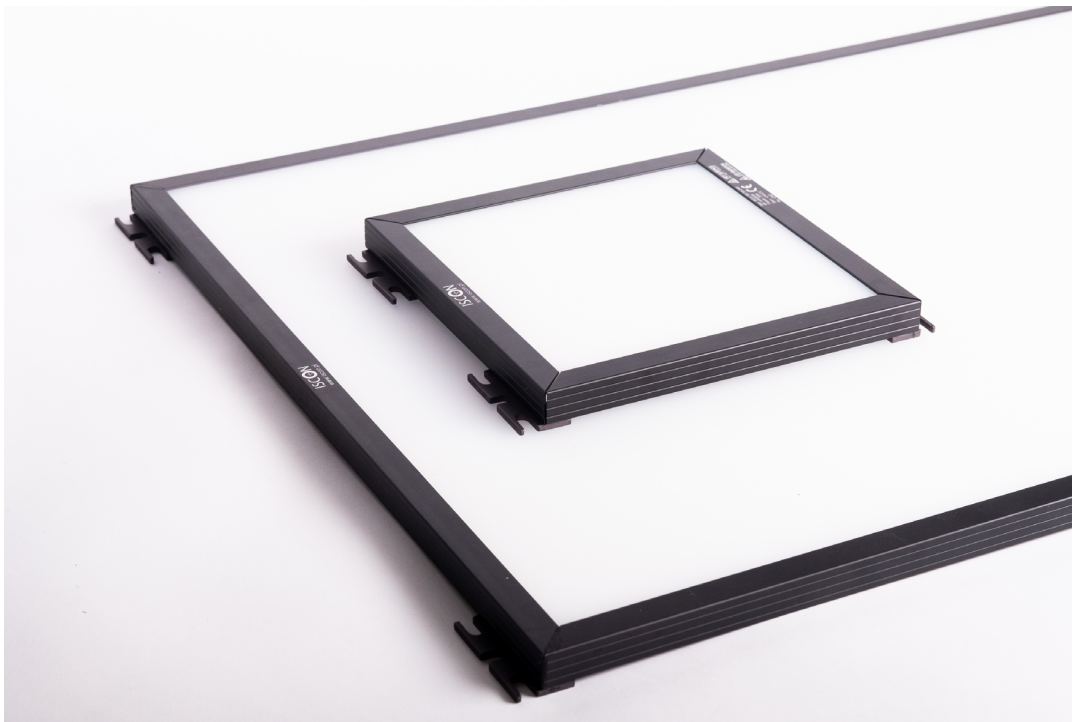
Selecting the correct ISCON illuminator for a vision system ensures:

- > maximising the contrast between the inspected object and the background
- > stable operating conditions of the machine vision system
- > minimising the impact of the surrounding ambient light.




Scope of services:

- > consultancy in terms of selecting the correct illuminator model
- > custom builds at the customer's request
- > free equipment rental for testing in actual conditions
- > technical documentation for products
- > warranty service and technical support.

- > Customize the size of the illuminator
- > Maximum illuminated surface area despite small dimensions
- > Uniform light dispersion across the entire surface
- > Wide range of dimensions



