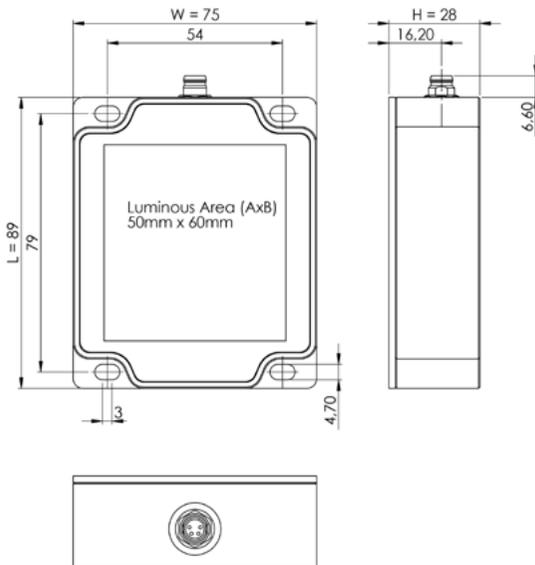


Mechanical Integration

4 long holes für M3 screws can be used to fix the lighting to the specified position. To ensure a long operational live time of the light additional heat transfer measures at the mounting postions are highly recommended.

Example: Model JBBL-0506



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

Safety Notes

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



1. The device is designed for indoor use only.
2. **Light** – Due to the risk of flash burn of the eyes it is not recommended to look directly into the light source. The lighting must be switched off before installation and/or maintenance. The device must not be used when a failure may cause a personal injury.
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 exceed 60 °C. Keep off flammable materials at any time.
4. **Electricity** - The housing is electrically isolated from the ground of the power supply. Exceeding the permissible input voltage U_m or $U_{LED(+)}$ 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 a inhomogenous 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.

Manual JB JustBright Series: Revision 03 - 20 January 2021. INDD file Rev07.

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Operating Manual
Technical Data

Just Bright Series



Model Sizes in Series

The illumination is available in the following sizes ¹⁾		
JBBL-0506	JBBL-0808	JBBL-1013
JBBL-0328	JBTL-0506	JBTL-0808
JBTL-1013	JBTL-0328	JBRL-10

¹⁾ size definition: JBBL-0808 refers to a light field of 80mm x 80mm, JBRL-10 refers to a ring outer diameter of 100mm

Model Types in Series

The illumination is available in the following Types	
JBBL	diffuse back light
JBTL	direct top light
JBRL	direct ring light

Possible LED Colors

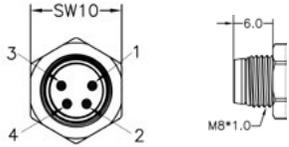
LED	Abbr. ¹⁾	Peak Wavelength ²⁾
White	-WT	5000K, CRI80

¹⁾ Color option will be added to the model name after the size information. JBBL-0506-WT refers to the diffuse back light with white 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 4 pin M8x1 connector.



Pin	Color ¹⁾	JustBright
1	brown	24 VDC
2	white	Dim
3	blue	Ground
4	black	Trigger

1) Wire color of MBJ lighting cable

Additional Information:

Pin4 (Trigger) is an 'active high' input signal with 5...24V=ON and 0...1V=OFF, it is a high resistance current sink with 0.2mA for 5V and 5mA for 24V

Pin2 (DIM) is used as brightness control and operation mode switch, it is a high resistance current sink with 0.2mA for 5V and 1mA for 24V.

For the connection it is recommended to use the MBJ lighting cable with a maximum length of 10m.

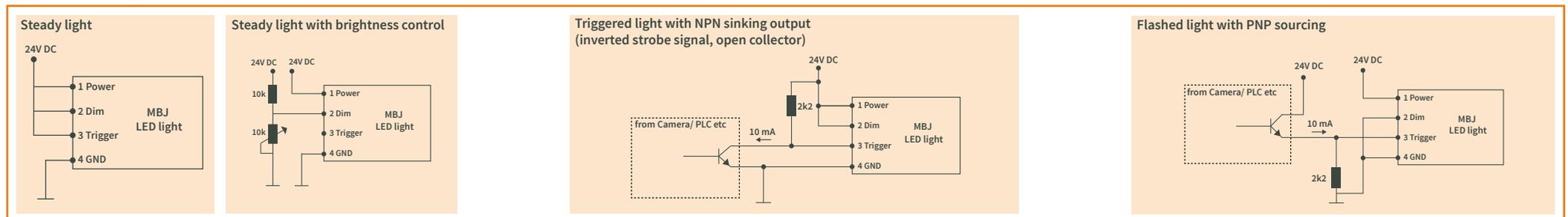
Integrated Controller (-s)

Supported operation modes with the integrated LED controller

Pin 2 (Dim)	Operation mode
24V	steady light ¹⁾
1...10V	steady light with brightness control ²⁾
24V	triggered light
GND	triggered flash light with max. 20ms and up-to 100% more light intensity ³⁾

- 1) Pin 3 (Trigger) needs permanent 24V to activate steady light mode
- 2) PWM with 3.8kHz clock is used, recommended minimal camera exposure is 5ms
- 3) latency between trigger and LED light ON is about 20...30µs, maximum recommended clock speed is 1 kHz, maximum recommended duty cycle is 25%, minimum recommended flash time is 100µs

Application Samples for (-s) controller



Specification	JBBL-0506-WT JBTL-0506-WT	JBBL-0808-WT JBTL-0808-WT	JBBL-0328-WT JBTL-0328-WT	JBBL-1013-WT JBTL-1013-WT	JBRL-10-WT
Optical parameter					
Luminous area (A x B)	56mm x 60mm	80mm x 80mm	30mm x 285mm	106mm x 135mm	Di=54mm Do= 96mm
Light emission	direct LED light emission from the back side with strong diffusion for the JBBL type and just slight diffusion for the JBTL/RL tye				
Recommended use	JBBL is commonly used as backlight, placed closely behind the object, e.g. for contour measurement JBTL/RL are commonly used as top light for bright field illumination				
Illuminance [klux] at 0mm distance ¹⁾	135klux	102klux	76klux	103klux	---
Luminous Flux [lumen] ²⁾	800lm	1150lm	1150lm	2600lm	1150lm
Electrical parameter					
Available interfaces	with integrated LED Controller and 4 operation modes				
U _{in}	24V DC +/- 5%				
Typical Power					
Steady light operation	5.8W	7.9W	7.9W	17.5W	7.9W
During ON time at flashed light operation	14.5W	19.75W	19.75W	43.75W	19.75W
General parameter					
Dimension (H x W x D)	89mm x 75mm x 29mm	113mm x 95mm x 29mm	300mm x 64mm x 29mm	150mm x 139mm x 29mm	110mm x 110mm x 29mm
Weight	155g	95g	220g	225g	135g
Material	aluminum base plate, ABS housing and PMMA light cover				
Connector	M8x1 socket, 4 pin, male (pinning details on the next page)				
Operating temperature	10°C to 30°C				
Certifications	CE, RoHS				
Degree of protection	IP54				
Humidity	30% to 70%				
Accessories	for cables, please check www.mbj-imaging.com				
Certifications	CE, RoHS				
Degree of protection	IP54				
Humidity	30% to 70%				
Accessories	for cable, mounts and LED controller please check www.mbj-imaging.com				

- 1) Values are approximate with a +/- 7% tolerance and applies to the JBBL type only
- 2) Values are approximate with a +/- 7% tolerance and applies to the JBTL/RL type only