



IDL FQ 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.

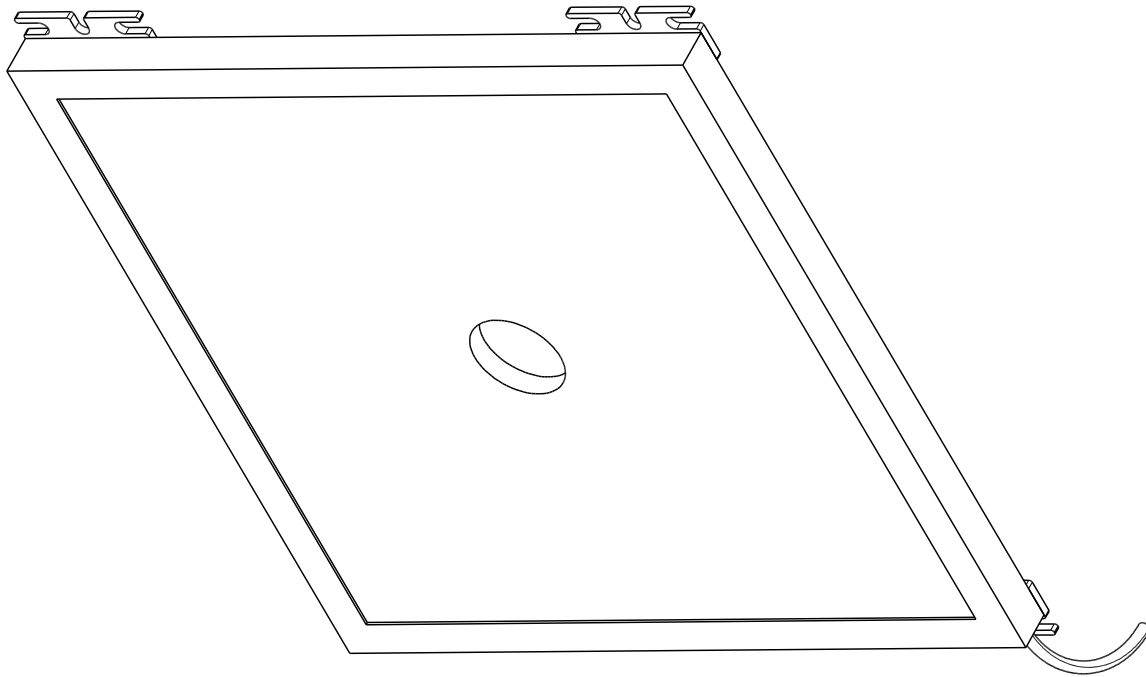
### Selecting the correct ISCON illuminator for a vision system ensures:

- > 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
- Durable, aluminium casing
- Uniform light dispersion across the entire surface
- Suitable for inspecting uneven and glossy surfaces



