

POWER SUPPLY SELECTION GUIDE

Low voltage LED lighting products such as strip light must be run from a regulated DC voltage power supply. This differs from a transformer which outputs an unregulated AC voltage. This may damage some LED products.

Information

There are two factors that determine the power supply to use for your lighting project:

- The voltage to run the LED product from (Usually 12V or 24V)
- The total wattage of the load (The power supply must be rated higher than the load wattage)

The following is a table of common LED products and their relevant information:

Product	LEDstuff Part Number	Voltage	Wattage
3528 Strip Light	LED-SL3528XXX	12V	4.5W per meter
5050 Strip Light	LED-SL5050XXX	12V	14.4W per meter
5050 Strip Light (24V)	LED-SL5050S24XX	24V	14.4W per meter
LED Neon Flex	LED-NFL8024X	24V	2.2 - 3.0W per meter
3-LED Modules	LED-MOD315XX	12V	1.5W ea
3-LED Modules	LED-MOD312XX	12V	1.2W ea

Calculation

To calculate the total wattage of the load, multiply the wattage per unit (meter or ea) by the total number of units, then select a power supply that has a higher wattage rating than this. This is also shown as the following formula:

$$Power_T = Wattage_u \times Number_u$$

Where $Power_T$ is the total power, $Wattage_u$ is the wattage per unit (meter or each), and $Number_u$ is the number of units (meter or each).

A list of available power supplies is shown in the following table:

LEDstuff Part Number	Voltage	Wattage
LED-PS12V005W	12V	5W
LED-PS12V006W	12V	6W
LED-PS12V020W	12V	20W
LED-PS12V030W	12V	30W
LED-PS12V045W	12V	45W
LED-PS12V060W	12V	60W
LED-PS12V060WS (Slim)	12V	60W
LED-PS12V100W	12V	100W
LED-PS12V150W	12V	150W
LED-PS12V200W	12V	200W
LED-PS24V020W	24V	20W
LED-PS24V030W	24V	30W
LED-PS24V045W	24V	45W
LED-PS24V045WLD (Lifud)	24V	45W
LED-PS24V060W	24V	60W
LED-PS24V080W	24V	80W
LED-PS24V100W	24V	100W
LED-PS24V150W	24V	150W

LEDstuff Part Number	Voltage	Wattage
MEAN WELL		
LED-PS12V012WMW	12V	12W
LED-PS12V020WMW	12V	20W
LED-PS12V036WMW	12V	36W
LED-PS12V060WMW	12V	60W
LED-PS12V100WPMW	12V	100W
LED-PS12V120WMW	12V	120W
LED-PS12V200WMW	12V	192W
LED-PS24V075WMW	24V	75W
LED-PS24V100WMW	24V	100W
LED-PS24V150WMW	24V	150W
LED-PS24V200WMW	24V	200W
LED-PS24V240WMW	24V	240W
TRIAC DIMMABLE		
LED-PSD12V30W	12V	30W
LED-PSD12V45W	12V	45W
LED-PSD12V60W	12V	60W
LED-PSD12V150W	12V	150W
LED-PSD12V200W	12V	200W
LED-PSD24V60W	24V	60W
LED-PSD24V80W	24V	80W
LED-PSD24V150W	24V	150W
LED-PSD24V200W	24V	200W

We also have a selection of wall adapter power supplies.

Example

To run 4m of 5050 Strip Light the total wattage is $14.4W \times 4m = 57.6W$. The strip requires the next available power supply above this wattage, which is a 12V 60W model (LED-PS12V060W).

Safety

It is recommended that any electrical work be performed by a registered electrician. If you will be attempting any work yourself, please review the NZECP 51 - Electrical Code of Practice for Homeowners document on the Energy Safety website. Go to www.worksafe.govt.nz and search for "ECP 51".