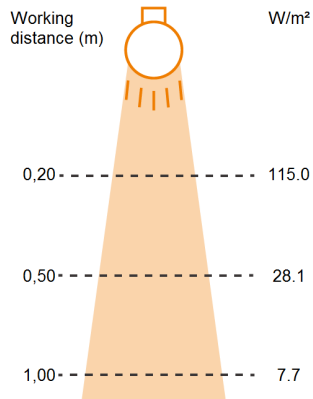


LED Ring Light LR70-36-IR850 / 101.0036.32.08.00



Pictures may differ from the original.

Irradiance



--- Object level

Technical Specifications

Light area dimensions	Inner Ø x outer Ø in mm 77 x 120
Illumination colour Wavelength	Infrared 850 nm
Light direction	Directed with 36° ancillary lenses ●
Operating mode	Continuous and switch mode
Controller	Integrated illumination controller
LED technology	16 High Power LEDs
Irradiance	115 W/m² @ 0,2 m
Average current (24 V DC)	0.9 A
Maximum electrical power at the light area	16 W
Risk group - DIN EN 62471	Risk Group 1
Operating voltage	19 to 30 V DC wide-range voltage input
Electrical connection	150 mm connection cable with M16 12-pin plug
TTL switching input	High level = 3 to 30 V DC
PLC switching input	High level = 15 to 30 V DC
Switch operation	Switching time follows the switching signal Connect + ON / OFF and GND ON / OFF
Switch-on delay	100 % brightness within a maximum of 550 µs
Continuous operation	Assign + ON / OFF permanently with high signal, e. g. by applying to operating voltage Connect GND ON / OFF
Brightness control via potentiometer	0 % (left stop) to 100 % (right stop) brightness Note: automatic deactivation at VC > 1 V DC
Brightness control via VC analogue input	VC = 1 to 10 V DC (0 % to 100 % brightness) Note: Turn potentiometer to left stop
Allowed ambient temperature	5 to 45 °C, non-condensing
Protection class	IP64
Dimensions	Ø x h in mm 156 x 39 (h = 79 mm with cable incl. bending radius)
Weight	1000 g
Material Casing Screen	Aluminium, anodised PMMA
Tariff code	85395100
Country of Origin	Federal Republic of Germany

