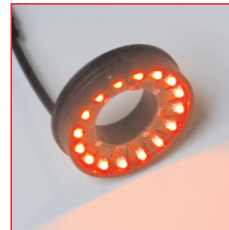


# Professional lighting systems for industrial imaging

## VARIO-XS

## Ring light

- >> adjustable focus
- >> compact housing
- >> well-priced design
- >> easy mounting directly on the lens
- >> for continuous, switched and pulsed operation  
(depending on type)



VARIO-XS red



VARIO-XS

### Technical specifications



Housing	Aluminium, black or natural anodised
Filterthread-connection	M27 x 0,5
Total weight	approx. 45g
Operating / ambient temperature	max. 50°C recommended
IP protection class	depending on the version
Connector	M8 plug (4-pin) on pigtail 10cm*
Supply voltage**	<b>24VDC type or 12VDC type:</b> 24VDC resp. 12VDC <b>SC type:</b> For use in conjunction with a controller
Number of LEDs	16
LED lifetime	The LED lifetime of our lights is very high, but depends on many different factors such as ambient temperature, current load, and so on. Further information is available in the <b>Technical information LED lifetime</b> .

\* Cable not included in the scope of supply

\*\* more information see section Operating modes

### Characteristics

Colour *	LED characteristics		typical characteristics per light		
	Wavelength (approx.)	Viewing angle	Current demand (24V type) ** / constant current max. (SC type) [mA]	Pulse current max. (SC type) *** [mA]	Intensity **** [W/m <sup>2</sup> ]
red	617nm	30°	45	200	19
red	617nm	60°		200	
red	635nm	120°		200	
white	6500K	120°		200	
IR	850nm	30°		800	
IR	850nm	50°		800	
IR	850nm	120°		800	
blue	470nm	20°		320	

\* other colours and types from UV to infrared on request

\*\* stated current values of the 24V types should be considered approximate values

\*\*\* depending on the strobe conditions, recommended maximum values for a flash time of 1ms

\*\*\*\* approximately data measured in DC mode; Measuring distance 150mm; Adjustment 1U



#### Safety note!

LED light systems can produce very intense radiation, which may possibly damage the eyes on improper use. Do not look directly into the light beam with unprotected eyes! Use eye protection!

### Operating modes

#### 24VDC type / 12VDC type

The lights are designed depending on the version for continuous operation at 24VDC or 12VDC.

The following operating modes are possible:

- DC operation at an appropriate power supply with 24VDC or 12VDC
- Switched operation with a matching power supply e.g. via PLC, opto-relay or controller (GS or SC series)
- Brightness-controlled operation via controller (GS or SC series) in conjunction with suitable power supply
- Pulsed mode via controller (GS or SC series) in conjunction with suitable power supply. The LED current can be increased in pulse mode up to a factor of 2 to 3.

#### SC type

For pulsed, switched or brightness-controlled operation, the lights are also available as optimized SC versions. They can be used in combination with our controllers of the GS and SC series and provide optimized and maximum current flow, especially in pulsed operation. We will assist you in selecting the right components.

