

# VeraSol

## Standardized Specifications Book

**Company Name:** Roofstar Technology Company Limited

**Brand Name:** Roofstar

**Component Family Name:** Flex 3e Family

**Family Expiration Date:** May 31, 2026

**Verify Online:** <https://data.verasol.org/products/sek/re-flexefamily>

**Contact Information:** [zelalem@roofstartechnology.com](mailto:zelalem@roofstartechnology.com)

**Website:** [www.roofstartechnology.com](http://www.roofstartechnology.com)

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 have passed IEC TS 62257-9-8.

**Quality Standards Framework Version:** 2024

**Revision:** 2024.12

# Component-Level Standardized Specifications Sheet

Roofstar Technology Company Limited

Flex 3e Family

## Batteries / Control Boxes

| Name / Model Number | Battery Chemistry      | Nominal Voltage (V) | Battery Capacity Rating (mAh) | Measured Battery Capacity (mAh) |
|---------------------|------------------------|---------------------|-------------------------------|---------------------------------|
| LED lantern battery | Lithium iron phosphate | 3.2                 | 4000                          | 4200                            |
| Torch battery       | Lithium iron phosphate | 3.2                 | 450                           | 550                             |
| Radio battery       | Lithium ion            | 3.7                 | 1500                          | 1500                            |

## PV Modules

| Name / Model Number                | Peak Power at STC Rating (W) | Measured Peak Power at STC (W) |
|------------------------------------|------------------------------|--------------------------------|
| 3 W Polycrystalline PV module (3W) | 3                            | 3.4                            |
| 8 W Polycrystalline PV module (8W) | 8                            | 7.6                            |

## Light Sources\*

| Name / Model Number | Luminous Flux Rating (lm) |            |    | Measured Luminous Flux (lm) |            |    | Measured Lamp Efficacy (lm/W) |            |     |
|---------------------|---------------------------|------------|----|-----------------------------|------------|----|-------------------------------|------------|-----|
|                     | High                      | Low        | On | High                        | Low        | On | High                          | Low        | On  |
| LED lantern         | 260                       | Not Tested | -  | 260                         | Not Tested | -  | 100                           | Not Tested | -   |
| Torch               | -                         | -          | 30 | -                           | -          | 28 | -                             | -          | 110 |

## Appliances\*

| Name / Model Number | Description   | Rated Power (W) | Measured Power During Use (W) | Rated Battery Capacity (mAh) | Measured Battery Capacity (mAh) |
|---------------------|---|-----------------|-------------------------------|------------------------------|---------------------------------|
| Radio (Flex 3e)     | Portable radio (Li-ion battery, 1.5 Ah, 3.7 V) with power consumption of 0.5 W while in use | 3               | 0.5                           | 1500                         | 1500                            |
| Torch               | 30 lumens torch, (LiFePO4 battery: 0.55 Ah, 3.2 V)  | 0.3             | 0.25                          | 450                          | 550                             |

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

**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 IEC TS 62257-9-8:2020. 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).

# List of Covered Systems

Roofstar Technology Company Limited  
Flex 3e Family

| System Name | Number of each component included in each system |                               |                               |       |       |
|-------------|--|-------------------------------|-------------------------------|-------|-------|
|             | LED lantern                                      | 3 W Polycrystalline PV module | 8 W Polycrystalline PV module | Torch | Radio |
| Flex 3e     | 3  | 1                             | 1                             | 1     | 1     |
| Flex 4e     | 4  | --                            | 2                             | 1     | 1     |
| Flex 4      | 4  | --                            | 2                             | 1     | --    |
| Flex 3      | 3  | 1                             | 1                             | 1     | --    |
| Flex 2e     | 2  | --                            | 1                             | 1     | 1     |
| Flex 2      | 2  | --                            | 1                             | 1     | --    |
| Flex 1e     | 1  | --                            | 1                             | 1     | 1     |
| Flex 1      | 1  | 1                             | --                            | 1     | --    |

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

## **NOTICE:**

Only the kits denoted with \*\* were tested as full systems according to Edition 4 of IEC 62257-9-5 and passed IEC 62257-9-8 standards. An Individual Standardized Specification Sheet (SSS) that reports system-level performance is available for these systems at VeraSol.org. 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 IEC 62257-9-8.

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

## **Warranty Information**

A 2-year warranty covering manufacturing defects in the system and a 1-year warranty for the radio.

# Available Daily Electrical Energy and Port Information

Roofstar Technology Company Limited

Flex 3e Family

| System Name | Available Daily Electrical Energy<br>(Wh/day) | Includes ports for charging? |
|-------------|---|------------------------------|
| Flex 3e**   | 29  | yes                          |
| Flex 4e     | 35  | yes                          |
| Flex 2e     | 18  | yes                          |
| Flex 1e     | 9   | 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.