

# SF-310 Solar Lighting System

SF-310  
Qingdao Sunshine New Energy Co., Ltd

Verify online:  
<https://data.verasol.org/products/sek/sc-sf310>  
Valid until: August 31, 2024

Results based on test procedures detailed in IEC TS 62257-9-5 and IEC TS 62257-9-8



Meets the requirements in IEC TS 62257-9-8:2020 for Size A Kits



Mobile charging

6

Light point(s)



Plug-and-play



## WARRANTY INFORMATION

Locations outside of Rwanda: A 2-year warranty covering manufacturing defects in the system.

Rwanda: A 3-year warranty covering manufacturing defects in the system.

## PERFORMANCE DETAILS

| VeraSol Certified? | Included in Kit? | Appliance <sup>a</sup>                               | Description                                                                     | Run time after a typical day of solar charging<br>(assuming 5kWh/m <sup>2</sup> /day) |                                  |
|--------------------|------------------|------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------|
|                    |                  |                                                      |                                                                                 | Used alone <sup>b</sup>                                                               | Used in combination <sup>c</sup> |
| yes                | included         | LED bulbs, reading light (integrated into main unit) | 4 light points and 1 integrated light point totaling 810 lumens and 7.8 W power | 4.4 hours                                                                             | 3.9 hours                        |
| yes                | included         | Torch (integrated in main unit)                      | 1 integrated light point (torch) totaling 53 lumens and 0.93 W power            | 39 hours                                                                              | --                               |
| yes                | included         | Radio (integrated into main unit)                    | Integrated battery with a power consumption of 0.52 W while in-use              | 75 hours                                                                              | 2.9 hours                        |
| no                 | not included     | Mobile phone                                         | Basic phone (3.7 Wh battery)                                                    | 7.4 full charge(s)                                                                    | 1 full charge(s)                 |

|                                                         |    |
|---------------------------------------------------------|----|
| Available daily electrical energy <sup>c</sup> (Wh/day) | 37 |
|---------------------------------------------------------|----|

| Performance measure                                                                                                                                       | Brightness setting: 4 LED bulbs on "Brighter", integrated reading light on "On" |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Lighting full battery run time <sup>d</sup> for main unit (hours)                                                                                         | 4.4                                                                             |
| Total lighting service (lumen-hours/solar-day)<br>(includes the both main lighting unit and any lights with internal batteries included with the product) | 3600                                                                            |

<sup>a</sup> Only included appliances were tested. Run times and power ratings for appliances sold separately come from manufacturer ratings or standard estimates.

<sup>b</sup> Without any other loads used during the run time

<sup>c</sup> Based on an example use profile with all of the appliances listed in the "Used in combination" column used simultaneously.

<sup>d</sup> Lighting full battery run time estimates do not account for mobile phone charging or other auxiliary loads; the run time is defined as the time until the output is 70% of the initial, stabilized output.

## LIGHTING DETAILS



| Lamp name                | Number of lamps | Number of settings | Setting   | Light output (lm) | Lumen efficacy <sup>g</sup> (lm/W) | CRI <sup>f</sup> | CCT <sup>g</sup> | Distribution type | Lumen maintenance <sup>h</sup> |
|--------------------------|-----------------|--------------------|-----------|-------------------|------------------------------------|------------------|------------------|-------------------|--------------------------------|
| LED bulbs                | 4               | 2                  | Brightest | 190               | 110                                | 85               | 6290             | Wide              | 100%                           |
| Integrated reading light | 1               | 1                  | On        | 64                | 64                                 | 76               | 5330             | Wide              | 100%                           |
| Integrated torch         | 1               | 1                  | On        | 53                | 57                                 | 74               | 8190             | Narrow            | not tested                     |

<sup>g</sup> Lumen efficacy is the power consumption at a light point during the light output test.

<sup>f</sup> Color Rendering Index. An index of 100 is equivalent to viewing objects in daylight; above 80 is considered good.

<sup>g</sup> Correlated Color Temperature in degrees Kelvin. Describes color appearance as warm (2700-3000 K), cool (3000-5000 K), or daylight (>5000 K)

<sup>h</sup> Percent of the original light output that remains after 2,000 hours of run time

| PORTS                                  |                |                                                                                                                                        |
|----------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1                                      | USB 2.0 type A |  Mobile phones can be charged. Adapters are included. |
| 4                                      | Barrel jack    |  6.4 V ports available to power light points.         |
| DURABILITY                             |                |                                                                                                                                        |
| Overall durability and workmanship     |                | Pass                                                                                                                                   |
| Durability tests passed                |                | Switch test, Drop test, Strain relief test, Physical ingress protection, PV durability tests                                           |
| Level of water protection              | Main Unit      | Has protection from occasional rain; met with appropriate warning label                                                                |
|                                        | PV module      | Has protection from permanent outdoor exposure                                                                                         |
|                                        | LED bulb       | Water ingress protection not tested, meant for indoor use only.                                                                        |
| SOLAR DETAILS                          |                |                                                                                                                                        |
| PV module type                         |                | Polycrystalline silicon                                                                                                                |
| PV maximum power                       |                | 11 watts                                                                                                                               |
| MAIN UNIT BATTERY DETAILS              |                |                                                                                                                                        |
| Battery replaceability                 |                | Easily replaceable with common tools; however, the warranty is void if product is opened.                                              |
| Battery chemistry                      |                | Lithium iron phosphate                                                                                                                 |
| Battery package type                   |                | 32650                                                                                                                                  |
| Battery capacity                       |                | 6 Ah                                                                                                                                   |
| Battery nominal voltage                |                | 6.4 V                                                                                                                                  |
| Battery status/ other indicator lights |                | Four indicators for PV charging and battery status.                                                                                    |
| PRODUCT DETAILS                        |                |                                                                                                                                        |
| Manufacturer name                      |                | Qingdao Sunshine New Energy Co., Ltd                                                                                                   |
| Product name                           |                | SF-310 Solar Lighting System                                                                                                           |
| Product model / ID number              |                | SF-310                                                                                                                                 |
| Contact information                    |                | steven@solarchange.com.cn                                                                                                              |
| Website                                |                | www.solarchange.com.cn                                                                                                                 |
| Dimensions (entire product in package) |                | 33 x 22 x 13 cm                                                                                                                        |
| Mass                                   |                | 2650 g                                                                                                                                 |
| SSS INFORMATION                        |                |                                                                                                                                        |
| Specs sheet expiration date            |                | August 31, 2024                                                                                                                        |
| Revision                               |                | 2022.04                                                                                                                                |