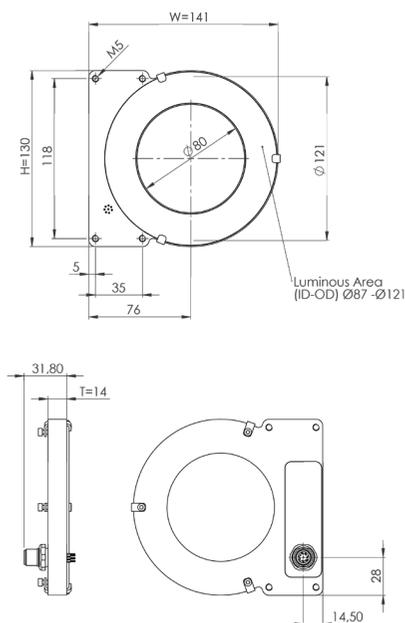


Mechanical Integration

The lights are equipped with 4 combined mounting positions of threaded or through holes. It can be used to fix the lighting to the specified position. To secure a long lifetime additional heat transfer measurements at the holding positions are highly recommended.

Model SRL-12

More 2D and 3D drawings can be found online:
www.mbj-imaging.com



Specification	Segmented Ringlight
Operating temperature	10°C to 30°C / 45°C ¹⁾
Certifications	CE, RoHS
Degree of protection	IP54 or IP67 ²⁾
Humidity	30% to 70%

- 1) Max. of 30°C is recommended for steady light operation w/o additional heat transfer measurements, for max. 45°C a thermal connection is mandatory. Max. of 45°C is also permissible for flash light operation with a max. 10% duty cycle.
2) MBJ LED lights are protected against the ingress of solids and water in accordance with the selected protection class and applicable standards. Permanent protection against liquids containing solvents, such as cleaning agents, machine emulsions or other lubricants, cannot be guaranteed. IP is only valid with a connected cable (MBJ cable recommended).

Safety Notes

Before working with this unit, read the warning and application instructions carefully and completely before operating the device.

Have the illuminators commissioned only in compliance with the specified protective measures. It is essential that you comply with the permissible ambient conditions. The lighting must be switched off before installation and/or maintenance. The device must not be used when a failure may cause personal injury.



1. The device is designed for indoor use only.
2. **Light** - Due to the risk of irritation of or damage to the eyes or skin it is not recommended to look directly into the light source.
3. **Heat** - In case of insufficient heat dissipation or when running the light in flash mode with a too high duty cycle, the surface temperature may get hot. Do not touch the product during operation or immediately after it is turned off. Keep off flammable materials at any time and allow for sufficient heat dissipation.
4. **Electricity** - The housing is electrically isolated from the ground of the power supply. Operate only with the permissible current. Exceeding the permissible current can lead to the destruction of the device or to a significant shortening of the lifetime of the LEDs in the device.
5. **Usage** - Please prevent mechanical stress to the light surface during operation. This will lead to an inhomogeneous light emission.
6. **Cleaning** - The light emission surface has to be cleaned with a standard glass cleaner and a soft cleaning cloth. Do not use other material for cleaning as it will damage the device.

03412.00 Manual MBJ Segmented Ringlight, Februar 2023

MBJ Imaging GmbH

Jochim-Klindt-Straße 7 +49 4102 778 90 - 31
22926 Ahrensburg, Germany sales@mbj-imaging.com
www.mbj-imaging.com

Segmented Ringlight



Model Sizes in Series

The light is available in the following size ¹⁾

SRL-12

¹⁾ Size definition refers to the outer luminous area diameter in cm.

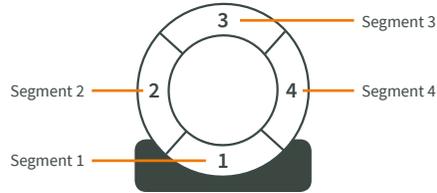
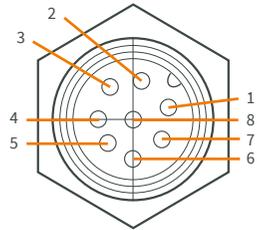
Possible LED Colors (Color mix for segments on request)

LED	Abbr. ¹⁾	Peak Wavelength ²⁾
White	-WT	5000 K, CRI80
Red	-RD	near 625 nm
Green	-GN	near 470 nm
Blue	-BE	near 521 nm
Infrared	-IR	near 850 nm

- 1) Color option will be added to the model name after the size information. SRL-12-4WT refers to a ringlight with 4 segments with white LED light.
2) This is an approximated value. The exact value also depends on LED temperature and LED current

Electrical Connection

The lighting is equipped with an 8 pin M12x1 connector.



