

# ENERGY 50

3356  
Niwa-Next Energy Products Ltd.

Results based on test procedures detailed in IEC TS 62257-9-5

Verify online:  
<https://data.verasol.org/products/sek/niwa-3356>  
Valid until: June 30, 2023



Meets the Lighting Global Solar Home System Kit Quality Standards



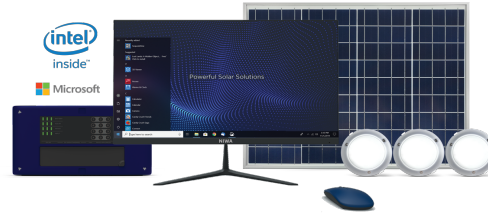
Mobile charging

3

Light point(s)



Plug-and-play



## WARRANTY INFORMATION

A 2-year warranty covering manufacturing defects in the system

## PERFORMANCE DETAILS

VeraSol Certified?	Included in Kit?	Appliance <sup>a</sup>	Description	Run time after a typical day of solar charging (assuming 5kWh/m <sup>2</sup> /day)	
				Used alone <sup>b</sup>	Used in combination <sup>c</sup>
yes	included	Main lighting unit	3 light points on (High) totaling 870 lumens and 5.7 W power	18 hours	5.1 hours
yes	included	Desktop computer with wireless mouse	24" screen diagonal with power consumption of 12 W on (On). (Keyboard not included)	13 hours	--
yes	not included	Television	32" diagonal (14 W power consumption while in-use)	11 hours	2.7 hours
yes	not included	16" Stand fan	16" stand fan (9 W power)	16 hours	6.7 hours
no	not included	Smartphone	Smartphone (5.7 Wh battery)	15 hours	1.4 hours

Available daily electrical energy <sup>e</sup> (Wh/day)	140
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Performance measure	Brightness setting: All lights on High
Lighting full battery run time <sup>d</sup> for main unit (hours)	18
Total lighting service (lumen-hours/solar-day) (includes the both main lighting unit and any lights with internal batteries included with the product)	15700

<sup>a</sup> Only included appliances were tested. Run times and power ratings for appliances sold separately come from manufacturer ratings or standard estimates.

<sup>b</sup> Without any other loads used during the run time

<sup>c</sup> Based on an example use profile with all of the appliances listed in the "Used in combination" column used simultaneously.

<sup>d</sup> Lighting full battery run time estimates do not account for mobile phone charging or other auxiliary loads; the run time is defined as the time until the output is 70% of the initial, stabilized output.

## LIGHTING DETAILS




Lamp name	Number of lamps	Number of settings	Setting	Light output (lm)	Lumen efficacy <sup>e</sup> (lm/W)	CRI <sup>f</sup>	CCT <sup>g</sup>	Distribution type	Lumen maintenance <sup>h</sup>
Home 300 Lamp	3	3	High	290	150	82	4785	Wide	98%
			Medium	100	140	85	4130		

<sup>e</sup> Lumen efficacy is the power consumption at a light point during the light output test.

<sup>f</sup> Color Rendering Index. An index of 100 is equivalent to viewing objects in daylight; above 80 is considered good.

<sup>g</sup> Correlated Color Temperature in degrees Kelvin. Describes color appearance as warm (2700-3000 K), cool (3000-5000 K), or daylight (>5000 K)

<sup>h</sup> Percent of the original light output that remains after 2,000 hours of run time

PORTS		
1	USB 2.0 type A	 USB port intended to charge phones and appliances. Adapters are included.
6	USB 3.0 Type B	 USB + port intended to charge phones and appliances. Adapters are included. (1 port on main unit, 5 ports on computer)
4	Barrel jack	 12 V ports available to power light points, TV, fan, and computer.
DURABILITY		
Overall durability and workmanship		Pass
Durability tests passed		Switch test, Drop test (Mouse), Strain relief test, Physical ingress protection, PV durability tests
Level of water protection	Main Unit	Water ingress protection not tested, meant for indoor use only.
	PV module	Has protection from permanent outdoor exposure
	Home 300 Lamp	Water ingress protection not tested, meant for indoor use only.
	Computer and Mouse	Water ingress protection not tested, meant for indoor use only.
SOLAR DETAILS		
PV module type		Polycrystalline silicon
PV maximum power		48 watts
MAIN UNIT BATTERY DETAILS		
Battery replaceability		Not easily replaceable with common tools.
Battery chemistry	Main Unit	Lithium Iron Phosphate
	Mouse	Lithium- Ion
Specific Li-ion battery chemistry	Main Unit	lithium iron phosphate
	Mouse	lithium cobalt oxide
Battery package type	Main Unit	12 x 26650
	Mouse	14500
Battery capacity	Main Unit	10 Ah
	Mouse	0.5 Ah
Battery nominal voltage	Main Unit	12.8 V
	Mouse	3.7 V
Battery status indication		One display shows the charging battery level, charging rate and credit remaining.
MARKS AND CERTIFICATIONS		
Factory certification		ISO 9001:2015, ISO 14001:2015
PRODUCT DETAILS		
Manufacturer name		Niwa-Next Energy Products Ltd.
Product name		ENERGY 50
Product model / ID number		3356
Contact information		sales@niwasolar.com
Website		www.niwasolar.com
Dimensions (entire product in package)		Multiple packages. Contact manufacturer for more information.
Mass		4405 g
SSS INFORMATION		
Specs sheet expiration date		June 30, 2023
Quality standards framework version		2021
Revision		2021.08