### SimpleLighting

#### A COMPLETE BUYER'S GUIDE FOR LED STRIP LIGHTS



## What are LED Strip Lights?





10w Cool White LED Tape 120 LEDs P/M - 6000K COB LED Strip, No Spots Cool, Warm or Natural White

LED strip lights are a flexible ribbon-like circuit board with embedded LED lights on one side and a double-sided adhesive on the other side. These lights are one of the most versatile lighting solutions for residential properties, commercial establishments, and other institutions. They are straightforward and effortless to install and can produce immense brightness that rivals many conventional lighting solutions. Aside from that, it does not only come in the usual white lights, but it's also available in various colours, which is perfect for decorative and unconventional applications!

There are countless types of LED strip lights that you can find. So, if you're new to this kind of lighting and you're a first-time buyer, it can be a bit confusing. If you aim to design the best lighting plan, there are many details that you need to consider. So, to guide you on your selection process, we compiled a complete buyer's manual on LED strip lights!

### What are the different types that you should know?



The first step when buying LED strip lights, identify the different types that are available. Once you know about the basics, it'll be easier to understand what you'll need. So, there are four categories that you need to know: Single, Dual, RGB, and RGBW. Let's break them down one by one.

### Single

This LED strip light has one colour only and is compatible with a single-colour controller and accessories. You can get them in a specific colour temperature like cool white light, warm white light, and natural white light or in a particular colour such as blue, violet, green, or red. Also, depending on the specifications of your strip, you can dim or brighten it to manipulate its intensity which is perfect for ambient and accent lighting.





### **Tunable White**

This type of LED strip gives you access to a complete spectrum from warm white light to cool white light when you pair it with a compatible controller. This strip light is suitable for areas with many functions, like the dining room. If you need bright lights for when you do various tasks, you can switch to natural or cool white light. On the other hand, if you're trying to wind down, you can change to a warm white light for a cosy ambience.

> Colour Temperature Adjustable LED Tape - Warm to Cool White 2200-7000K



#### LED Tape, RGB Colour Changing 60 LEDs P/M 15W

RGB stands for red, green, and blue, which refers to the three colours of light that you can mix to produce thousands or millions of colours! However, you'll need an **RGB** controller to make the colour selection. speed, brightness, and mode control possible. Without this, you can still use the strip lights, but it's such a waste of function if you don't utilise them to the fullest.



### RGBW

Like RGB strip lights, this light has an RGB chip and requires a controller to utilise its various functions. The only difference is that it has an additional warm white chip which enables you to add more shades to the RGB chip, increasing the colours you get access to and giving you the option of having a static warm white colour when you want it. Even though the RGB chip can produce a close to white tone, it cannot reproduce the pure cool white tone that you get from a white chip.



## Is the number of LED chips per metre important?

Most of the time, people tend to disregard the number of LED chips per metre and solely focus on the length of the strip. While the length is significant, it's also crucial that you look into the number of LED chips per metre, yard or foot. Why? Well, in general, the more LEDs per metre the brighter it is. You might also find that if the LEDs are spaced out too much, your strip lights will create a spot-light type of lighting instead of a continuous linear glow. You could find it annoying and frustrating if you end up with this type of strip!

Identifying the number of LED chips per unit can be difficult because manufacturers don't use a standard count. Some may have 90 LEDs per metre, while some may have 30 LEDs per metre. Since there's no exact way of telling, what you can do is buy the strip that is most populated with LED chips. Also, when comparing different types of strips, make sure that you stick with one unit of measurement to stand on equal grounding.

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# How much brightness do you need?

With the continued advancements of LED technology, LED strip lights are becoming brighter and brighter. However, it does not mean that you need to always purchase the brightest one on the market. You see, because LED strip lights are incredibly versatile, people use them in various applications. In some cases, you'll not be needing intense brightness, especially if you're using it as accent or ambient lighting.

The brightness of LEDs is measured by lumens. So, to know how many lumens you should get, you need to first identify the use and where you will be placing your strips. Depending on the function, you may need more, or you can settle with less. The lumens count is usually indicated in the product description or in the packaging of the lights. However, you need to check on how it is stated since there is no standard. You may see 300 lumens per foot or 300 lumens per metre. So, to give you a general idea here's a simple guide.

#### Standard Lumens Requirement per Foot: (1m = 3.2ft)

- Accent lighting: 150 250 lumens
- Under Cabinet Lighting: 175 550 lumens
- Task lighting near the source: 250 450 lumens
- Task lighting far from the source: 350 700 lumens
- Indirect Lighting: 375 575 lumens
- Signages: 500 750 lumens



Remember that this guide is just to give you a general idea. However, you're free to get a higher lumens count or settle for a lower lumens count, depending on your preference. Just keep these numbers in mind, so you have a baseline when you buy your LED strips.

# What are the different colours that you can try?

When buying LED strip lights, you'll be entertained by the numerous varieties of colours that you'll see. Some may have a single variant, while orders can transition from one colour to another. Those that only produce one fixed light colour like red, blue, and green are the most basic, cheapest and easiest to install. If you're working with a tight budget and prefer one static colour, this is the perfect choice for you.

