

VeraSol

Standardized Specifications Book

Company Name: Omnivoltaic Energy Solutions Co. Ltd

Brand Name: Omnivoltaic

Component Family Name: LUMN HOME Family

Family Expiration Date August 31, 2025

Verify Online: <https://data.verasol.org/products/sek/omni-homefam>

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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 have passed IEC TS 62257-9-8.

Quality Standards Framework Version: 2023

Revision: 2025.07

Component-Level Standardized Specifications Sheet

Omnivoltaic Energy Solutions Co. Ltd

LUMN HOME Family

Batteries / Control Boxes

Name / Model Number	Battery Chemistry	Nominal Voltage (V)	Battery Capacity Rating (mAh)	Measured Battery Capacity (mAh)
SHS 20	Lithium iron phosphate	3.3	6	6
SHS 40	Lithium iron phosphate	3.3	12	12
Torch battery	Lithium iron phosphate	3.2	0.63	0.63

PV Modules

Name / Model Number	Peak Power at STC Rating (W)	Measured Peak Power at STC (W)
6 W PV module	6	6
12 W PV module	12	12

Light Sources*

Name / Model Number	Luminous Flux Rating (lm)	Measured Luminous Flux (lm)	Measured Lamp Efficacy (lm/W)
	high	high	high
LED lamp	210	190	190
Security Lamp	200	190	170
LED tubelight	410	350	170
Torch- Side Light	40	46	140
Torch-Front Light	33	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)
Solar Powered Radio	Portable Radio with 3.7 V internal battery, charges via USB	3	0.39	1	1.1

* 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

Omnivoltaic Energy Solutions Co. Ltd
LUMN HOME Family

System Name	Number of each component included in each system								
	LED Lamp (L2)	Security Lamp (S2)	Tubelight (T4)	6 W PV module	12 W PV module	SHS 20 control unit (6 Ah battery)	SHS 40 control unit (12 Ah battery)	Torch (X)	Radio (RD)
SHS20_06W_T4_L2	1	--	1	1	--	1	--	--	--
SHS20_06W_L22	2	--	--	1	--	1	--	--	--
SHS20_06W_L22_S2	2	1	--	1	--	1	--	--	--
SHS20_06W_L222	3	--	--	1	--	1	--	--	--
SHS20_06W_L222_S2	3	1	--	1	--	1	--	--	--
SHS20X_06W_L22	2	--	--	1	--	1	--	1	--
SHS20X_06W_L22_S2	2	1	--	1	--	1	--	1	--
SHS20X_06W_L222_RD	3	--	--	1	--	1	--	1	1
SHS40_12W_L2222	4	--	--	--	1	--	1	--	--
SHS40_12W_T444	--	--	3	--	1	--	1	--	--
SHS40_12W_T444_S2	--	1	3	--	1	--	1	--	--
SHS40_12W_T4_L222	3	--	1	--	1	--	1	--	--
SHS40_12W_L22_S2 / MOON Energy SHS40_12W_L22_S2***	2	1	--	--	1	--	1	--	--
SHS40_12W_L222_S2	3	1	--	--	1	--	1	--	--
SHS40_12W_T4_L2_S2 **	1	1	1	--	1	--	1	--	--
SHS40_12W_T4_L22_S2	2	1	1	--	1	--	1	--	--
SHS40X_12W_L22_S2	2	1	--	--	1	--	1	1	--
SHS40X_12W_T4_L22_S2_RD	2	1	1	--	1	--	1	1	1
SHS40X_12W_L2222_RD	4	--	--	--	1	--	1	1	1
SHS40X_12W_T444_S2_RD	--	1	3	--	1	--	1	1	1
SHS40X_12W_T4_L22_S2_RD	2	1	1	--	1	--	1	1	1

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

*** The MOON Energy (SHS40_12W_L22_S2 is co-branded by Moon Community and is equivalent to the Omnivoltaic version. For more details, please visit the product's listing at <https://data.verasol.org/products/sek/moon-energy>

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 appliances and USB charging cable

Available Daily Electrical Energy and Port Information

Omnivoltaic Energy Solutions Co. Ltd

LUMN HOME Family

System Name	Available Daily Electrical Energy (Wh/day)	Includes ports for charging?
SHS20_06W_L22	15	yes
SHS40_12W_T444	33	yes
SHS40_12W_L222_S2	33	yes
SHS40_12W_T4_L2_S2**	33	yes
SHS40_12W_L22_S2 / MOON Energy SHS40_12W_L22_S2***	33	yes

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

*** The MOON Energy (SHS40_12W_L22_S2 is co-branded by Moon Community and is equivalent to the Omnivoltaic version. For more details, please visit the product's listing at <https://data.verasol.org/products/sek/moon-energy>

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.