WLED power calculator

Language/Sprache:
English

Attention: estimation only! Find out here more details

Examples of calculations

Input fields:

LED strip type:
[1] WS2812B (5V)

Color to be controlled:
RGB White

Number of RGB(W) (physical) LEDs:
240

Brightness:
50%

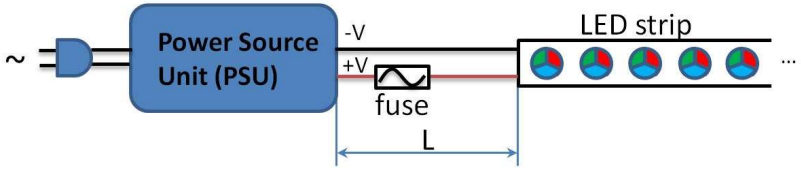
Wire length (PSU to LED) [cm]:
100

Ambient temperature:
20 °C

Max allowed voltage drop:
400 mV (recommended @ 5V)

Wire laying:
Within of electro pipes

Wire cross sections to use:
US type (AWG)



Results:

- LED power consumption: **29.57 W** / **5.91 A**
- Recommended minimal wire crosssection: **1.31 mm^2** (**AWG 16**)
- Recommended fuse (automotive standard or mini): **7.5 A** (fuse color: brown)
- Total voltage drop (wire + fuse): **0.299 V**
- Recommended number of injections: **2** (at the beginning and at the end of the LED strip)
- Power off (standby) consumption: **1.328** W

High current: calculate with power injections:

Useful web pages:

- WLED Wiki (Englisch): https://kno.wled.ge
- WLED FAQ: https://wled-faq.github.io
- DIY WLED boards: Github
- Professional WLED controllers: WLED Shop (worldwide) or MyHome-Control Shop (Germany, Poland)
- WEB-based WLED software installer: WLED-INSTALL