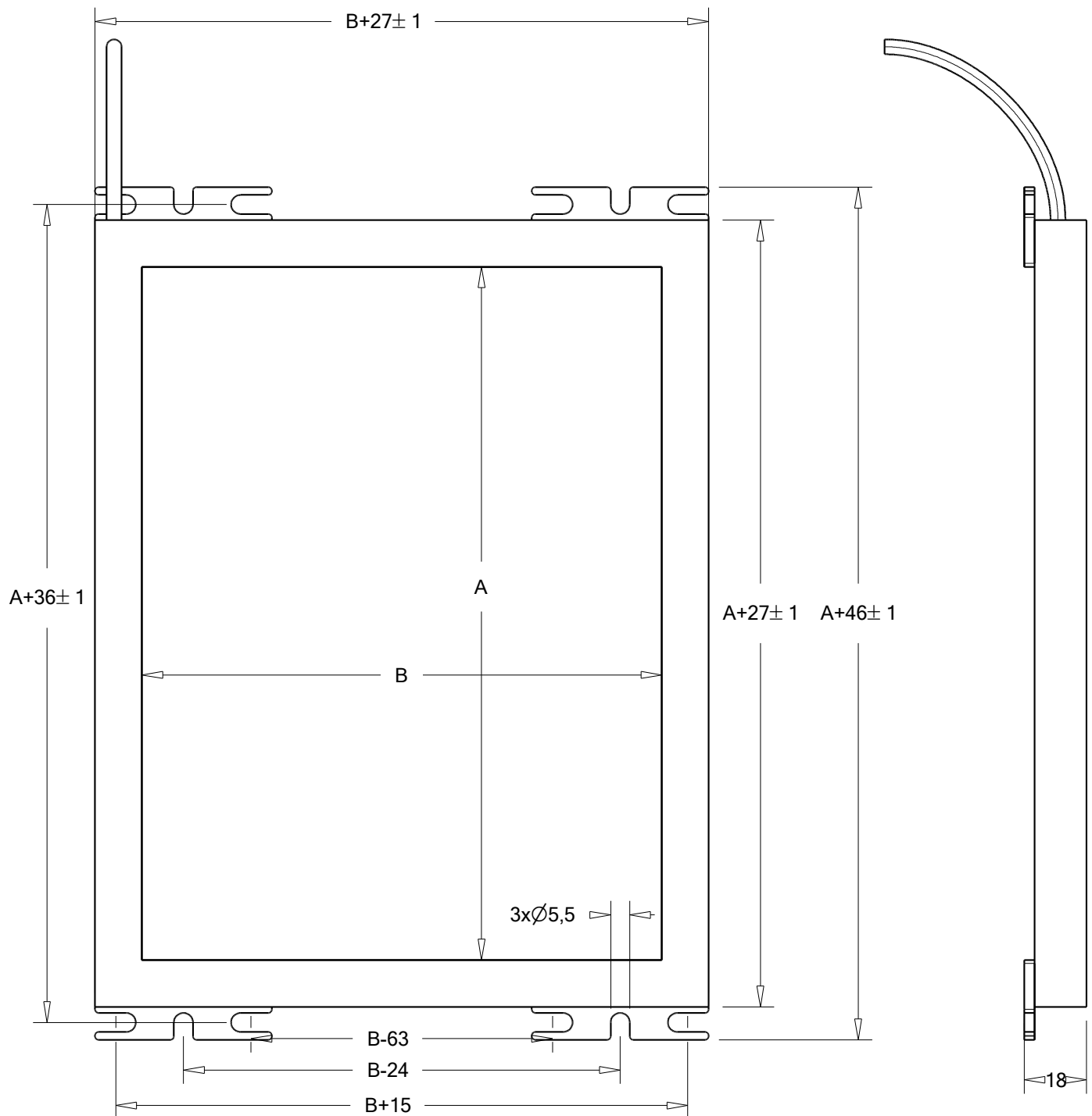
Product specifications

Supply voltage	24 VDC
Operating temperature	0-40 °C
Protection rating	IP40
Cable	PUR cable up to 2m or 0.5m, M8, 3-pin
Cooling	Convection
Certificates	  
Casing	Anodised aluminium
Casing colour	Black

LED wavelength

W (white)	R (red)	G (green)	B (blue)
CRI=75	620-650nm	520-540nm	460-480nm

Overview drawing IBCLK



	IBCLK-A-B-24R	IBCLK-A-B-24W	IBCLK-A-B-24B	IBCLK-A-B-24G
LED colour	Red	White	Blue	Green
Height	18 mm			
Lighting area's length	A mm			
Total length	A mm + 46 mm ± 1 mm			
Lighting area's width	B mm			
Total width	B mm + 27 mm ± 1 mm			

The table below presents max current and max power of IBCLK illuminator. X indicates that IBCLK of that length and width is currently not available.

