

VeraSol

Standardized Specifications Book

Manufacturer: Rural Spark B.V.

Component Family Name: Rural Spark Family

Date of Standardized Specifications Book Expiration: August 31, 2022

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

Contact Information: shagun@ruralspark.com

Website: www.ruralspark.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 the applicable Lighting Global Quality Standards or to meet the requirements in IEC 62257-9-8.

Revision: 2020.08

Component-Level Standardized Specifications Sheet

Rural Spark B.V.

Rural Spark Family

Battery / Control Box

Name / Model Number	Battery Chemistry	Nominal Voltage (V)	Battery Capacity Rating (Ah)	Measured Battery Capacity (Ah)
Cube	Lithium iron phosphate	6.4	--	3.3
Portable lamp battery	Lithium iron phosphate	3.2	1.0	8.8
Router [Control Unit]	no battery	--	--	--

PV Module

Name / Model Number	Peak Power at STC Rating (W)	Measured Peak Power at STC (W)
20 W PV module	20	23
40 W PV module	40	42
50 W PV module	50	Not tested
80 W PV module	80	71

Light Sources*

Name / Model Number	Luminous Flux Rating (lm)		Measured Luminous Flux (lm)		Measured Lamp Efficacy (lm/W)	
	High	Low	High	Low	High	Low
LED Bulb	150	80	200	--	130	--
Portable Lamp	--	--	82	--	130	--

Appliances*

Name / Model Number	Description	Rated Power (W)	Measured Power During Use (W)	Rated Battery Capacity (Ah)	Measured Battery Capacity (Ah)
24" TV	24" diagonal	15	11	--	--
32" TV	32" diagonal	15	11	--	--
Radio	portable radio with 3.7 V Li-ion battery	--	0.34	8.0	8.0
16" Fan	16" inch table fan	9	7.8	--	--

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 applicable Lighting Global Quality Standards or 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

Rural Spark B.V.
Rural Spark Family

System Name	Number of each component included in each system											
	20 W PV module	40 W PV module	50 W PV module	80 W PV module	Cube	Router	LED Bulb	Portable Lamp	Radio	24" TV	32" TV	16" Table Fan
RSR_aPVxx_bC_cB_dL_LGC	PV20	PV40	PV50	PV80	C	1	B	L	RD	TV24	TV32	FANV1
RSR PV20 C 2B	1				1	1	2					
RSR PV20 C 2B RD	1				1	1	2		1			
RSR PV20 C 2B L	1				1	1	2	1				
RSR PV20 C 3B	1				1	1	3					
RSR PV20 C 3B L	1				1	1	3	1				
RSR PV20 C 3B RD	1				1	1	3		1			
RSR PV20 2C 3B	1				2	1	3					
RSR PV20 2C 3B L	1				2	1	3	1				
RSR PV20 2C 3B RD	1				2	1	3		1			
RSR PV20 2C 3B L RD	1				2	1	3	1	1			
RSR PV20 2C 4B	1				2	1	4					
RSR PV20 2C 4B L	1				2	1	4	1				
RSR PV20 2C 4B RD	1				2	1	4		1			
RSR PV20 3C 4B RD	1				3	1	4		1			
RSR 2PV20 3C 3B L RD FANV1	2				3	1	3	1	1			1
RSR 2PV20 4C 3B RD FANV1	2				4	1	3		1			1
RSR 2PV20 4C 3B RD FANV1	2				4	1	3		1			1
RSR 2PV20 5C 3B L RD TV24	2				5	1	3	1	1	1		
RSR 2PV20 5C 3B L RD TV32	2				5	1	3	1	1		1	
RSR 2PV20 5C 4B RD TV24	2				5	1	4		1	1		
RSR 2PV20 6C 3B	2				6	1	3					
RSR 3PV20 6C 4B RD TV32	3				6	1	4		1		1	
RSR 3PV20 8C 4B RD TV32 FANV1	3				8	1	4		1		1	1
RSR PV40 C 2B L		1			1	1	2	1				
RSR PV40 C 2B		1			1	1	2					
RSR PV40 2C 3B L		1			2	1	3	1				
RSR PV40 2C 3B RD		1			2	1	3		1			
RSR PV40 2C 3B		1			2	1	3					
RSR PV40 2C 4B		1			2	1	4					
RSR PV40 3C 4B		1			3	1	4					
RSR PV40 4C 2B TV24		1			4	1	2			1		
RSR PV40 4C 2B L TV24		1			4	1	2	1		1		
RSR PV40 4C 3B TV24		1			4	1	3			1		
RSR PV40 4C 3B L TV24		1			4	1	3	1		1		
RSR PV40 4C 3B RD FANV1		1			4	1	3		1			1
RSR PV40 4C 4B TV24		1			4	1	4			1		
RSR PV40 4C 4B L TV24		1			4	1	4	1		1		
RSR PV40 4C 4B RD FANV1		1			4	1	4		1			1

