LED Projector Battery Value Calculator

| Full Battery |  |  |
| :--- | ---: | :--- |
| R_GND | 220 | k |
| R_PWR | 390 | k |
| VCC | 12600 | mV |
|  |  |  |
| Value |  | 930 |



| Low Battery |  |  |
| :--- | ---: | :--- |
| R_GND | 220 | k |
| R_PWR | 390 | k |
| VCC | 10500 | mV |
|  |  |  |
| 775 |  |  |


| Empty Battery |  |  |
| :--- | ---: | :--- |
| R_GND | 220 | k |
| R_PWR | 390 | k |
| VCC | 8500 | mV |
|  |  |  |
| Value | 627 |  |

## Note:

Please enter the resistances $R_{-} G N D$ and $R \_P W R$ you are using, and three voltages: a full, partially discharged and fully discharged battery. After that, the program will calculate the 10-bit digital value on the analog input pin using the 5 V analog reference voltage using the following formula:

$$
\text { Val = } 1023 \text { * R_GND * VCC / (R_GND + R_PWR) / Vref }
$$