If you need more diversity with the tones that your strip lights produce, you can go with a dual white (adjustable from warm white light to cool white light), RGB (can shift from one colour to another), or RGB + WW (can switch between colours + produce a warm white light). Although they are pricier and more complex to install (requires a controller to utilise the functions), it's still worth every penny because of the magnificent transformation it can bring to your home.



#### What are the different colour temperatures?



Warm White Light - This 3.000K colour temperature produces white light with a vellow to slightly orange tint. It emits a soft, soothing, and relaxing colour that's suitable for accent and ambient lighting. If you are fond of the warmth that an old incandescent bulb creates, then this colour temperature is a better and more energy-efficient replacement.

Natural White Light – This colour temperature radiates a clean white glow without any shades of yellow or blue. It's set at the centre of the spectrum and is usually around 4,000K. This colour is mainly used for tasks and general lighting because although it's bright, it's still comfortable on the eyes. **Cool White Light** – This colour temperature has a cool bluish tint that's pure and bright, perfect for task lighting. Strip lights in this colour are usually around 6,000K and are ideal for lavish design schemes, minimal aesthetic interiors, and a completely white room.

Why are LED strip lights a comprehensive lighting solution that you can use almost anywhere? It is because they have countless variants to choose from! If you happen to dislike multi-colour lights in your living room, LED strip lights are also available in different colour temperatures!

Colour Temperatures determine the number of white tints available in your lights. If it has more white, it will result in a cooler tone. On the contrary, if it has less white, you'll get a warmer tone. There are three colour temperatures that you should know: Cool White Light, Natural White Light, and Warm White Light.

# How many watts should you get?

Aside from the type and colour of your LED strips, another crucial factor that you should look into prior to buying is the wattage. Before anything else, you need to indicate the total wattage of the system you want to set up. With this, you'll be able to get the adequate power supply you need, and you'll know how much energy the entire setup will consume. Usually, the wattage of an LED strip is indicated as watts per metre. From there, you can just multiply the total length of the strip by the wattage per metre. Once you get the product, you'll be able to identify the appropriate power supply to run your strip lights.

Most LEDs run at a 12v DC or 24v DC power, so you'll need a corresponding power supply to make them work. To know what to get, you just need the total wattage of the entirety of your strip and look for a power supply that's higher than the total wattage count. Never get a power supply that's lower than the wattage of your strips, or else it will overload. If that happens, there's a high chance that your strips will be ruined.

#### What is IP rating and Bathroom Lighting Zones?

IP (Ingress Protection) is the amount of defence your lights have against solid and liquid elements. It is specified by the letters IP followed by two numbers (e.g., IP44), with the first number stating the level of protection against solids while the second number signifying the amount of protection against liquids. The higher the number you see on your strip lights, the more protected they are.

When lighting the bathroom, you cannot simply use regular lights. We all know that water and electricity are not on friendly terms, so you'll need fittings with a higher IP rating. This will ensure that you won't bathe under flickering or unsafe lights or get electrocuted while you shower. Although the bathroom is covered with liquids, not all parts are exposed to the same amount of water. So, to know which areas may get away with a lower IP rating and those requiring a higher IP rating, a guide is made as a standard. The bathroom lighting zone (the approximate distance of the light fixture to a water source) is established as a guideline and precautionary measure to help people identify the correct IP rating for each area. Here's what they are:



- Zone 0 Directly inside the bath and shower; requires a minimum of IP67 lighting fixtures.
- Zone 1 Above the bath or shower and up to a height of 2.25 metres from the floor; requires an IP65 rating.
- Zone 2 0.6 metres outside the border of the washbasin and up to a height of 2.25 metres from the floor; requires at least an IP44 rated strip light.
- Zone 3 Outside Zone 0, 1, and 2; requires at least an IP20 rated light.

If you have the budget to use IP65 strip lights in your whole bathroom (other than inside the bath or shower), go ahead! There's nothing wrong with that, and you'll feel safer knowing that your strip lights have high protection against water. Actually, many people prefer to do this because it gives them extra peace of mind, as well as matching lights all throughout the room.

# How do you want to install your LED strips?

Before checking out any LED strips, you should plan and map out how you want to install your lights. Remember, there are tons of LED strips out there, and different strips have specific requirements for installation. So, to not waste any of your hard-earned money, you need to think about what you will be doing with your lights. With regards to the mounting on your strip lights, always ask the following questions:

- 1. How long should your LED strips be, or how many strips do you need?
- 2. What is the voltage requirement of your LED strip setup?
- 3. How will the direction of your LED strips be?
- 4. Do you need incredibly flexible strips, or is it okay with semi-flexible strips?
- 5. Do you need connectors for your setup?
- 6. Do you need to program your lights to a remote controller?

Once you address these questions, you'll have a clearer picture and idea of the materials that you should get. If you're only going with the basics, you can work with a flexible strip with an adhesive backing and set it up near a power outlet. Alternatively, if you want your lights to look fancier and elaborate, you have to develop a more detailed system and integrate a controller.