		Lighting area's length [mm]													
		150	200	250	300	350	400	450	500	550	600	650	700	750	800
Lighting area's width [mm]	150	0.72A 20W	0.81A 25W	0.9A 25W	1A 30W	1.2A 30W	1.3A 35W	1.4A 35W	1.5A 40W	1.7A 45W	1.8A 50W	1.9A 50W	2A 55W	2.1A 55W	X
	200	X	0.9A 25W	1A 30W	1.1A 30W	1.3A 25W	1.4A 35W	1.5A 40W	1.6A 40W	1.8A 45W	1.9A 50W	2A 55W	2.1A 55W	2.2A 60W	2.3A 60W
	250	X	X	1.1A 30W	1.2A 30W	1.4A 35W	1.5A 40W	1.6A 40W	1.7A 45W	1.8A 45W	1.9A 50W	2A 55W	2.1A 55W	2.3A 60W	2.4A 65W
	300	X	X	X	1.3A 25W	1.5A 40W	1.6A 40W	1.7A 45W	1.8A 45W	1.9A 50W	2A 55W	2.1A 55W	2.2A 60W	2.4A 65W	2.5A 65W
	350	X	X	X	X	1.7A 45W	1.8A 45W	1.9A 50W	2A 55W	2.1A 55W	2.2A 60W	2.3A 60W	2.4A 65W	2.6A 70W	2.7A 70W
	400	X	X	X	X	X	1.9A 50W	2A 55W	2.1A 55W	2.2A 60W	2.3A 60W	2.4A 65W	2.5A 65W	2.7A 70W	2.8A 75W
	450	X	X	X	X	X	X	2A 55W	2.1A 55W	2.3A 60W	2.4A 65W	2.5A 65W	2.6A 70W	2.8A 75W	2.9A 75W
	500	X	X	X	X	X	X	X	2.2A 60W	2.4A 65W	2.5A 65W	2.6A 70W	2.7A 70W	2.8A 75W	2.9A 75W
	550	X	X	X	X	X	X	X	X	2.6A 70W	2.7A 70W	2.8A 75W	X	X	X
	600	X	X	X	X	X	X	X	X	X	2.8A 75W	X	X	X	X

Examples:

Illuminator IBCLK-200-150-24-R - max current 0.9 A, max power 25 W, total length 246 mm, total width 177 mm

Illuminator IBCLK-600-400-24-W - max current 2.3 A, max power 60 W, total length 646 mm, total width 427 mm

Connection Diagrams

An illuminator without a strobe module, e.g. **IBCLK-600-400-24R**

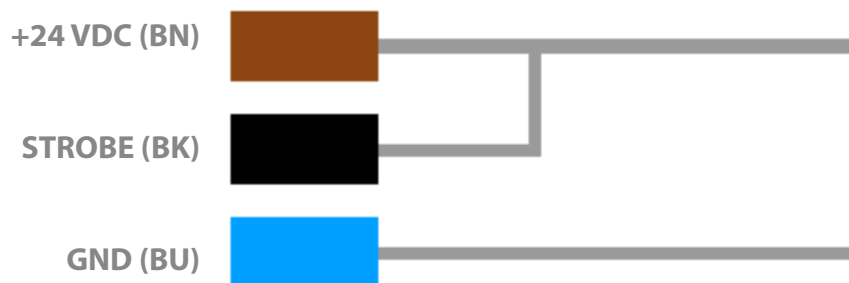
- Continuous operation



- The illuminator can also operate in strobe mode, for example by using a relay or another external device to trigger the illuminator.

An illuminator with a strobe module, e.g. **IBCLK-600-400-24R**

- Continuous operation



- Strobe mode operation



Strobe signal (black wire) between +5VDC and +24VDC. Minimum triggering current of 0.01A.

Connector Type

No connector (loose wires). Cable length up to 2m. For an illuminator without a strobe module.

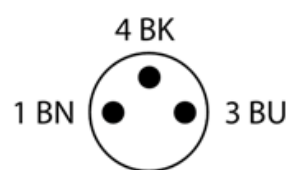
For an illuminator without a strobe module, e.g. IBCLK-600-400-24R	
Brown	+24VDC
Blue	GND

No connector (loose wires). Cable length up to 2m. For an illuminator with a strobe module.

For an illuminator without a strobe module, e.g. IBCLK-600-400-24R	
Brown	+24VDC
Black	Strobe signal
Blue	GND

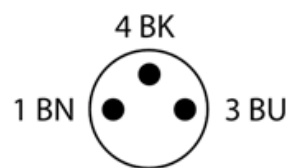
With an M8 connector (3-pin, male). Cable length up to 0.5m. For an illuminator without a strobe module.

