

VeraSol

Standardized Specifications Book

Company Name: Qingdao Sunshine New Energy Co., Ltd

Brand Name: SolarChange

Component Family Name: SC-80 Family

Family Expiration Date: July 31, 2028

Verify Online: <https://data.verasol.org/products/sek/sc-sc80family>

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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 5 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: 2025

Revision: 2025.10

Component-Level Standardized Specifications Sheet

Qingdao Sunshine New Energy Co., Ltd

SC-80 Family

Batteries / Control Boxes

Name / Model Number	Battery Chemistry	Nominal Voltage (V)	Battery Capacity Rating (mAh)	Measured Battery Capacity (mAh)
12 Ah main unit battery	Lithium iron phosphate	12.8	12000	11100
18 Ah main unit battery	Lithium iron phosphate	12.8	18000	16800
24 Ah main unit battery	Lithium iron phosphate	12.8	24000	not tested
30 Ah main unit battery	Lithium iron phosphate	12.8	30000	29700
Radio battery	Lithium ion	3.7	2000	2000

PV Modules

Name / Model Number	Peak Power at STC Rating (W)	Measured Peak Power at STC (W)
30 W PV module	30	30
50 W PV module	50	not tested
60 W PV module	60	not tested
80 W PV module	80	81
100 W PV module	100	not tested
120 W PV module	120	not tested
150 W PV module	150	140
180 W PV module	180	170

Light Sources^

Name / Model Number	Luminous Flux Rating (lm)	Measured Luminous Flux (lm)	Measured Lamp Efficacy (lm/W)
	On	On	On
LED Bulb	530	650	95
Integrated light (Radio)	not rated	Not tested	Not tested

Appliances^					
Name / Model Number	Description	Rated Power (W)	Measured Power During Use (W)	Rated Battery Capacity (mAh)	Measured Battery Capacity (mAh)
32" TV	32" television (11 W power consumption while in use)	15	11	n/a	n/a
16" Fan	16" diameter standing fan (14 W power consumption while in use)	13	14	n/a	n/a
Radio	Portable radio (Li-ion battery: 2 Ah, 3.7 V) with integrated light, with a power consumption of 0.41 W while in use	3	0.41	2000	2000

^ 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 5 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 62257-9-8:2025. 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

Qingdao Sunshine New Energy Co., Ltd

SC-80 Family

Number of each component included in each system																
System Name	12 Ah main unit	18 Ah main unit	24 Ah main unit	30 Ah main unit	30 W PV module	50 W PV module	60 W PV module	80 W PV module	100 W PV module	120 W PV module	150 W PV module	180 W PV module	LED Bulb	32" TV	16" Fan	Radio
30 W Solar Home System (SC80-3012RF)	1	--	--	--	1	--	--	--	--	--	--	--	4	1	1	1
50 W Solar Home System (SC80-5012RF)	1	--	--	--	--	1	--	--	--	--	--	--	4	1	1	1
60 W Solar Home System (SC80-6018RF)	--	1	--	--	--	--	1	--	--	--	--	--	4	1	1	1
80 W Solar Home System (SC80-8018RF) **	--	1	--	--	--	--	--	1	--	--	--	--	4	1	1	1
100 W Solar Home System (SC80-10024RF)	--	--	1	--	--	--	--	--	1	--	--	--	4	1	1	1
120 W Solar Home System (SC80-12030RF)	--	--	--	1	--	--	--	--	--	1	--	--	4	1	1	1
150 W Solar Home System (SC80-15030RF)	--	--	--	1	--	--	--	--	--	--	1	--	4	1	1	1
180 W Solar Home System (SC80-18030RF)	--	--	--	1	--	--	--	--	--	--	--	1	4	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 5 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 TS 62257-9-8:2025.

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 (3 years in Rwanda).

Available Daily Electrical Energy and Port Information

Qingdao Sunshine New Energy Co., Ltd

SC-80 Family

System Name	Available Daily Electrical Energy (Wh/day)	Includes ports for charging?
30 W Solar Home System (SC80-3012RF)	95	yes
50 W Solar Home System (SC80-5012RF)	160	yes
60 W Solar Home System (SC80-6018RF)	190	yes
80 W Solar Home System (SC80-8018RF)**	250	yes
100 W Solar Home System (SC80-10024RF)	320	yes
120 W Solar Home System (SC80-12030RF)	380	yes
150 W Solar Home System (SC80-15030RF)	420	yes
180 W Solar Home System (SC80-18030RF)	450	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 Edition 5. 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.