



**Solar LED Street Light Model**  
**Solar Module**  
**Notes**

**18 Watts Full Power**  
**90 Watts**

**9 Watts Dim Power**

- \* Set up the controller for Full Power Hours and Dim Hours according to Location
- \* We recommend using 105Ah 12V Tubular Gell Battery in all instances
- \* In Southern Locations Tilt Solar Panel to tilt angle facing north
- \* In Northern Locations Tilt Solar Panel to tilt angle facing south

Country	Location	Latitude	Longitude	Elevation (meters)	Radiation (max)	Radiation (min)	Radiation Selected	Tilt Angle	Batt Size 12V (ah)	Full Power Hours	Dim Hours	Max Battery
Angola	Huambo	-13	16	1700	5.17	4.64	4.70	15	90	10	4	25
Angola	Lobito	-12	14	3	5.38	3.22	3.89	30	75	6	8	27
Angola	Luanda	-9	13	70	5.86	4.07	4.55	20	86	9	5	23
Angola	Luau	-11	22	1100	6.23	4.83	5.13	15	98	12	2	24
Angola	Luena	-12	20	1357	5.36	4.68	4.68	15	90	10	4	26
Angola	Malanje	-10	16	1142	5.10	4.40	4.52	15	86	9	5	24
Angola	Mocamedes	-15	12	45	5.80	3.89	4.77	25	90	10	4	22
Angola	Ngila	-17	16	1109	6.11	4.60	5.46	15	105	14	0	26
Botswana	Gaborone	-25	26	980	6.70	3.81	5.63	35	105	14	0	20
Botswana	Ghanzi	-22	22	1131	6.73	4.36	5.76	25	105	14	0	18
Botswana	Mahalapye	-23	29	1006	6.24	3.68	5.00	25	98	12	2	30
Botswana	Maun	-20	23	945	6.41	4.17	5.48	25	105	14	0	25
Botswana	Shakawe	-18	22	1008	6.24	4.45	5.33	20	101	13	1	23
Botswana	Tsabong	-26	22	962	7.24	3.86	5.93	40	105	14	0	15
D.R.C.	Butembo	0	29	1841	4.89	4.19	4.22	15	79	7	7	21
D.R.C.	Case Barriere	-4	15	347	5.15	4.34	4.34	15	82	8	6	24
D.R.C.	Col Bamba	-4	12	423	5.11	4.08	4.10	15	79	7	7	26
D.R.C.	Kamina-Basoko	-9	25	1106	5.68	4.57	4.57	15	86	9	5	22
D.R.C.	Kinshasa	-4	15	310	5.05	3.94	4.15	15	79	7	7	23
D.R.C.	Kisangani	1	25	396	5.32	4.16	4.28	15	82	8	6	26
D.R.C.	Lumbumbashi	-12	27	1298	6.32	4.74	4.74	15	90	10	4	24
D.R.C.	Mengo	-4	12	178	5.01	4.03	4.05	15	79	7	7	29
D.R.C.	Missafou	-4	14	450	5.20	4.38	4.38	15	82	8	6	22
D.R.C.	Mont Belo	-4	13	338	5.11	4.08	4.10	15	79	7	7	26
D.R.C.	PK 26	-4	12	220	5.11	4.08	4.10	15	79	7	7	26

