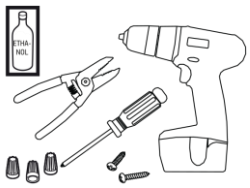
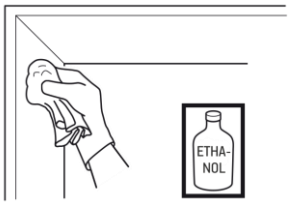
BACKLIT HE BAR INSTALLATION GUIDE

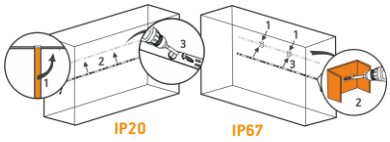
READ THE INSTRUCTIONS CAREFULLY BEFORE MOUNTING



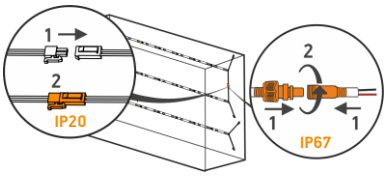
Tools reguired. Wires, wire strippers, drill, screwdriver, screws, surface cleaner, wire connectors and end caps.



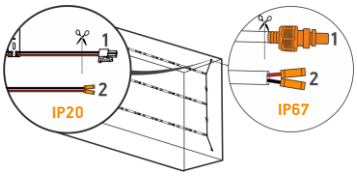
1. Clean the inside of the sign with surface cleaner (e.g. ethanol) to make sure it is free of dirt.



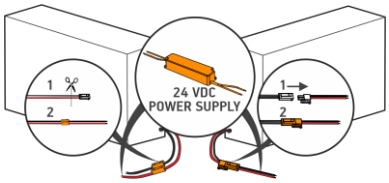
2. *For IP20*, peel off the protective layer and stick the bar in place. Secure it with screws, adjusting torque to avoid damaging mounting tabs. *For IP67*, attach the bar holder first, then click the bar into place.



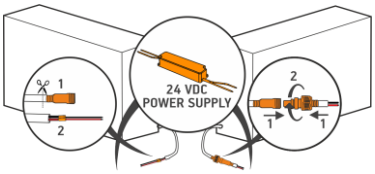
3. Connect the bars by connecting female connector with male connector.



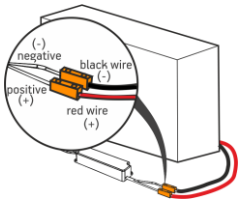
4. Cap all unused wires. First - cut the connector off, then – cap the wires).



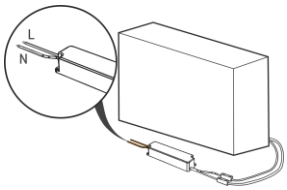
5. ***For IP20***, choose a 24 VDC power supply*. Before connecting wires to the power supply: *Option 1*. Connect female connector with additional male connector. *Option 2*. . Cut the connector, then strip the wires and use a terminal block to connect to the power supply.



5. ***For IP67***, choose a 24 VDC power supply*. Before connecting wires to the power supply: *Option 1*. Connect female connector with additional male connector. *Option 2* . Cut the connector, then strip the wires and use a terminal block to connect to the power supply.



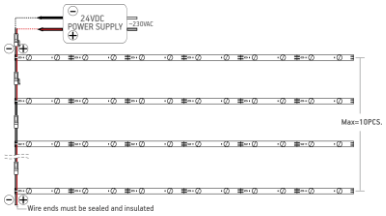
6. Connect the red wire (+) of the LED bars to the positive wire (+) of the power supply. Connect the black wire (-) to the negative wire (-) of power supply.



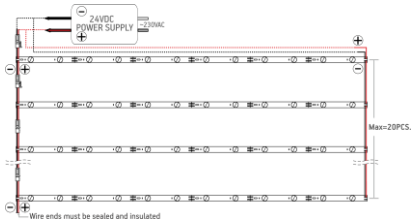
7. Finish by connecting AC power line to the input wires of the power supply.

*Take in consideration the insolation class for the power supply and connectors outside the lightbox, depending on the place it will be stored.

