

LED Indicator Light

LED indicator light for panel mounting (accessories of the MULTIDIMMER product)



Device description:

The LED Indicator light is mainly intended for use in combination with the Multidimmer product (PWM splitter), which is used for dimming the indicator lights of devices that do not have a dimming input. The signaling output of this device is connected to the one control input of the multidimmer and we connect the signaling LED to the corresponding output of the multidimmer. It is also possible to connect the indicator light directly to devices that are not located on the dashboard and have an output (compatible with the signaling LED indicator) for an external indicator device. The polarity of the connection must be observed for the signal light. It is designed for systems with an onboard voltage of 12 VDC. The product is produced in signaling colors: red, green, orange and blue. The brightness of the colors is matched to each other as much as possible (within tolerance of parts).

Installation of the LED indicator light is simple. It is necessary to first drill an 8 mm mounting hole in the panel. We pass through these opening wires, and we plug the free ends of the supply wires into the dashboard device. Finally, we insert the socket with the LED into the hole and push it to the panel. Attention! When installing the indicator light, we only press on the LED socket! Do not pull the product by the wires! The LED could jump out of the socket, or the product could be damaged.

THIS PRODUCT IS NOT APPROVED FOR INSTALLATION ON CERTIFIED AIRCRAFT. THIS IS NOT A TSO-CERTIFIED LIGHT.

Electrical parameters:

<i>parameter</i>	<i>min</i>	<i>typ</i>	<i>max</i>	<i>unit</i>	<i>note</i>
Power supply VCC	9	12	15	VDC	Pay attention to the correct polarity connection!
Color and consumption					
Red (*645 nm)	7,0	10,2	14	mA	* wavelength
Green (*572nm)	11,0	14,5	19	mA	* wavelength
Orange (*610 nm)	2	3,6	5	mA	* wavelength
Blue (*465 nm)	0,5	1,4	2	mA	* wavelength
PWM dimmable		YES			
Brightness LED (approx.) ***					*for supply 12V
Red		15		mcd	±20%
Green		100		mcd	±20%
Orange		150		mcd	±20%
Blue		7		mcd	±20%
LED ballast resistor		YES**			Built into the product

**Note: The LED indicator has only a ballast resistor. Larger fluctuations in the power supply can be observed in the change in LED brightness.

***Note: The luminosity of the individual colors is coordinated so that the resulting impression of light is as uniform as possible (within the tolerance of the parts and human color perception)

Device mechanical parameters:

parameter	value	unit	note
Length	26	mm	See Fig. device dimensions and mounting holes
Diameter	9,5	mm	
Mounting hole	ø8	mm	
Weight	6,5	g	
Cable cross-section	0,34	mm ²	22AWG
Cable length	50	cm	For a larger number, the lengths can be adjusted to order

Wires color marking

Name	Marking	Wire color
Power supply +	VCC	White
Power supply -	GND	Black

Installation schema:

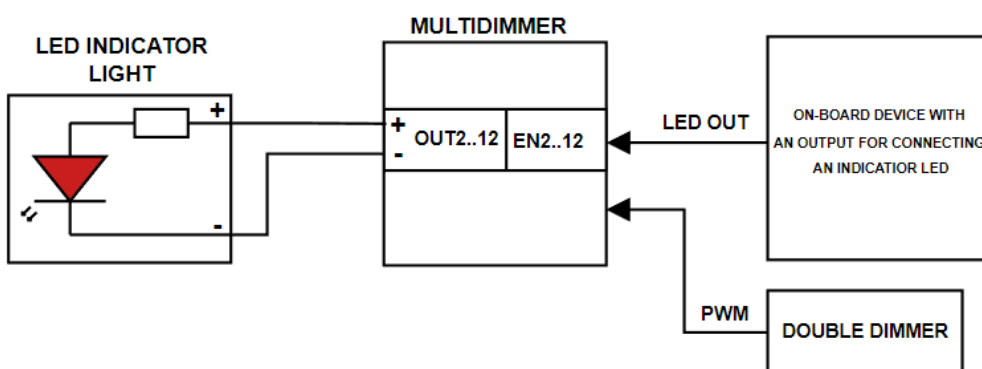


Fig.1a Wiring diagram with multidimmer unit

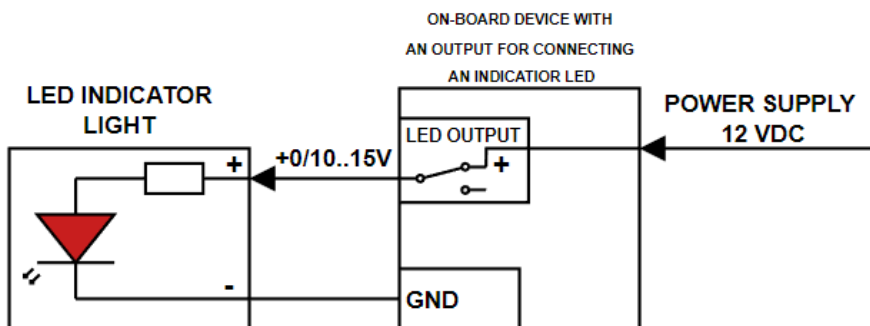


Fig.1b Wiring diagram (switched plus or push-pull)