Street Light Power 18W Solar Panel 90W



Country	Location	Latitude	Longitude	Elevation (meters)	Radiation (max)	Radiation (min)	Radiation Selected	Tilt Angle	Batt Size 12V (ah)	Full Power Hours	Dim Hours	Max Battery Recharge
D.R.C.	Yamba	-4	14	309	5.21	4.13	4.15	15	79	7	7	23
Gambia	Banjul	14	-17	15	6.27	4.29	4.29	15	82	8	6	26
Kenya	Garissa	0	40	147	5.81	4.81	5.08	15	98	12	2	26
Kenya	Kapenguira	1	35	2134	6.21	4.29	4.51	15	86	9	5	25
Kenya	Kiamba	-1	37	1731	6.69	4.13	4.43	15	86	9	5	29
Kenya	Kisumu	0	35	1146	6.97	5.15	5.31	15	101	13	1	24
Kenya	Kitui	-1	38	1090	7.11	4.35	4.72	20	90	10	4	24
Kenya	Lamu	-2	41	30	6.44	5.12	5.47	15	105	14	0	26
Kenya	Lodwar	3	36	515	6.82	5.91	5.91	15	105	14	0	15
Kenya	Makindu	-2	38	1000	5.97	4.81	4.90	15	94	11	3	25
Kenya	Malindi	-3	40	20	6.57	5.03	5.46	15	105	14	0	26
Kenya	Mandera	4	42	331	6.55	5.47	5.47	15	105	14	0	26
Kenya	Marsabit	2	38	1345	5.82	4.71	4.71	15	90	10	4	25
Kenya	Mombasa	-4	40	55	6.66	4.61	5.04	20	98	12	2	28
Kenya	Nairobi	-1	37	1624	6.72	4.13	4.48	20	86	9	5	26
Kenya	Naivasha	-1	36	1901	5.71	4.08	4.20	15	79	7	7	21
Kenya	Subukia	0	36	2101	6.04	4.74	4.88	15	94	11	3	26
Kenya	Thila	-1	37	1463	6.69	4.14	4.44	15	86	9	5	28
Kenya	Voi	-3	39	579	6.11	4.07	4.45	20	86	9	5	28
Kenya	Wajir	2	14	244	6.23	4.98	4.98	15	94	11	3	22
Lesotho	Butha Buthe	-29	28	1680	6.72	3.49	5.17	30	98	12	2	22
Lesotho	Maseru	-29	27	1510	7.13	3.57	5.75	40	105	14	0	18
Lesotho	Quithing	-30	28	1650	6.95	3.02	5.16	50	98	12	2	23
Madagascar	Antananarivo	-19	48	1910	6.71	3.86	5.02	25	98	12	2	29
Madagascar	Fascene	-13	48	10	6.73	4.59	5.28	15	101	13	1	25
Madagascar	Fianarantsoa	-21	47	1109	6.00	3.29	4.60	35	86	9	5	21
Madagascar	Fort Dauphin	-25	47	9	6.00	3.27	4.77	40	90	10	4	22
Madagascar	Lac Alaotra	-18	49	770	5.95	3.36	4.33	25	82	8	6	24
Madagascar	Maintirano	-18	44	23	7.09	4.62	5.88	25	105	14	0	16
Malawi	Chitipa	-10	33	1278	6.10	4.31	4.31	15	82	8	6	25
Malawi	Lilongwe	-14	34	1136	6.64	4.35	4.87	15	94	11	3	26
Malawi	Mlekano	-15	36	728	5.62	3.85	3.95	15	75	6	8	23
Malawi	Mulanje	-16	36	628	6.36	3.47	4.46	30	86	9	5	27

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Country	Location	Latitude	Longitude	Elevation (meters)	Radiation (max)	Radiation (min)	Radiation Selected	Tilt Angle	Batt Size 12V (ah)	Full Power Hours	Dim Hours	Max Battery Recharge
Malawi	Mzimba	-12	34	1350	6.72	4.72	4.72	15	90	10	4	24
Mauritius	Agalea	-10	57	1	7.17	4.99	5.70	15	105	14	0	19
Mozambique	Alto Molocue	-16	38	563	6.27	3.66	4.58	25	86	9	5	22
Mozambique	Beira Observ	-20	35	7	6.37	3.81	5.15	30	98	12	2	23
Mozambique	Bela Vista	-26	33	15	5.96	3.50	5.12	30	98	12	2	24
Mozambique	Chibuto	-25	34	90	6.67	2.97	3.86	40	75	6	8	29
Mozambique	Chiou Cheml	-17	35	100	4.74	3.88	4.14	15	79	7	7	24
Mozambique	Chobue	-12	35	502	7.00	4.67	5.11	15	98	12	2	25
Mozambique	Fingoe	-15	32	857	6.40	4.16	4.99	20	94	11	3	22
Mozambique	Inhambane	-24	35	14	6.07	3.39	4.95	35	94	11	3	23
Mozambique	Lichunga	-13	35	1364	6.23	4.15	4.59	15	86	9	5	22
Mozambique	Mapi	-23	32	254	6.21	3.71	5.21	30	101	13	1	29
Mozambique	Maputo Obsc	-26	33	60	6.12	3.58	5.23	30	101	13	1	28
Mozambique	Marrupa	-13	38	838	6.24	4.36	4.82	15	94	11	3	29
Mozambique	Muede	-12	40	847	5.96	4.33	4.57	15	86	9	5	22
Mozambique	Panda	-24	35	150	5.89	3.30	4.82	35	94	11	3	29
Mozambique	Pemba	-13	41	50	6.61	4.17	4.84	15	94	11	3	28
Mozambique	Quelimane	-18	37	16	6.34	3.67	4.84	30	94	11	3	28
Mozambique	Tete	-16	34	149	6.45	3.87	4.89	25	94	11	3	26
Mozambique	Vilanculos	-22	35	20	6.84	3.83	5.43	35	105	14	0	27
Namibia	Gobabis	-22	19	1445	7.06	4.19	5.81	30	105	14	0	17
Namibia	Keetmansho	-27	18	1067	8.61	4.28	6.73	45	105	14	0	8
Namibia	Swakpmund	-23	15	12	5.91	3.58	4.96	30	94	11	3	23
Namibia	Tsumeb	-19	18	1311	6.65	4.58	5.69	20	105	14	0	19
Namibia	Windhoek	-23	17	1728	7.77	4.76	6.47	25	105	14	0	10
Nigeria	Kaduna	11	7	623	6.83	5.62	5.62	15	105	14	0	21
Nigeria	Lagos	6	3	30	6.35	4.33	4.40	15	82	8	6	22
Nigeria	Maiduguri	12	13		7.07	5.69	5.69	15	105	14	0	19
Sierra Leone	Binkolo	9	-12	410	5.82	3.93	3.98	15	75	6	8	22
Sierra Leone	Freetown	8	-13	20	5.70	2.44	2.51	15	52	No Fit	No Fit	No Fit
South Africa	Alexander Bz	-29	17	21	7.13	3.33	5.32	50	101	13	1	24
South Africa	Calvinia	-31	20	981	7.86	3.02	5.25	55	101	13	1	27
South Africa	Cape St Luci	-29	32	11	5.97	3.06	4.89	40	94	11	3	25

