**IMPORTANT INSTRUCTIONS**

- **Never power when rolled.** Lighting must be installed in a straight line on a flat surface. Do not curl or twist and roll out completely straight before applying power.
- **Only install on smooth flat surfaces free of burrows that are fire retardant.**
- **Product has an adhesive tape on back.** Adhesion can only be made once and the LED strip must fully adhere to surface (flush). Failure to do this step will damage product. Rigidly support wires with wire clamps.
- **During installation, do not damage the printed circuit.** Exposed wires can cause short circuit damaging product and creating a serious hazard. Do not mount in a manner or support LED Strip light in a manner that can damage the outer jacket or cord insulation. Do not install this lighting system where the exposed bare conductors can be shorted or contact any conductive materials. Carefully check that there is no wire cross-over or possibility in the future in area of installation.
- **To reduce the risk of fire and overheating, make sure all connections are tight.**
- **Product is sold in the maximum length. Do not exceed or extend the length of the roll.**
- **Only qualified electricians or engineers can perform installation familiar with low voltage wiring techniques.** Correct polarity is imperative (+/- is marked on printed circuit). Parallel connection only.
- **DO NOT install on flammable material or possibility of in the future. Do not install any luminaire closer than 6 inches (15.25 cm) from any curtain, or similar combustible materials.**
- **The light and all its components cannot be mechanically pressed. Never apply to surface above 40c (104F).**
- **Voltage must not exceed 12VDC and must be regulated. The Voltage is printed every 3 LEDs.** Check that it is the correct voltage before applying power.
- **This is not a toy. Keep out of children's reach.**
- **Keep Flex strip spaced 1/2" apart if placing next to each other.**
- **LED Flex Strips are bendable on one flat widest plane. Maximum bend radius is 4 inches (100mm) on one plane (flat).**
- **Not for use in mission critical , aircraft, emergency signs or lifesaving equipment.**
- **Static electricity can damage LED(s). Handle with care.**
- **Inspect installation after one hour and thereafter regularly.**
- **For stationary use only and not subjected to possible pressure or movement (or in the future).**
- **Not for in-wall use.**
- **Max. Soldering temperature cannot exceed 250°C (482°F) for a max of 4 seconds. Use 22 – 20 AWG wire to connect.**
- **Use correct wiring as required by local electrical code. Use a 20 gauge wire to attach to strip by solder (2464 type of wire).** Connection to power source may use Wago™ 222-413 in hardwire applications.
- **Cable lighting systems not be installed in bathrooms.**
- **Conductors of extra-low-voltage circuits be rigidly supported.**
- **Conductors not be installed in contact with combustible materials and not run through walls, ceilings, floors or partitions, and; Uninsulated conductors not be installed less than 2.2 m (86") from the floor.**
- **Do not stare directly into the LED Light. Install LED lighting out of direct sight.**

**SAFETY & WARNINGS**

Please read instructions before using product and **SAVE THESE INSTRUCTIONS.** Before using this product make sure you have right color, product (item number) and voltage (printed on product). Check for possibility of damage during shipping. If damaged, or wrong product, do not use. Disconnect power before installing or using.

Use only with Class 2 Type power supply. **Using with any other type of power supply will void the limited warranty.**

**FIVE YEAR LIMITED LIGHTING WARRANTY**

LED WORLD INC. warrants this product for five years (some exceptions may apply) from the date of shipping unless otherwise noted in writing. This warranty is expressly in lieu of all other warranties expressed or implied. Under this Limited Warranty, the obligation of the company is limited to replacing or prorated basis, at its option, any component found to be defective. This Limited Warranty does not apply to damage caused by buyer or alteration to the product or incorrect power supply. Factory warranties are covered by the original manufacturer and claims must be submitted to them. This product must be used with LED World’s Class 2 power supply. Failure to do so will void limited warranty.

LED World Inc. And its providers will never be liable to you or any other person for any indirect, accidental, consequential, special, punitive or exemplary loss or damage arising from, connected with, the purchase of products, including but not limited to loss of data, business, profits, loss of use, production, reputation or goodwill, anticipated or otherwise, or economic loss; under any theory of liability (whether in contract, tort, strict liability or any other theory or law or equity), regardless of any negligence or other fault or wrongdoing (including without limitation gross negligence and fundamental breach) by led world inc or any person for whom led world inc is responsible, and even if led world inc has been advised of the possibility of such loss or damage being incurred.

If a product is defective, we will replace the product with similar or identical product or at our option a credit towards a future purchase. To make a claim under this warranty, obtain a return authorization number.
**IMPORTANT INSTRUCTIONS**

**INSTALLATION PLANNING**
LED Flexstrip is a versatile lighting product that can provide a superior lighting solution in a variety of applications. **Recommend design steps before starting the installation process:**

General questions based on lighting requirements:
- Where will your power supply be located
- How will you switch your LED lighting ON and OFF?
- What is the best layout configuration for your installation with wiring consideration?
- How will you run your wiring to your LED strip lighting?