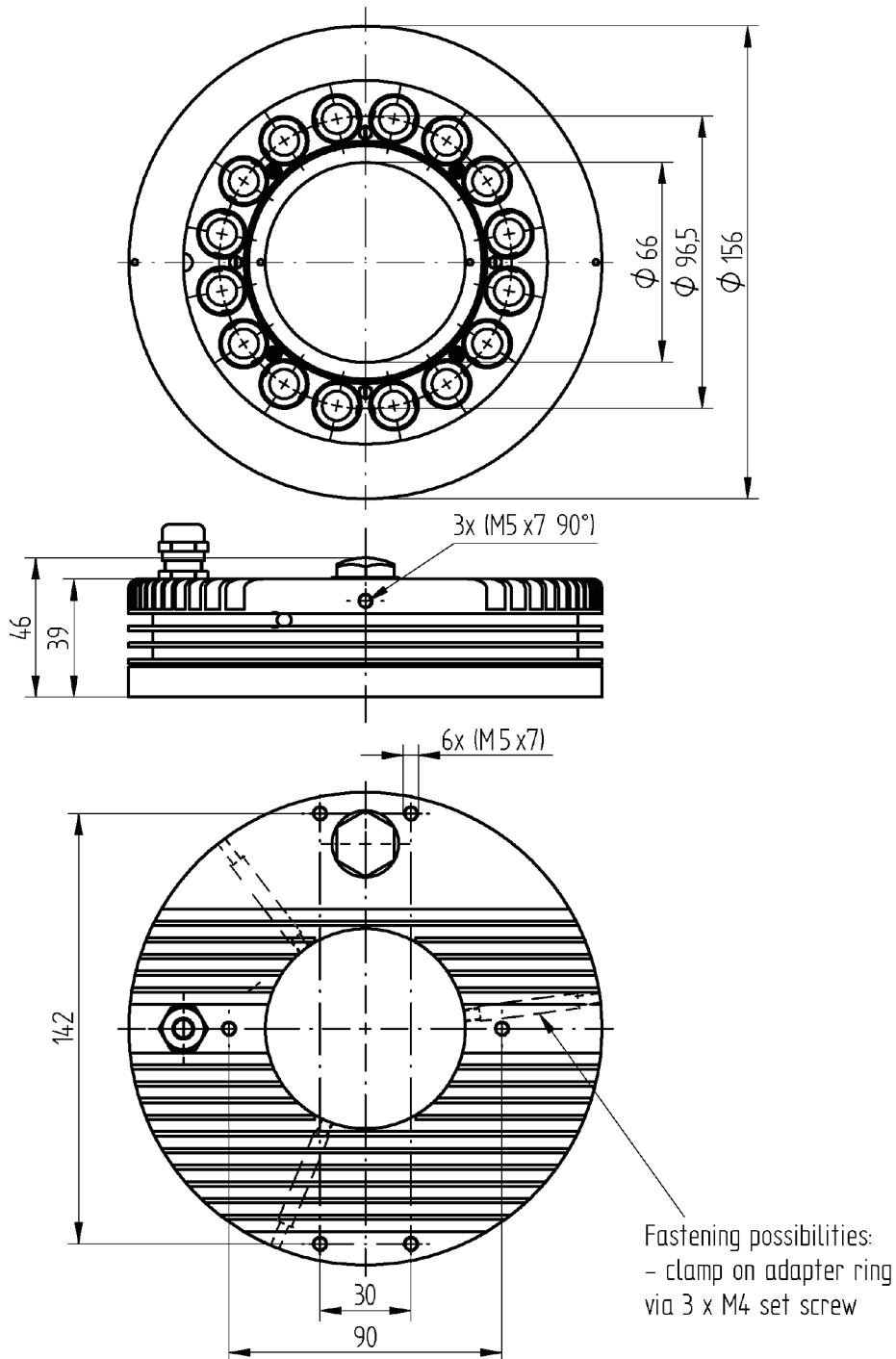
Pin Assignment

	U _B	LUMIMAX [®]
brown	+ 24 V DC	
white	GND	
	ON / OFF	
pink	PLC +24 V DC	
grey	TTL +5 V DC	
blue	GND	
	VC	
yellow	1...10 V DC	

Pin	Colour	Assignment	Function	Image
A+K	white	GND	GND Operating voltage	
B+L	brown	U _B	Operating voltage	
C	green	NC	NC	
D	yellow	VC	Brightness control 1...10 V DC	
E	grey	+ ON / OFF TTL	Switching input, TTL > 3 V DC	
F	pink	+ ON / OFF PLC	Switching input, PLC > 15 V DC	
G	blue	GND ON / OFF	GND switching circuit	
H	Shield	Shield	Shield connection	
J	NC	NC	NC	
M	NC	NC	NC	

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Technical Drawing



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Warnings

Photobiological safety - infrared



Caution! The lighting emits optical radiation in the infrared region (wavelength > 750 nm). This is invisible to the human eye. It can cause irritation and damage to the eyes and to the skin. Observe the following risk group classifications and protective measures. The use of additional optical accessories (e. g. lenses, interchangeable screens/frames) can lead to a change of the risk group. For further help ask the LUMIMAX[®] Service&Support Team.

Hazard related risk group labelling

Illumination colour	RG 0 (exempt)	RG 1	RG 2	RG 3
IR	No requirements	NOTICE IR radiation emitted from this product	CAUTION IR radiation emitted from this product	WARNING IR radiation emitted from this product

Instructions for protective measures

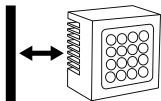
Illumination colour	RG 0 (exempt)	RG 1	RG 2	RG 3
IR	No requirements	Do not look at operating light for a long time. Use appropriate shielding.	Do not look at operating light for a long time. Avoid eye exposure. Use appropriate shielding.	Do not look at operating light. Avoid eye exposure. Use appropriate shielding.