technical changes reserved

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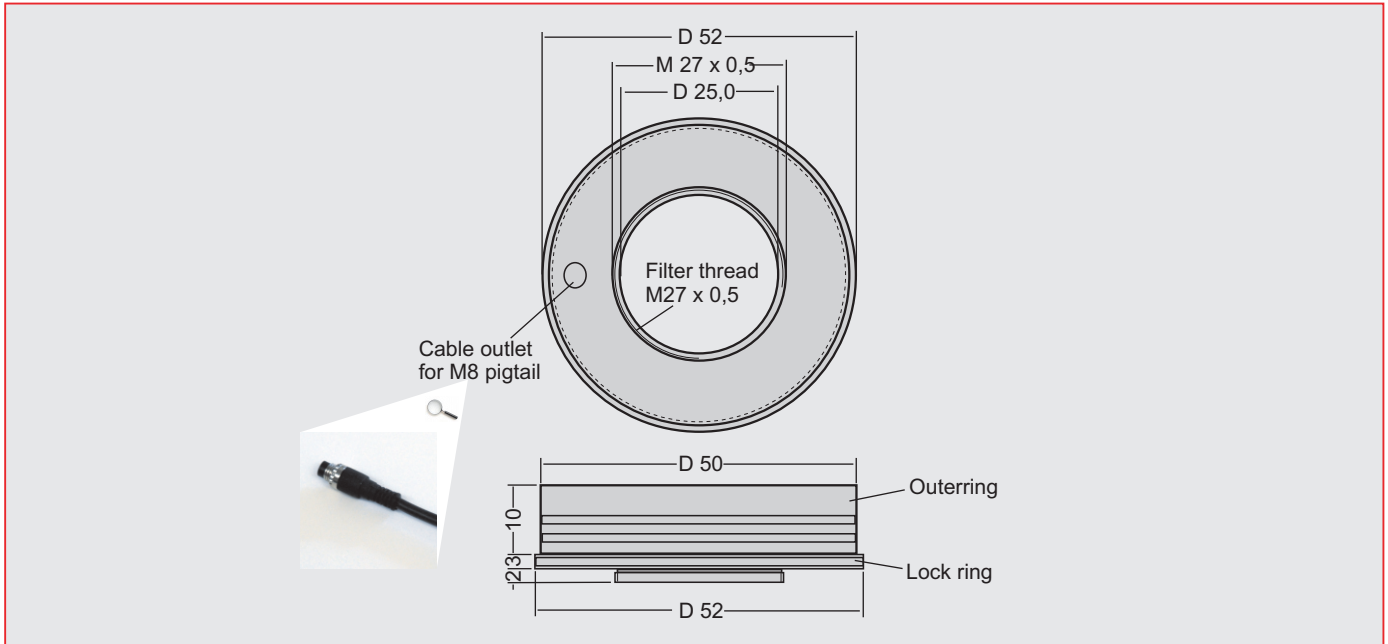
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**BÜCHNER**

### Dimensions



### PIN assignment connector

M8 plug 4-pin  
(Front view on pigtail)



24VDC type

PIN	Colour	Function
1	brown	+ 24V
3	blue	-

12VDC type

PIN	Colour	Function
2	white	+ 12V
3	blue	-

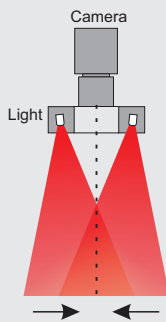
SC type

PIN	Colour	Function
4	black	+
3	blue	-

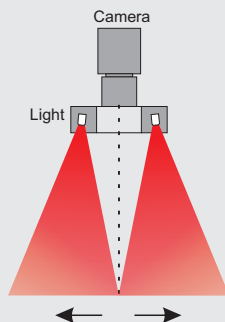
### Application notes

Adjustment possibilities

Focusing  
Adjustment to the front  
(counter clockwise)



Defocusing  
Adjustment to the back  
(clockwise)



The possibility to adjust the optical axes of the LEDs (focusing) allows to react to the different LED characteristics and different working distances. For focusing or defocusing the lock ring is released and the outer housing ring is rotated relative to the housing inner ring. By the lock ring the position can be fixed afterwards. The housing parts have small auxiliary holes for holding. This adjustment is typically done at the factory, but can also be performed by the customer if required. The adjustment to the rear (defocusing clockwise) has a natural stop. In this position the lock ring is approximately flush with the housing base.

**Attention!**  
The adjustment to the front (focus counter clockwise) has no natural stop and should only be opened up by a total of 2.5 to a maximum of 3 turns, starting from the rear stop.

### Accessories



#### Clamping ring

The clamping ring has a mounting thread suitable for the VARIO-XS (M27x0,5) and can be easily clamped to various lenses via locking screws.