

VeraSol

Standardized Specifications Book

Manufacturer: Shenzhen Poweroak Newener Co., Ltd

Component Family Name: E-Series Family

Date of Standardized Specifications Book Expiration: October 31, 2023

Verify Online: <https://data.verasol.org/products/sek/po-efamily>

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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: 2022.04

Component-Level Standardized Specifications Sheet

Shenzhen Poweroak Newener Co., Ltd

E-Series Family

Battery / Control Box

Name / Model Number	Battery Chemistry	Nominal Voltage (V)	Battery Capacity Rating (Ah)	Measured Battery Capacity (Ah)
Main unit with 19.2 Wh battery	Lithium iron phosphate	6.4	3	3
Main unit with 38.4 Wh battery	Lithium iron phosphate	6.4	6	not tested
Main unit with 57.6 Wh battery	Lithium iron phosphate	6.4	9	9.3

PV Module

Name / Model Number	Peak Power at STC Rating (W)	Measured Peak Power at STC (W)
6 W PV module	6	6.8
12 W PV module	12	not tested
18 W PV module	18	18

Light Sources*

Name / Model Number	Luminous Flux Rating (lm)			Measured Luminous Flux (lm)			Measured Lamp Efficacy (lm/W)		
	High	Medium	Low	High	Medium	Low	High	Medium	Low
1.2 W Lamp	130	--	--	150	--	--	130	--	--
2.5 W Lamp	260	--	--	350	--	--	160	--	--
5.7 W Lamp	520	--	--	700	--	--	130	--	--

Appliances*

Name / Model Number	Description	Rated Power (W)	Measured Power During Use (W)	Rated Battery Capacity (Ah)	Measured Battery Capacity (Ah)
Radio	portable radio	3	0.32	--	1

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 meet 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

Shenzhen Poweroak Newener Co., Ltd

E-Series Family

System Name	Number of each component included in each system									
	1.2 W Lamp	2.5 W Lamp	5.7 W Lamp	6 W PV Module	12 W PV Module	18 W PV Module	Main Unit with 19.2 Wh Battery	Main Unit with 38.4 Wh Battery	Main Unit with 57.6 Wh Battery	Radio
E-20-6_LP112**	2	1	--	1	--	--	1	--	--	--
E-20-6_LPxxxxxxx	0-6	0-6	0-6	1	--	--	1	--	--	--
E-20-6_LP112_RD	2	1	--	1	--	--	1	--	--	1
E-40-12_LP1122	2	2	--	--	1	--	--	1	1	--
E-40-12_LPxxxxxx	0-6	0-6	0-6	--	1	--	--	1	--	--
E-40-12_LP1122_RD	2	2	--	--	1	--	--	1	--	1
E-60-18_LP555	--	--	3	--	--	1	--	--	1	--
E-60-18_LPxxxxxx	0-6	0-6	0-6	--	--	1	--	--	1	--
E-60-18_LP555_RD	--	--	3	--	--	1	--	--	1	1

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

The SKUs in the table above are interpreted as follows:

In E-AA-BB_LPxxxxxx_C, the following letters may be changed as follows:

AA - can be 20, 40, or 60 (used to represent battery capacity)

BB - can be 6, 12, or 18 (used to represent PV module size)

xxxxxx - each x can be either 1, 2, 5, or blank (used to represent the type and number of lamps; 1.2 W, 2.5 W, and 5.7 W)

C - VeraSol verified appliances such as RD (radio) or blank

NOTICE:

Only the E-20-06_LP112 Solar Home System was fully tested as a system according to Edition 4 of IEC 62257-9-5. Individual Standardized Specifications Sheets (SSS) that report system-level performance are available for the E-20-06_LP112 Solar Home System at <https://data.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 meet the requirements in 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/workmanship defects for the battery, solar panel, and lights and a 1-year warranty for appliances.

Marks and Certifications

Factory certification	ISO9001:2015, ISO14001:2015, ISO45001:2018
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Available Daily Electrical Energy and Port Information

Shenzhen Poweroak Newener Co., Ltd

E-Series Family

System Name	Available Daily Electrical Energy (Wh/day)	Includes ports for charging?
E-20-6_LP112**	17	yes
E-40-12_LPxxxxxx	31	yes
E-60-18_LPxxxxxx	50	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.