Hot housing surfaces



Caution! High ambient temperatures and insufficient heat dissipation lead to hot housing surfaces. These can cause burns if touched. Do not touch the light during operation. Maintain a minimum distance of 20 mm between the light and thermally insulating surfaces or mount the light on a thermally conductive surface.

Cooling fins



Caution! Keep the cooling fins of the light free at all times during operation. Covered cooling fins lead to insufficient heat convection and thus to a significantly increased housing temperature. This can cause burns if touched as well as a reduction of the lights' service life.

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FAQ

Intended Use

LUMIMAX[®] LED lights are exclusively intended as components for Machine Vision systems, that are used for quality control as well as process control and optimisation in industrial installations.

- Use the lights in enclosed rooms only.

Notes on operation

Initial operation

- Have the light only put into operation by trained specialists and in compliance with the specified protective measures. Adhere to the permissible environmental conditions.
- For optimal heat dissipation, mount the largest possible surface of the light on thermally conductive machine elements.
- Keep cooling fins free to ensure sufficient convection.

Status LEDs

Most lights have 2 status LEDs on the (rear) side. The light only illuminates when both status LEDs light or blink.

- The green status LED signals the connection to the correct operating voltage.
- The red status LED blinks when a switching or trigger signal is connected to the light.

Protection class

LUMIMAX[®] LED lights with protection class IP64 and higher are protected against dust, contact and splash water on all sides in accordance with the applicable standards. Permanent protection against liquids containing solvents, such as e. g. cleaning agents, machine emulsions or other lubricants cannot be guaranteed.

Ageing-related brightness decrease of the LEDs

The brightness of LEDs decreases over time due to natural ageing. LUMIMAX[®] LED lights are designed and manufactured in such a way that at full load operation under the permissible ambient conditions at least the following expected operating hours are achieved or exceeded without the light's intensity falling by more than 30% compared to the delivery condition:

- 80,000+ h for LUMIMAX[®] LED lights in the visible and infrared wavelength range
- 55,000+ h for LUMIMAX[®] High Power LED lights in the ultraviolet wavelength range
- 21,000+ h for LUMIMAX[®] High Power LED Spot lights in the ultraviolet wavelength range

The ageing is significantly influenced by the mounting conditions in the machine, the ambient temperature, and the operating mode of the lighting. Switching or flashing can significantly reduce the decrease in brightness of the LEDs and thus of the light. Further information concerning this topic you could find [here](#).

Troubleshooting

The device does not light up.

The green status LED does not light up.

- Check if the light is connected as described on the data sheet and that the correct operating voltage is set. If you are using a power supply with current limiting, increase the allowable current.

The green status LED does light up.

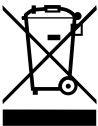
- Check whether the light has been dimmed. Carefully turn the brightness potentiometer clockwise. For variants with an active VC brightness regulation, check if the VC voltage input is correctly connected and a control voltage of at least 2 V DC is applied.
- For lights with switching input and for flash lights check that the necessary switching or trigger signals are present. The status LED should blink red when a trigger is released.

Care and Maintenance

The LED lights from iiM AG usually do not need maintenance. Should it still be necessary to clean the external glass and plastic surfaces or device components, then observe the following:

- Do not use acetone, methylated spirits or other solvents.
- For cleaning the plastic surfaces use a soft, lint-free cloth moistened with soapy water or a normal glass cleaning cloth.

Disposal



LUMIMAX[®] LED lights and cables are registered at Stiftung Elektro-Altgeräte Register[®] under WEEE Reg. No. DE 48985193.

- Ensure the separate collection of electrical and electronic equipment. Beforehand, a non-destructive removal of the LEDs is not possible.
- On request, the iiM AG will handle the proper disposal of returned LED lights.
Contact via info@iimAG.de

The aims of the Packaging Act (VerpackG) are the avoidance or reduction, reuse and recycling of packaging waste to protect the environment.

- Properly recycle packaging waste.

Compliance



EU and UK Documents of Conformity for all LUMIMAX[®] standard lights can be found online on the respective product detail page using our product configurator.

UK Representative: PKG Consultants LLP, 38 Northgate, Newark, Nottinghamshire NG24 1EZ, United Kingdom