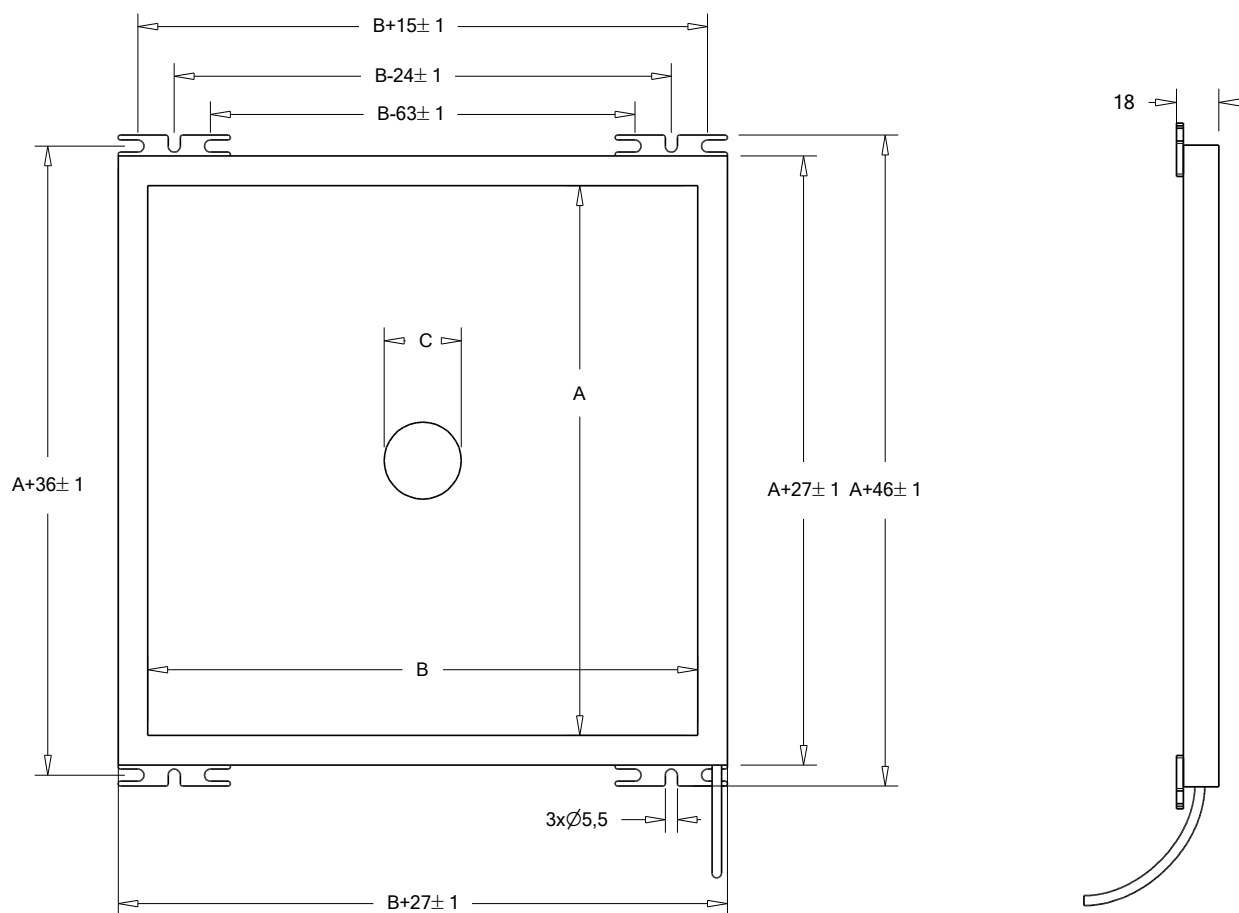
## Product specifications

Supply voltage	24VDC
Operating temperature	0-60 °C
International 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's wavelength

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

Overview drawing IDLFQ-250-250-24x



	IDLFQ-A-B-24R	IDLFQ-A-B-24W	IDLFQ-A-B-24B	IDLFQ-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			
C - hole's diameter	35 mm (customizable diameter)			

The table below presents max current and max power of IDLFQ illuminator.

		Lighting area's length [mm]													
Lighting area's width [mm]		100	150	200	250	300	350	400	450	500	550	600	650	700	750
	100	0.36A 10W	X	X	X	X	X	X	X	X	X	X	X	X	X
	150	X	0.72A 20W	X	X	X	X	X	X	X	X	X	X	X	X
	200	X	X	0.9A 25W	X	X	X	X	X	X	X	X	X	X	X
	250	X	X	X	1.1A 30W	X	X	X	X	X	X	X	X	X	X
	300	X	X	X	X	1.3A 25W	X	X	X	X	X	X	X	X	X
	350	X	X	X	X	X	1.7A 45W	X	X	X	X	X	X	X	X
	400	X	X	X	X	X	X	1.9A 50W	X	X	X	X	X	X	X
	450	X	X	X	X	X	X	X	2A 55W	X	X	X	X	X	X
	500	X	X	X	X	X	X	X	X	2.2A 60W	X	X	X	X	X
	550	X	X	X	X	X	X	X	X	X	2.6A 70W	X	X	X	X

Dimensions shown in the table are only the examples of IDLFQ illuminator's possible configuration. On request, length and width of the illuminator can be customized.

Reference coding

Model	Lighting area's length	Lighting area's width	Power supply	Colour code	Integrated strobe module	Connector
	[mm]	[mm]	VDC	RBGW	S	3 pin
IDLFQ - xxx - xxx - 24xxM8						
Colour code: W - white, R - red, B - blue, G - green						

## Example 1

### IDL-250-250-24WM8

Total length - 296 mm, total width - 277mm, lighting surface 250mm x 250mm, max current 1.1A, max power 30W, white light colour, a cable up to 0.5 m with M8 connector (3-pin).

## Example 2

### IDL-100-100-24B

Total length - 146 mm, total width - 127, lighting surface 100mm x 100mm, max current 0.36A, max power 10W, blue light colour, a cable up to 2 m without connector - loose wires.

## Example 3

### IDL-150-150-24RSM8

Total length - 196 mm, total width - 177, lighting surface 150mm x 150mm, max current 0.72A, max power 20W, red light colour, with an integrated strobe module, a cable up to 0.5 m with M8 connector (3-pin).