Pin	Color ¹⁾	SRL-12 4 Segments ²⁾
1	white	Segment 1 LED (+)
2	brown	Segment 1 LED (-)
3	green	Segment 2 LED (+)
4	yellow	Segment 2 LED (-)
5	grey	Segment 3 LED (+)
6	pink	Segment 3 LED (-)
7	blue	Segment 4 LED (+)
8	red	Segment 4 LED (-)

1) Wire color of MBJ lighting cable

2) Connection to 24VDC without external LED controller may destroy the unit

Additional information

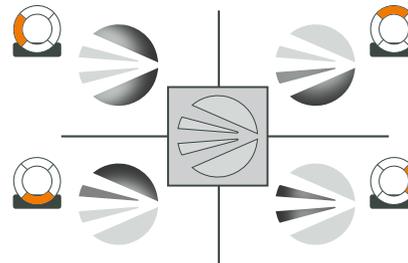
For connection it is recommended to use the MBJ light cable M12/8P with a maximum length of 5m and CTR-52 4-channel controller.

Specification	Segmented SRL-12 / Segmented SRL-12-IP	
Optical parameter		
Luminous area (ID-OD)	87 mm - 121 mm	
Light emission	Ring shaped light field with direct light emission, 6 power LED with 80° beam, 6 LED/segment	
Recommended use	Commonly used for shape from shading applications & highlighting different optical surface structures.	
Recommended light working distance	75 mm - 200 mm	
Electrical parameter		
Available interfaces	-x with direct LED access (external 4-channel LED control is required)	
ULed(+) range for -x version ²⁾	WT: 17 ... 20 VDC; RD: 12 ... 15 VDC; IR: 9 ... 12 VDC	
	4 segment operation	1 segment operation
Typical Power steady light	15 W (3,75 W / channel)	9 W
Recommended LED current		
Steady light (100% duty cycle)	900 mA (total max. for all segments)	450 mA (max. for one segment)
Flash light (50% duty cycle, < 500 ms pulse)	1800 mA (total max. for all segments)	900 mA (max. for one segment)
Flash light (25% duty cycle, < 50 ms pulse)	2700 mA (total max. for all segments)	1350 mA (max. for one segment)
Flash light (10% duty cycle, < 5 ms pulse)	3600 mA (total max. for all segments)	1800 mA (max. for one segment)
General parameter		
Dimension (H x W x D)	130 mm x 141 mm x 14 mm	
Lens hole diameter [Ø]	80 mm	
Weight	300 g	
Material	Anodized aluminum housing with PMMA light cover	
Connector	M12x1 socket, 8 pin, male (for pinning details refer to chart "Electrical Connection")	
Accessories	For cable, mounts and LED controller please check www.mbj-imaging.com	

1) Values are approximate with a +/- 7% tolerance.

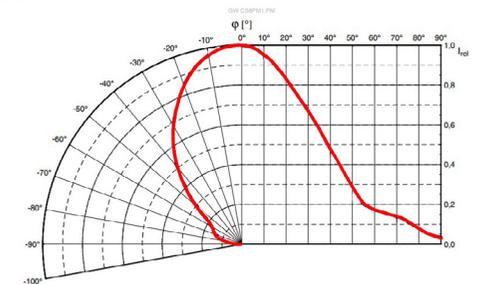
2) Lower voltage value refers to steady light, higher voltage value refers to flash light, please see max. allowed current in the rows below.

Shape from shading example



Radiation Characteristics

$I_{rel} = f(\phi)$; $T_j = 85^\circ\text{C}$



More information and tips

Please scan the QR-Code to visit our Website for more product information.