### Do beam angles matter?

The beam angle is the scope of light from the strip light and how wide it spreads out from the left and the right. So, how do you choose which one is the best? That goes down to the area you're putting them in and the purpose of that space. For the living room, a beam angle of 120°+ will create a beautiful diffused glow that will brighten up the room in a comfortable way and enhance its ambience.



Alternatively, if you're adding your strip light in your kitchen as task lighting, a narrower beam angle may work better. A narrower beam angle will produce a more concentrated stream of light that's necessary for illuminating your workspace, helping you see finer details clearly. If you're unsure which beam angle to choose, your safest bet is a 120 degrees beam angle. Anyway, most of the time, strip lights are used as an accent and ambient lighting but if you're using it specifically as task lighting, go for something lower.

## How do you want to control your LED Strips?

How do you want to control your LED strips? Are you okay with just switching them on and off, or do you want a more elaborate system that allows you to dim/brighten and change the colour of your lights? While plugging your strips into a plug socket or wiring it to your light switch is the most basic, there are various ways that you can manage your lights and utilise all of their functions. Here are some that you can consider:



DMX LED RGB or RGBW Controller - 4 Zone - 220-240v



5 In 1 LED Strip Controller, App, Alexa & Google Home Controlled



4 Zone RGBW Remote Control and Receiver



Infrared Hand Movement Sensor Switch

- Standard Light Switch this type of control is the most basic and a staple in all homes. It simply allows you to switch your lights on/off.
- Wall Dimmers this type of control enables you to regulate the brightness level of your strips. It can dim/brighten and on/off your lights. Do take note that not all types of dimmers can work with LED strip lights, so ensure that it's compatible.
- Wall Controllers this type of control gives you the freedom to manage your lights using a stylish wall controller that enables you to operate them in 4-zones. With this, you can switch your lights on/off, dim/brighten, and change colour (for RGB and RGBW LED strips only).
- Sensor this type of control is a "hands-free" way of managing your lights. Using PRI or microwave sensors, if there's any movement detected, the lights will switch on. So, if you have sensors installed, when you walk into a room, your lights will automatically turn on. This is especially handy in the kitchen, where you often have wet or dirty hands or in your stairs or hallway when you make your way to the bathroom in the evening.
- Remote control this type of control allows you to operate your lights using a single remote. With this, you'll be able to manage your lights in four zones and switch them on/off, dim/brighten, and change colour (for RGB and RGBW LED strips only).
- Smart Control this type of control can be accomplished when you pair your strip lights with our smart home controller module. It will enable you to manage your lights using your smartphone (via a free app) or smart speakers like Alexa and Google Home. With this, you'll be able to switch on/off, dim/brighten, or change the colours of your lights to match your mood (you can do this if you add an RGB or RGBW LED strip) with your phone or via voice command, e.g., "Alexa, kitchen lights on", "Alexa, living room lights blue".

### Do you need an LED Profile?

LED profiles are used to cover your LED strip lights to give them a more polished look compared to when you leave them in their basic form. Ideally, they are paired with strip lights that are mounted visibly around your home. If you dislike seeing the circuit board of your strips and want to cover them up in a sophisticated and stylish way, LED profiles can get the job done.

Since strip lights are incredibly functional and can be used almost anywhere, there's a high risk for them to break if placed in easy to reach areas. To prevent this from happening, you can enclose them in an LED profile for protection. LED profiles are great for keeping your LED strips free from dust and will offer some protection against steam etc, they are not designed to be waterproof. If you want to add LED strips in the bathroom, you still need to get an IP65 rated strip before putting them inside a profile. In addition, some types of LED profiles can extend the range of light by narrowing the light beam of the strip light.

#### Here are some of the types of LED profiles:

 Recessed LED Profile – This type is sunken into your surface and allows your lights to sit flush with the surface, making them look stylish and elegant. They come in various widths, lengths, and shapes and can be mounted in three ways: standard recessed, plaster-in recessed, or tiled-in recessed. With standard recessed, you need to cut a channel on the surface of the wall or the furniture piece so the trim of the profile can hold the strip in place. Plaster-in recessed are trimless LED profiles made for recessing in plastered ceilings or walls to create a continuous diffused light. Tile-in recessed allows you to create a modern design in your kitchen, bathroom, or other tiled areas with its exceptional edge rim.

- Corner LED Profile They are intended to create a light beam that results in a 45-degree angle. They are perfect for under cabinets and shelves and ceiling coffers.
- Surface Mounted LED Profile They are installed using a screw-in mounting bracket. Unlike recessed LED profiles, they stand out from the surface where they are mounted.
- Bendable LED Profile They are suitable for utilising the flexibility of your strips. They are perfect for curved edges and create unique shapes.



Shallow 7mm Surface Mounted LED Aluminium Profile



Shallow 7mm Recessed LED Aluminium Profile



Bendable Aluminium LED Profile, 1000 or 2000mm Long



Corner Aluminium LED Profile - Angled 45 Degree



Trimless Plaster In Aluminium Profile With Diffuser & End Caps , 2m Long

#### Thanks for viewing!



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