

# VeraSol

## Standardized Specifications Book

**Manufacturer:** Salpha Energy Ltd.

**Component Family Name:** Salpha Energy Family

**Date of Standardized Specifications Book Expiration:** March 31, 2024

**Verify Online:** <https://data.verasol.org/products/sek/sal-family>

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This VeraSol Standardized Specifications Book presents a **component-level Standardized Specifications Sheet** listing the available components in the product family by component type, each individual component's performance rating, and performance results for each component tested according to the Edition 4 of IEC 62257-9-5. Following the component-level Standardized Specifications Sheet is a **list of the systems** covered by this Specifications Book that use combinations of these components.

**NOTICE:** Systems or kits developed using components from the component family will each perform differently and have not all been evaluated on a system-level basis. All systems listed in this Specifications Book are regarded to meet the requirements in IEC 62257-9-8.

**Revision:** 2022.08

# Component-Level Standardized Specifications Sheet

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## Battery / Control Box

| Name / Model Number | Battery Chemistry      | Nominal Voltage (V) | Battery Capacity Rating (Ah) | Measured Battery Capacity (Ah) |
|---------------------|------------------------|---------------------|------------------------------|--------------------------------|
| 6000 mAh battery    | Lithium iron phosphate | 6.4                 | 6                            | 6                              |
| 12000 mAh battery   | Lithium iron phosphate | 6.4                 | 12                           | 12                             |

## PV Module

| Name / Model Number | Peak Power at STC Rating (W) | Measured Peak Power at STC (W) |
|---------------------|------------------------------|--------------------------------|
| 6 W PV module       | 6                            | 6.1                            |
| 10 W PV module      | 10                           | 11                             |
| 15 W PV module      | 15                           | not tested                     |
| 20 W PV module      | 20                           | 21                             |

## Light Sources\*

| Name / Model Number                      | Luminous Flux Rating (lm) |           |           | Measured Luminous Flux (lm) |            |    | Measured Lamp Efficacy (lm/W) |            |    |
|--|---------------------------|-----------|-----------|-----------------------------|------------|----|-------------------------------|------------|----|
|  | Brighter                  | Normal    | On        | Brighter                    | Normal     | On | Brighter                      | Normal     | On |
| LED bulb                                 | 170                       | not rated | --        | 190                         | not tested | -- | 110                           | not tested | -- |
| Reading lamp (integrated into main unit) | --                        | --        | 48        | --                          | --         | 64 | --                            | --         | 64 |
| Torch (integrated into main unit)        | --                        | --        | not rated | --                          | --         | 53 | --                            | --         | 57 |

## Appliances\*

| Name / Model Number               | Description                         | Rated Power (W) | Measured Power During Use (W) | Rated Battery Capacity (Ah)          | Measured Battery Capacity (Ah)       |
|-----------------------------------|-------------------------------------|-----------------|-------------------------------|--------------------------------------|--------------------------------------|
| Radio (integrated into main unit) | Integrated battery (6.4 V, LiFePO4) | 4.2             | 0.52                          | 6 Ah or 12 Ah (depends on main unit) | 6 Ah or 12 Ah (depends on main unit) |

**NOTICE:** As indicated, not all components listed on this page were tested according to the Quality Test Method (QTM) in Edition 4 of IEC 62257-9-5. However, based on the satisfactory performance of the tested components in the family, the components that were not tested are regarded to have passed the requirements in IEC 62257-9-8. In addition, all tested components passed an internal inspection, the full array of applicable QTM durability tests, as well as ingress protection testing (where applicable).

\*Light points and appliances may perform differently when used with different systems.

# List of Covered Systems

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| System Name    | Number of each component included in each system |  |   |               |                |                |                |
|----------------|--|--|---|---------------|----------------|----------------|----------------|
|                | LED bulb   | Main unit with 6 Ah battery, integrated reading lamp, integrated torch, and integrated radio | Main unit with 12 Ah battery, integrated reading lamp, integrated torch, and integrated radio | 6 W PV module | 10 W PV module | 15 W PV module | 20 W PV module |
| <b>SE-6</b>    | 3  | 1  | --  | 1             | --             | --             | --             |
| <b>SE-10**</b> | 4  | 1  | --  | --            | 1              | --             | --             |
| <b>SE-15</b>   | 4  | --   | 1   | --            | --             | 1              | --             |
| <b>SE-20</b>   | 4  | --   | 1   | --            | --             | --             | 1              |

\*\*Tested as full systems. Individual SSS available on VeraSol website.

## NOTICE:

Only the SE-10 Spark 10W was fully tested as a system according to Edition 4 of IEC 62257-9-5. An individual Standardized Specifications Sheet (SSS) that report system-level performance are available for the SE-10 Spark 10W at <https://data.verasol.org/products/sek/sc-sf310>. Systems that were not tested, but that were developed using components from the component family will perform differently than the system(s) shown in the individual system-level SSS. All systems listed above are regarded to have passed the requirements in IEC 62257-9-8.

Unless otherwise noted, the following information applies to all listed systems and components:

## **Warranty Information**

Locations outside of Rwanda: Two-year warranty on all kits and components.

Rwanda: Three-year warranty on all kits and components.

# Available Daily Electrical Energy and Port Information

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| System Name    | Available Daily Electrical Energy (Wh/day) | Includes ports for charging? |
|----------------|--|------------------------------|
| <b>SE-6</b>    | 22   | yes                          |
| <b>SE-10**</b> | 37   | yes                          |
| <b>SE-15</b>   | 55   | yes                          |
| <b>SE-20</b>   | 74   | yes                          |

\*\*Tested as full systems. Individual SSS available on VeraSol website.

## **NOTICE:**

The available daily electrical energy (Wh/day) is calculated for fully tested systems following the energy service calculations as described in IEC/TS 62257-9-5 Ed. 4. For products in a family that are not tested as a full system, estimations of available daily electrical energy (Wh/day) are calculated according to an alternative method using data from the test reports of fully-tested products and components. Estimating Wh/day values requires making assumptions about system efficiencies, power consumption, and user behavior. As with any calculation based on multiple assumptions, there is some degree of error in the Wh/day estimate, which may be greater or less than the actual value for a given product.