CONNECTION SCHEME

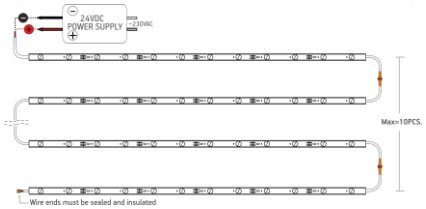


IP20

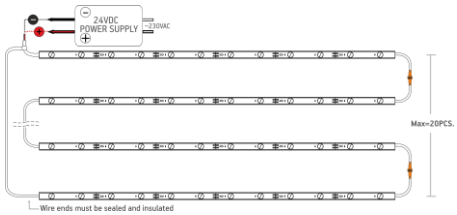


! 10 pcs (10W) | 20 pcs (3.7W) - max number of LED bars in one chain when the power supplied from single end.
! String end voltage can't be less than 23V, do not exceed specified bar string length

! 20 pcs (10W) | 40 pcs (3.7W) - max number of LED bars in one chain when the power supplied from both ends (additional wiring is needed)
! String end voltage can't be less than 23V, do not exceed specified bar string length



IP67



POWER SUPPLY LOAD RECOMMENDATIONS

POWER SUPPLY for 10 W bar	PCS, bars	2 m*		5 m*		10 m*	
		mm²	AWG	mm²	AWG	mm²	AWG
BPSP-40-24V.1	3	0.5	16	1.5	13	3	10
BPSP-60-24V.1	4	0.75	15	2	11	3	7
BPSP-100-24V.1	8	1.5	14	3	10	6	7
BPSP-150-24V.1	13	2	13	5	7	9	5

POWER SUPPLY for 3.7 W bar	PCS, bars	2 m*		5 m*		10 m*	
		mm²	AWG	mm²	AWG	mm²	AWG
BPSP-40-24V.1	8	0.5	16	1.5	13	3	10
BPSP-60-24V.1	12	0.75	15	2	11	4	7
BPSP-100-24V.1	21	1.5	14	3	10	6	7
BPSP-150-24V.1	32	2	13	5	7	9	5

* Distance between power supply and bars.
! Power loss less than 5%.
! Recommendations for optimal use of power supply.

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BACKLIT HE BAR INSTALLATION GUIDE

SAFETY PRECAUTIONS

- Installation of bars must carried out by a qualified technician in accordance to relevant electrical equipment handling standards.
- Before installing make sure that the fixing area can bear the total weight of the bars.
- Bars and power supplies have absolute maximum ratings. Comply with the specifications to avoid failure, damage and injury.
- Do not modify LED bar. This may lead to damage, injury and will void the warranty.
- Do not connect LED bars to a power supply that is turned on! Injury and bar failure may occur. If a power supply is turned on with no load (for example because of a bad connection), turn the power supply off and allow 5 minutes for it to fully discharge before continuing work on the installation.
- Avoid placing any high temperature objects around the bars. Also avoid putting cloth or paper on the bars. It may lead to combustion, burnout, overheat, deformation or other failure.
- Before performing maintenance, turn off the power and allow the bars to cool down. Otherwise there is danger of burns or electric shock.
- Do not wipe or spray bars with volatile materials such as thinner or benzene as it may lead to damage or spontaneous combustion.
- If there are any signs of smoke or there is a smell of burnt plastic, turn off power to the installation immediately and investigate the power supply and wiring carefully.
- Ensure that power supply and other system components are properly earthed if using Class 0 or Class I power supplies.

INSTALLATION RECOMMENDATIONS

- Adhesive tape is for temporary mounting only! Additional adhesives or fasteners must be used for permanent installation.
- Be sure to install bars in maintainable places.
- Avoid using excessive force during installation in order to minimize the risk of damage to bars or cabling.
- Be careful not to go beyond the recommended maximum quantities of bars for a given power supply. Overload may cause blinking, uneven illumination or failure.
- These bars are designed to work with constant-voltage power supplies. Use only recommended power supplies. Do not connect to constant-current power supplies, as doing so will cause immediate failure of bars.
- Please install LED bars using appropriate appliance wiring material and cables.
- Make sure to provide sufficient ventilation and rainwater drainage for the installation containing the bars to prevent shortening their lifetime due to excess heat, long-term exposure to water or ice damage. Operating temperature should be within -30~50 °C.
- When fixing the cabling of the installation avoid using metal cable ties or brackets – they may damage the cable insulation and cause short-circuits.
- In order to prevent LED breakdown caused by static discharge make sure not to touch the wiring of the bars with bare hands.
- Make sure to check the bar connections for the correct polarity. Reversed connections may lead to failure.
- Do not pull on the wiring while removing the bars – risk of damage.
- Do not install bars under direct sunlight or falling water – premature failure may occur.

STORAGE AND GENERAL REMARKS

- Make sure to store bars in a dry place, avoid elevated temperatures, high pressures, vibrations, corrosive or combustible materials, direct sunlight.
- bars cannot be used in combination with other types of bars. This may cause colour and brightness mismatches and lead to premature failure.
- Please ensure that the materials and components used in the installation do not contain or emit sulphuric compounds. Sulphuric compounds attack the LED bar components and may lead to changes in colour and premature failure.
- Make sure to keep records of the lot numbers and installation dates of the bars.

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