**FLEX STRIP CONNECTION**

Wire connection using WAGO block connectors

<table>
<thead>
<tr>
<th>AC120V</th>
<th>Class 2 Power Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAGO</td>
<td>LED Flex Strip</td>
</tr>
</tbody>
</table>

**Cut instructions**

- Note Polarity Marks
- Polarity marks must match ((+) to (+) and (-) to (-)) otherwise strip will not work

**Solder Connection Points**

Solder connection points are at marked intervals. Cut points are at every 3 LEDs (12VDC)

| 25mm (0.98") |

**MOUNTING NOTE**
LED Strip is equipped with 3M self-adhesive tape. Mount strips on clean (no wax/oil), dry, smooth, burrows free surface. Adhesion can be made once and LED Strip must fully adhere to surface.

| °C |

Use Aluminum profile or aluminum heat sink tape to avoid overheating, ensure proper heat dissipation and extend the life of the LED

**WIRING FOR VOLTAGE DROP**
Voltage drop is normal loss of voltage that occurs as power flows along a wire connection in a low voltage systems, and increases as the length of a wire connection is increased. Wire length and thickness as well as total light wattage influence the amount of voltage drop.

<table>
<thead>
<tr>
<th>Recommended maximum wire lengths - 12VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire Guage (AWG)</td>
</tr>
<tr>
<td>20 AWG</td>
</tr>
<tr>
<td>18 AWG</td>
</tr>
<tr>
<td>16 AWG</td>
</tr>
</tbody>
</table>

**WATTAGE CALCULATION**
The LED Flex Strips have a label on each roll that indicates the voltage and wattage. You must have the correct Class 2 Power Supply (Transformer) for LED Strip model. To calculate the wattage, measure the total length of LED Strip in your run multiplied by the wattage of the LED Strip. Remember that a power source should only operate at a maximum 80% of it rated capacity.

For example: 10 feet of FA120M30-5M-12V-W  \times 2.9W = 29 Watts

Never Extend the Length of rolls. Rolls are sold in there max length.
POWERING OPTION

Option 1

Dimmable Class 2 Transformer

INPUT 120V AC 60Hz

Optional Dimmer rated for low voltage

Option 2

Regulated Class 2 Power Supply

INPUT 120V AC 60Hz

Option 3

Fuse (5Amps)

INPUT 12V DC Battery

Dimmer or Switch

If powered directly by 12V DC Battery Source, a 5amp listed fuse is required on the positive wire (+) near to the battery source and before the switch or dimmer.
**CONNECT WITH SOLDERING**

It is strongly recommended to solder the connection. Please refer to our quick connector instructions sheet.

![Soldered Contacts](image)

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**LED STRIP CUTTING**

Our strips come with cut mark sign. Strips are be cuttable at each 3 LEDs. Cut marks lying between set of soldering points.

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**TROUBLESHOOTING**

**Tape light strip does not light**

- Make sure your power supply is turned on and has the correct voltage.
- Confirm you have the correct polarity (+ to + and - and -) throughout the run of LED Lighting.
- Have an electrician check all connections and any switch or dimmer connections from the power supply to the LED Light Strips.
- Consider testing with a multimeter to ensure light strip is receiving 12V power.

**LED Flex Strip lights blink on, then go off**

- The power supply is not adequate for the length of LED Light Strips you are powering. Install a adequate Class 2 power supply.

**LEDs farthest from the power supply are noticeably dimmer**

- This is the result of voltage drop. Decrease the length of the 12V power feed or use thicker power feed wires between the 12V power supply and the lighting strips.

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**IMPORTANT !**

Apply 1 ½" long electrical heat shrink over all connection points. Secure connection wire with wire clamp.

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**MAXIMUM FLEXSTRIP LENGTH SUPPORTED BY LED WORLD’s CLASS 2 POWER SUPPLY**

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>Max Feet of LED Flexstrips</th>
<th>Power Supply</th>
<th>Max Feet of LED Flexstrips</th>
</tr>
</thead>
<tbody>
<tr>
<td>E60L12DC-KO</td>
<td>16.5 Feet (Continuous 48 Watts)</td>
<td>MD-012-024VT</td>
<td>6.6 Feet (Continuous 19.2 Watts)</td>
</tr>
<tr>
<td>Dimmable</td>
<td></td>
<td>MD45W12VA</td>
<td>15.5 Feet (Continuous 45 Watts)</td>
</tr>
<tr>
<td>MD-012-060VTH</td>
<td>16.5 Feet (Continuous 48 Watts)</td>
<td>MD-012-180VTHJ</td>
<td>3 X 16.5 Feet (Continuous 48 Watts each channel)</td>
</tr>
<tr>
<td>XLD75B-112V-FC</td>
<td>20.6 Feet (Continuous 60 Watts)</td>
<td>XLD200B-412V-FC</td>
<td>4 X 13.8 Feet (Each Channel) Total 55 Feet</td>
</tr>
</tbody>
</table>

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**IMPORTANT NOTE**

Polarity marks must match (+) to (+) and (-) to (-) otherwise strip will not work.