System Name	Number of each component included in each system											
	20 W PV module	40 W PV module	50 W PV module	80 W PV module	Cube	Router	LED Bulb	Portable Lamp	Radio	24" TV	32" TV	16" Table Fan
RSR_aPVxx_bC_cB_dL_LGC	PV20	PV40	PV50	PV80	C	1	B	L	RD	TV24	TV32	FANV1
RSR_PV40_4C_4B_FANV1		1			4	1	4					1
RSR_PV40_4C_5B_TV24		1			4	1	5			1		
RSR_PV40_4C_5B_L_TV24		1			4	1	5	1		1		
RSR_PV40_4C_5B_L		1			4	1	5	1				
RSR_PV40_5C_3B_TV24		1			5	1	3			1		
RSR_PV40_5C_3B_L_TV24**		1			5	1	3	1		1		
RSR_PV40_5C_3B_L_RD_TV32		1			5	1	3	1	1		1	
RSR_PV40_5C_4B_TV24		1			5	1	4			1		
RSR_PV40_5C_4B_L_TV24		1			5	1	4	1		1		
RSR_PV40_5C_4B_RD_TV24		1			5	1	4		1	1		
RSR_PV40_5C_5B_TV24		1			5	1	5			1		
RSR_PV40_5C_5B_L_TV24		1			5	1	5	1		1		
RSR_PV40_6C_3B_TV24		1			6	1	3			1		
RSR_PV40_6C_3B_RD_TV24		1			6	1	3		1	1		
RSR_PV40_6C_4B_TV32		1			6	1	4				1	
RSR_PV40_6C_4B_RD_TV24		1			6	1	4		1	1		
RSR_PV40_6C_4B_TV32		1			6	1	4				1	
RSR_2PV40_6C_3B_TV24		2			6	1	3			1		
RSR_2PV40_6C_4B_TV24		2			6	1	4			1		
RSR_2PV40_6C_4B_L_TV24		2			6	1	4	1		1		
RSR_2PV40_7C_4B_TV24		2			7	1	4			1		
RSR_2PV40_8C_4B_TV24		2			8	1	4			1		
RSR_2PV40_8C_4B_TV24_FANV1		2			8	1	4			1		1
RSR_2PV40_8C_4B_RD_TV32		2			8	1	4		1		1	
RSR_2PV40_8C_4B_TV32_FANV1		2			8	1	4				1	1
RSR_2PV40_8C_5B_TV24		2			8	1	5			1		
RSR_2PV40_9C_3B_RD_TV32		2			9	1	3		1		1	
RSR_2PV40_9C_4B_TV24		2			9	1	4			1		
RSR_2PV40_10C_4B_TV24		2			10	1	4			1		
RSR_2PV40_10C_4B_L_TV24		2			10	1	4	1		1		
RSR_2PV40_10C_5B_TV24		2			10	1	5			1		
RSR_2PV40_10C_5B_L_TV24		2			10	1	5	1		1		
RSR_PV50_6C_4B_TV32			1		6	1	4				1	
RSR_PV50_8C_4B_RD_TV32			1		8	1	4		1		1	
RSR_2PV50_10C_4B_L_RD_TV24			2		10	1	4	1	1	1		
RSR_2PV50_10C_4B_L_RD_TV24_FANV1			2		10	1	4	1	1	1		1
RSR_2PV50_10C_4B_L_RD_TV32			2		10	1	4	1	1		1	
RSR_2PV50_10C_4B_L_RD_TV32_FANV1			2		10	1	4	1	1		1	1
RSR_PV80_8C_4B_L_RD_TV32				1	8	1	4	1	1		1	

**Tested as a full system. Individual SSS available on VeraSol website.

These SKUs in the table can be interpreted as follows. In RSR_aPVxx_bC_cB_dL_LGC

- a: Number of Solar Panels. Blank in case of 1 panel in the kit configuration.
- xx: Size of the solar panel (20-80W).
- b: Number of Cubes
- c: Number of Light Bulbs or blank in case of no bulbs
- d: Number of lamps or blank in case of no lamps
- LGC: Other components including Radio (RD), 24" LED TV (TV24), 32" LED TV (TV32), 16" Table Fan (FANV1) or blank in case of no other appliances.

NOTICE:

Only the Rural Spark Kit (RSR_PV40_5C_3B_L_TV24) 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 Rural Spark Kit (RSR_PV40_5C_3B_L_TV24) at <https://data.verasol.org/products/sek/>. Systems that were not tested, but that were developed using components from the component family will perform differently than the system shown in the individual system-level SSS. All systems listed above are regarded to have passed the applicable Lighting Global Quality Standards.

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

Warranty Information

Two year warranty on all kits and components covering manufacturing defects in the system

Marks and Certifications

Factory certification	ISO 9001:2015, OHSAS ISO 18001-2007, ISO 14001-2015, EN 9100:2018
Other certification	IEC 61215:2005

Available Daily Electrical Energy and Port Information

Rural Spark B.V.
Rural Spark Family

System Name	Available Daily Electrical Energy (Wh/day)	Includes ports for charging?
RSR_PV40_5C_3B_L_TV24**	119	yes
RSR_PV20_2C_3B	44	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.