



Solar panel D2 double as a photo detector.
 R1,R2 and R18 form a volatge divider.
 A pot is used to compensate for differences
 characterustics of each solar panel
 When this divider voltage exceeded the junction voltage
 of Vbe Q1, then Q1switch off Q2 which turn LED 1-3 off,
 and start to charge the battery bank.
 As dusk fall, Q1 turns off, Q2 turns on via R3 which turn on
 the LEDs.

Risks 1: Total series resistance of batterys and LED must be
 sufficient such Q2 maximum collector currernt not exceeded.
 Risk 2: Day time charging current and ambient temperature
 could over charge and over heat the battery bank,
 Which lead to short life span.

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| Title | | |
| Solar Night Light | | |
| Size | Document Number | Rev |
| A | <Doc> | 1 |
| Date: | Sunday, October 31, 2021 | Sheet 1 of 1 |