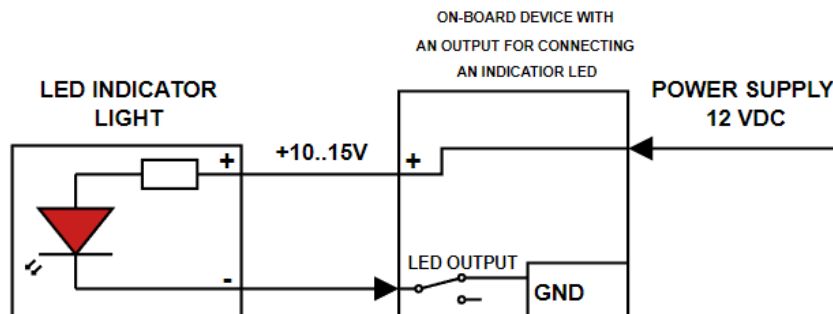


Fig.1c Wiring diagram (switched minus or push-pull)

Device view:



Fig. 2 Product view (red, blue, orange, green)

Device dimension:

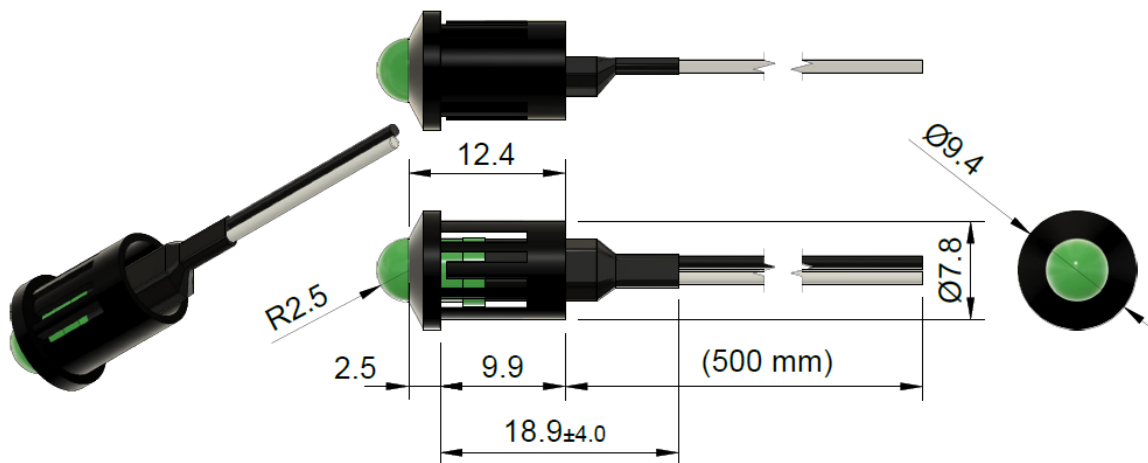
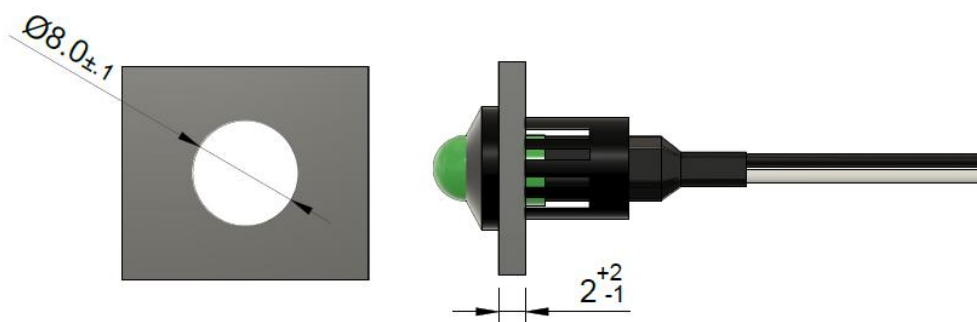


