



## General information

- Caution: The delivered goods may contain products and packaging material, such as small parts and films, that may be swallowed or cause suffocation if used improperly. The products and the packaging material must be kept away from children and animals.
- We assume no liability for damage or injury caused by improper handling.
- Ensure that the LED product and the control gear match technically before assembling the products.
- Do not touch products with wet hands during installation or handling and do not handle them in a wet environment.
- LED flex strips of one type are delivered in the same BIN. Please indicate the BIN of the initial delivery if you order any additional items. We will try to deliver from the same batch. Unfortunately, this is not always possible since the quick development of LEDs keeps leading to production of new batches and LED types.
- Please note that the materials aluminium and PC or PMMA have different expansion coefficients.  
At a temperature difference of 10 °C, aluminium expands or contracts by 0.7 mm/metre and PC or PMMA by 1.5 mm/metre. The resulting gaps are not a product defect but have physical reasons.
- Check that the LED flex strips work in the unrolled condition before installing them.
- Flexible Optostrips of the IP00 protection class are not suitable for use in town and rural areas with intense air pollution from industry and traffic (higher class 4C1). Not suitable for areas with high drifting sand and dust burden.



- The products are to be stored protected and ESD-compatibly in a dry, dust-free environment and without any mechanical stress.
- Please wear anti-static clothing and/or an antistatic wrist cuff when working with LED products.
- Note that these are highly sensitive electrostatic parts that will quickly take damage if handled inappropriately.



- The maximal operating temperature of -20 °C, storage temperature of -40 °C, and ambience temperature of -20 °C must not be exceeded since this may damage the LED flex strips.



- IP00 LED Strips: the bending diameter of 50 mm must not be undercut.
- IP65 LED Strips: the bending diameter of 100 mm must not be undercut.
- IP67 Optostrip Flex: MTV = 150mm, MSV=60mm, TV=240mm, SV=240mm, TV3D=200mm.



## Safety instructions

- Non-observance of the safety and assembly instructions may cause injury and property damage.
- Observe the specified protection type of the product.



## Electric security



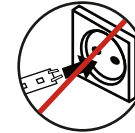
- Installation must only be performed by a qualified electrician. The liability claim shall lapse for any lamps, LED strips, or electronic parts not installed in accordance with the European safety directives or e.g., the VDE.
- Turn off the power supply before installation and prevent accidental reactivation. Turn off the circuit breaker.



- Always observe the applicable ESD precautionary measures for installation when installing the products, such as LED flex strips.



## Electric security



### CAUTION!

- Do not connect directly to the mains voltage with 240 V/50 Hz.

- Installation of the LED products must only use a control gear with a secondary SELV voltage (e.g., 24V DC).
- Supply lines, input and output lines on the LED product and control gear must only be used with a sufficient cross-section.
- Ensure proper polarity when connecting the lines ("+" = red, flags on the line). Incorrect connection will destroy the LED products. No protection against polarity reversal. Even brief periods with reversed polarity may cause visible damage on the LED product. This drastically reduces the service life.
- Improper wiring may cause unforeseeable permanent damage.
- Ensure that the permitted temperature at the Tc point of the LED products is not exceeded in operation. Secure operation is ensured in connection with I-LEP profiles. The Tc point must be measured in steady-state vibration, with all channels set to 100% (TW, RGB, RGBW, etc.). If this is missing, the measurement must be performed on the soldering point of the first LED. Tc point temperature = 85 °C.
- Repairs generally must be performed by an electrician.

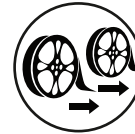


- Protection class III (safety extra-low voltage)
- Devices of protection class III work with voltages < 50 V~ and require reinforced or double insulation in case of grid operation. Safety extra-low voltages must be generated using either only rechargeable batteries, batteries, and special transformers or a safety transformer.
- The local provisions must be observed for installation.

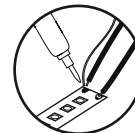


## Assembly and processing instructions

- Check the LED strips for function and light colour before installation.
- Malfunctions must be reported to I-LEP GmbH before installation.
- The installed products must remain accessible after installation.
- Accessibility must be ensured.
- Attention: Never glue the LED flex strips to the surface more than once.  
Subsequent removal of the LED flex strips from the base will destroy the conducting paths of the LED flex strips by pulling, folding, and bending forces. The LED flex strips must be disposed of after this.
- LED flex strips must always be installed with two persons, with one person installing them and another one holding the goods and protecting them from external influences.
- Observe the maximal LED strip length that can be operated with one supply. Only this ensures an even light current across the entire LED strip length.