Dla oświetlacza bez modułu strobującego, np. IBCLK-600-400-24R	
Brown (BN)	+24VDC
Black (BK)	NA
Blue (BU)	GND



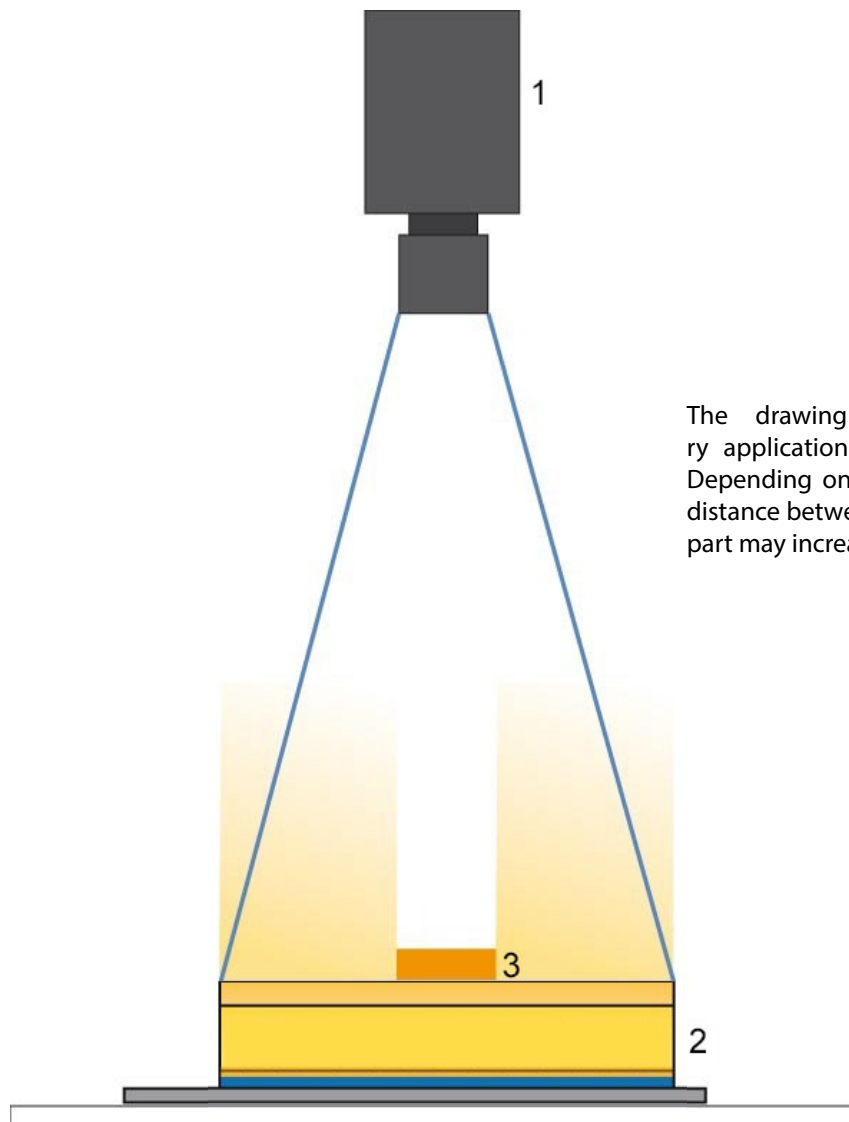
With an M8 connector (3-pin, male). Cable length up to 0.5m. For an illuminator with a strobe module.

For an illuminator with a strobe module, e.g. IBCLK-600-400-24R	
Brown (BN)	+24VDC
Black (BK)	Strobe signal
Blue (BU)	GND



Installation and Application

The illuminator is installed using 4 screws (not included with illuminators). The spacing between holes is shown on the overview drawing. It is recommended to mount the illuminator on the machine's metal structure, so that its largest surface is aligned with the structure in order to dissipate the most heat.



The drawing presents an exemplary application of the IBCLK illuminator. Depending on the size of the IBCLK, the distance between the light source and the part may increase or decrease.

1 - Machine vision 2 - Illuminator 3 - Object

WARRANTY TERMS AND CONDITIONS

All ISCON products are subject to a 24-month warranty starting from the purchase date.

The warranty is honoured under the following conditions:

- Presenting the purchase invoice as well as the device's serial number or sending the device to the ISCON company address.
- The device must not have been disassembled, modified or otherwise customised to the user's needs. Incorrect installation (drilling through the casing or installing using different screws and holes than the ones anticipated by the manufacturer) voids the warranty.
- The device is powered with a direct current voltage 24-30V. Providing a higher or lower voltage or an alternate current may damage the illuminator and is not covered by the warranty.
- The device is designed for operation inside a dry room environment. Using it outside of a closed room may lead to exposure to moisture followed by damage and is not covered by the warranty.
- The device should not be cleaned using: water, pressure washers, hot steam, mechanical components and chemical agents.
- The room in which the illuminator operates must not be air tight without any air exchange or ventilation.
- The ambient temperature must be within 5-40°C.



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