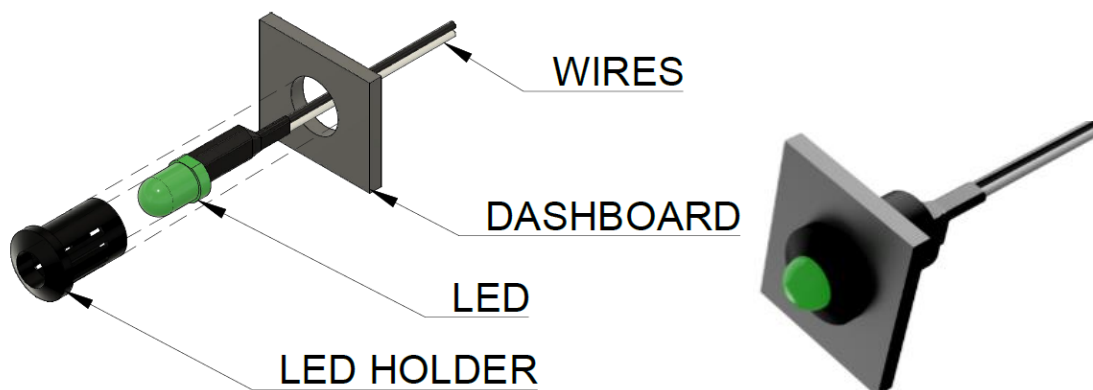
Fig. 3 Device dimensions (mm)

Mounting holes:



Obr. 4 Mounting dimensions (mm)

Assembly of the product:



Obr. 5 Disassembly and installation of the indicator light

The product is assembled by snapping the socket and the LED (it is usually already prepared from the factory, if not, do it by lightly pushing the LED (with electronics) into the socket). Next, passing the wires through the dashboard and connecting them to the control device is necessary. Finally, the indicator light is inserted into the dashboard. When inserting the LED socket, press only on the socket! Not on LED! The ingenious structure of the socket fixes the LED firmly in the socket after it is inserted and protects it from falling out.

Remove the product from the dashboard with a flat object by pulling up the socket. Be careful not to scratch the dashboard. If the construction allows it, it is possible to push out the socket from behind the dashboard. In any case, hold only the socket! Don't push the LED and electronics.

If you need to slide the LED out of the socket, push the LED from the front of the socket. The socket must be outside the mounting hole! Do not pull on the electronics or the LED wires!

Operating conditions:

<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>note</i>
Working temperature	-30 ÷ 55	°C	
Operating humidity	20 ÷ 85 %	RH	
Atm. pressure	800 ÷ 1100	hPa	
Protection	IP20	-	
Mounting type	By pushing it into the hole	-	Drill size ø 8 mm
Working position	any	-	

Important notes and warnings

Thank you for purchasing **LED Indicator Light**. For a comfortable and safe use of this product, please pay attention to THE ENTIRE MANUAL, especially the notes and warnings below.

- Although the **LED Indicator Light** unit has been thoroughly tested to ensure maximum safety in all conceivable situations, THE RIGHT FUNCTIONALITY DEPENDS ON THE RIGHT INSTALLATION AND SETTINGS.
- Therefore, it is **NECESSARY to READ CAREFULLY and UNDERSTAND THIS MANUAL COMPLETELY**.
- Keep this manual printed in an airplane for cases of emergency or change of ownership.
- **THIS PRODUCT IS NOT APPROVED FOR INSTALLATION IN CERTIFIED AIRPLANES.**
- The pilot **MUST UNDERSTAND** the control of this product before the first flight. **DO NOT** use the product unless you are sure how it works!
- Do not allow unauthorized persons to handle the installed product.
- After installing the product, before the first flight, turn on ALL possible sources of electromagnetic interference on board the aircraft and ensure that the instrument is functioning properly.
- Use of the device in conflict with this manual, with bad wiring, outside the allowed operating conditions, etc., may cause the device to malfunction or damage and endanger flight safety.
- If the product repeatedly indicates an error, do not use it and turn off the power!
- **AVOID** contact with liquids and chemicals
- Before installation, check the mechanical integrity of the device and its accessories
- **DO NOT** disassemble the device!
- After installation, carefully check the functionality of the device and its installation
- The responsibility for the installation is entire with the installer.
- Responsibility for performing control actions based on information indicated by the product is full of the operator (pilot). The operator must be able to evaluate an incorrect indication even if the product does not indicate an error.
- Ensure regular maintenance of the aircraft's main battery
- If you do not agree to the notes and warnings above, do not use this product.

Company LAMBERT AERODEVICES s.r.o reserves the right to change or improve the product or manual without prior or subsequent notice.

Document history:

<i>Date (DMY)</i>	<i>version</i>	<i>description</i>	<i>author</i>
15.01.2024	0	Initial version	NEPOR



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