## BOM for Arduino Solar Charge Controller V2.02

### Components Price

| SL No | Part Name | Designator | Quantity | Supplier | Link | Unit Price ( USD) | Total ( USD) |
|---|---|---|---|---|---|---|---|
| 1 | Arduino Nano | U1 | 1 | Aliexpress | https://bit.ly/2WP67MK | 2.99 | 2.99 |
| 2 | IRF4905 | Q1 ,Q2 | 2 | Aliexpress | https://bit.ly/2UM4BZ5 | 0.142 | 0.284 |
| 3 | MBR2045 | D2 | 1 | Aliexpress | https://bit.ly/33T98NB | 0.124 | 0.124 |
| 4 | Buck Converter-MP2307 | X1 | 1 | Aliexpress | https://bit.ly/3awo2M7 | 0.289 | 0.289 |
| 5 | Current Sensor - ACS712 | U2, U3 | 2 | Aliexpress | https://bit.ly/3bzHs2F | 1.08 | 2.16 |
| 6 | TVS diode- P6KE36CA | D1 | 1 | Aliexpress | https://bit.ly/2wMXl7k | 0.032 | 0.032 |
| 7 | Transistors - 2N3904 | T1, T2 | 2 | Aliexpress | https://bit.ly/3dE8APT | 0.0077 | 0.0154 |
| 8 | Resistors -100K | R1, R3 | 2 | Aliexpress | https://bit.ly/3dGMw7i | 0.008 | 0.016 |
| 9 | Resistors-20K | R2, R4 | 2 | Aliexpress | https://bit.ly/3dGMw7i | 0.008 | 0.016 |
| 10 | Resistors-10K | R6, R8 | 2 | Aliexpress | https://bit.ly/3dGMw7i | 0.008 | 0.016 |
| 11 | Resistors-1K | R5, R7 | 2 | Aliexpress | https://bit.ly/3dGMw7i | 0.008 | 0.016 |
| 12 | Resistors-4.7K | R16 | 1 | Aliexpress | https://bit.ly/3dGMw7i | 0.008 | 0.008 |
| 13 | Resistors- 330R | R9-R15 | 3 | Aliexpress | https://bit.ly/3dGMw7i | 0.008 | 0.024 |
| 14 | Capacitors - 0.1uF | C1, C2 | 2 | Aliexpress | https://bit.ly/39u4KWz | 0.0105 | 0.021 |
| 15 | RGB LED | LED2 | 1 | Aliexpress | https://bit.ly/2Jv87lb | 0.0207 | 0.0207 |
| 16 | Bi-Color LED | LED1, LED3 | 2 | Aliexpress | https://bit.ly/3bvr5US | 0.0154 | 0.0308 |
| 17 | Heat Sinks | U6, U7, U8 | 3 | Aliexpress | https://bit.ly/2WRCgmQ | 0.112 | 0.336 |
| 18 | Fuse Holder | F1 | 1 | Aliexpress | https://bit.ly/2ULuhoF | 0.135 | 0.135 |
| 19 | Push Button | RST | 1 | Aliexpress | https://bit.ly/2JrQMdc | 0.0295 | 0.0295 |
| 20 | Screw terminal 1x6 pin | P4 | 1 | Aliexpress | https://bit.ly/3dDOJR5 | 0.93 | 0.93 |
| 21 | Screw terminal 1x3 pin | I2C LCD | 1 | Aliexpress | https://bit.ly/3dEaXSN | 0.099 | 0.099 |
| 22 | Straight Headers | Headers | 2 | Aliexpress | https://bit.ly/2ydxpSz | 0.093 | 0.186 |
| 23 | USB Socket | USB | 1 | Aliexpress | https://bit.ly/2QQoHQP | 0.047 | 0.047 |
| | | | | | **Total Components Price (USD)  :** | | **7.8254** |

### PCB Price

| SL No | Part Name | Designator | Quantity | Supplier | Link | Unit Price ( USD) | Total ( USD) |
|---|---|---|---|---|---|---|---|
| 1 | PCB V2.02 | PCB | 1 | PCBWay | https://bit.ly/3dzk9bj | 1 | 1.00 |
| | | | | | **Total PCB Price (USD)  :** | | **1.00** |

| | | Others Component Price | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | Temp Sensor - DS18B20 | | 1 | Aliexpress | https://bit.ly/2WSMUK7 | 1.41 | 1.41 |
| 2 | 20x4 I2C LCD | | 1 | Aliexpress | https://bit.ly/2UNg2zO | 3.31 | 3.31 |
| 3 | Jumper Wires/Wires | | 1 | Aliexpress | https://bit.ly/33U3St7 | 0.45 | 0.45 |
| 4 | PCB Standoffs M/F | | 4 | Aliexpress | https://bit.ly/2JoMJhx | 0.132 | 0.528 |
| 5 | Heat Sink Pads | | 3 | Aliexpress | https://bit.ly/3aua5hG | 0.009 | 0.027 |
| | | | | | Total Others Component Price (USD) : | | 6.03 |
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| | | | | | Total Project Cost (USD) : | | 14.86 |