## Operation modes

The device allows for both continuous operation and operation in strobe mode. The next page contains connection diagrams for illuminators fitted with a strobe module or illuminators without a strobe module.

## Connection diagrams

An illuminator without a strobe module, e.g. **IDL FQ-250-250-24R**

- 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. **IDL FQ-250-250-24RS**

- 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.

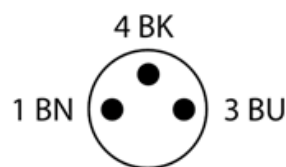
For an illuminator without a strobe module, e.g. IDLFQ-600-400-24R	
Brown	+24VDC
Blue	GND

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. IDLFQ-600-400-24R	
Brown	+24VDC
Black	Strobe signal
Blue	GND

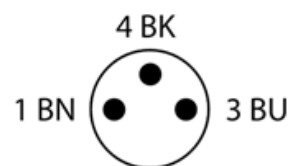
With an M8 connector (3-pin, male). Cable length up to 0.5m. For an illuminator without a strobe module.

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

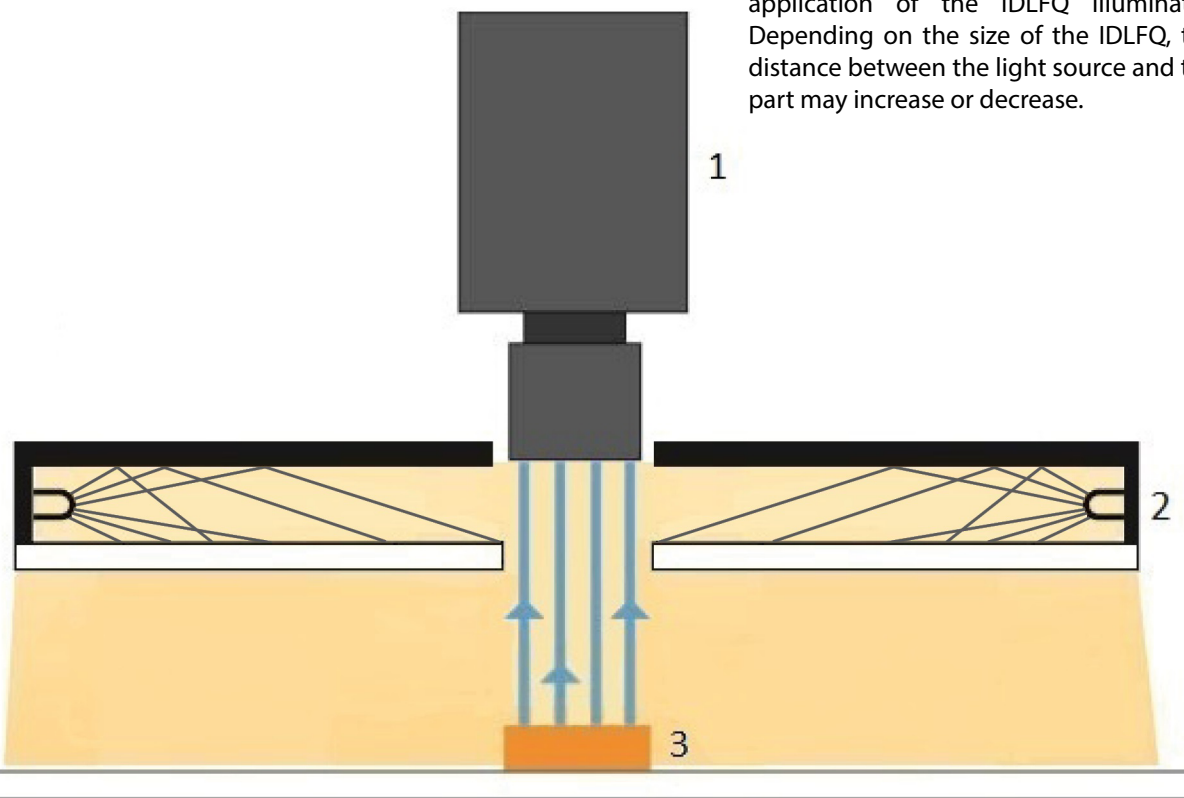




### Installation and Application

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 IDLFAQ illuminator. Depending on the size of the IDLFAQ, the distance between the light source and the part may increase or decrease.



1 - Machine vision 2 - Illuminator 3 - Detail

# 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.



## Contact

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