- Always unroll the LED flex strips in the same unrolling direction when installing since this may affect the light effect.



- When soldering linking or connection lines to the intended soldering pads, do not exceed a maximal soldering duration of 3 seconds and a soldering temperature of 350 °C.
- Soldering vapours that are harmful to health must be extracted properly and professionally.
- Soldering must only take place under zero potential.
- Soldering points must be insulated against conductive surfaces.
- Only lines specified for at least 80 °C must be used.
- Ensure that the lines are large enough -> danger of fire



### CAUTION!

- The LED product must not be folded, pulled, or crushed. This will cause irrevocable damage even if no damage is visible on the product. Immediate failure or shortened service lives of the product will result.



## Assembly and processing instructions



### CAUTION!

- Never run LED products over any sharp edges and always protect them from dust, heat, chemicals, etc.

- Damaged products must be disconnected from the mains voltage at once.
- Only control gears approved by the manufacturer must be used.



### CAUTION!

- The LED flex strips must only be bent sharply once, in places that have no electronic parts. Observe the minimum bending radius of the respective product.
- Do not twist!



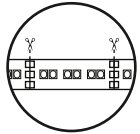
### CAUTION!

- Only use heat-discharging bases!
- Covering with insulation material or other materials is not permitted. It may result in overheating and fire, or cause property damage and injury.



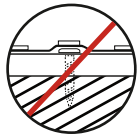
### CAUTION!

- Do not place any objects on the LED strip.
- Protect the products from mechanical stress.
- Do not step on them



- The flex-LED strips can be shortened with scissors in the designated locations. Ensure a straight, clean cut. Do not damage the soldering pad.
- If "flexible Optostrips" with increased protection type (e.g., IP65) are cut or soldered by an installer/processor on the customer's side, these points must be professionally sealed again to achieve full protection of the product. Responsibility for maintaining product quality shall be with the further processor.

- Primary and secondary lines must not cross or be placed side by side.
- Radio interference suppression must be observed. Install the control gear no closer than 2 m from the LED product. Otherwise, there will be strong inductive coupling with the mains line, which may cause voltage drops.
- Due to the different expansion coefficients of aluminium and LED flex strips, the LED flex strips must not be glued across joints of support profiles. The LED flex strips must be connected with flexible bridges at the joints of the aluminium profiles.



### CAUTION!

- Fully glue on the LED strips; heat build-up may occur otherwise.
- Load-bearing capacity of the base must be ensured on both sides.
- The base must be free of oil, dust, silicone, grease, and dirt.



- Use only our I-LEP pressure roller for pressing on IP20 LED flex strips to the base. 00-000000-0010 (width 10mm) or 00-000000-0008 (width 8mm). Never touch the electronic parts with your finger to press them on. This will destroy the product.



## Maintenance and Care



### CAUTION!

- Make sure that the environment is free from hydrogen sulphide. Hydrogen sulphide may destroy the LED flex strips.
- Hydrogen sulphide H<sub>2</sub>S occurs naturally but is also contained in rubber seals, foam adhesive tapes, etc.
- Use in environments with aggressive substances, such as sulphur-, chlorine-, or bromine-containing environmental conditions, is forbidden.



### CAUTION!

- Do not clean the IP00 LED module!



### CAUTION!

- Wipe off the IP65 and IP67 LED modules with a moist, lint-free rag.



## Disposal

- Ensure that you have removed all delivered components before disposing of the packaging material.
- Electronic products must not be disposed of in the household waste. Legislation requires you to dispose of the electronic components and devices separately. Your municipality will inform you about disposal options.
- WEEE-Reg.-Nr.: DE94874737



### CAUTION!

#### Possible error causes

- Paint got on the LED while painting and causes a dark spot or shifting of the light colour.
- Connection or supply lines are not properly placed. Shadows cause dark spots.
- The LED strips are not placed evenly across the entire length. Differently bright areas form due to different illumination angles.