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South Africa	Cape Town	-34	19	17	7.43	2.34	4.35	60	82	8	6	23
South Africa	De Aar	-31	24	1243	7.56	3.13	5.47	50	105	14	0	26
South Africa	Durban	-30	31	8	5.86	2.97	4.84	40	94	11	3	28
South Africa	Edzinkulu	-29	29	1886	5.32	3.13	4.16	35	79	7	7	23
South Africa	Kuruman	-27	23	1300	7.48	3.68	5.84	45	105	14	0	16
South Africa	Messina	-22	30	549	6.38	3.93	5.38	30	101	13	1	22
South Africa	Newcastle	-28	30	1199	6.51	3.57	5.55	35	105	14	0	23
South Africa	Oudtshoorn	-34	22	335	7.48	2.79	5.12	60	98	12	2	24
South Africa	Polokwane	-24	29	1230	6.47	3.90	5.53	30	105	14	0	23
South Africa	Poffader	-29	19	994	7.80	3.42	5.72	50	105	14	0	18
South Africa	Port Elizabet	-34	26	58	7.37	2.75	5.21	55	101	13	1	29
South Africa	Pretoria	-26	28	1326	6.47	3.73	5.59	35	105	14	0	22
South Africa	Thabazimbi	-25	27	1028	7.03	3.87	5.74	35	105	14	0	18
South Africa	Umtata	-32	29	696	5.09	2.60	4.34	35	82	8	6	24
South Africa	Upington	-28	21	809	7.68	3.49	5.69	50	105	14	0	19
Swaziland	Mbabane	-26	32	1163	6.48	3.68	5.54	35	105	14	0	23
Tanzania	Biharamulo	-3	31	1480	5.96	5.43	5.43	15	105	14	0	28
Tanzania	Bukoba	-1	32	1137	5.28	4.30	4.45	15	86	9	5	28
Tanzania	Dar Es Salaam	-7	39	14	6.32	4.61	4.85	20	94	11	3	28
Tanzania	Dodoma	-6	36	1120	6.46	4.95	5.14	15	98	12	2	23
Tanzania	Igeria	-10	35	2251	5.60	4.18	4.33	15	82	8	6	24
Tanzania	Iringa	-8	36	1428	6.48	4.88	5.10	15	98	12	2	25
Tanzania	Kigoma	-5	30	885	5.93	4.90	4.90	15	94	11	3	25
Tanzania	Kongwa	-6	36	1021	6.46	4.95	5.14	15	98	12	2	23
Tanzania	Lyamungo	-9	37	1250	6.33	2.77	3.18	30	60	2	12	22
Tanzania	Mbeya Airfield	-9	33	1707	6.22	4.42	4.42	15	86	9	5	30
Tanzania	Mombo	-5	38	1070	5.31	3.82	4.26	20	82	8	6	28
Tanzania	Mwanza Airfi	-2	33	1140	5.96	5.44	5.44	15	105	14	0	27
Tanzania	Nachingwea	-10	39	465	6.68	4.62	4.85	15	94	11	3	28
Tanzania	Sao Hill	-8	35	1981	6.66	5.01	5.38	15	101	13	1	22
Tanzania	Songea Town	-11	36	1153	6.23	4.44	4.87	15	94	11	3	27
Tanzania	Sumbawang	-8	32	1710	6.21	4.50	4.50	15	86	9	5	25
Tanzania	Tabora	-5	33	1265	6.44	5.50	5.50	15	105	14	0	25

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Tanzania	Zanzibar	-6	39	15	6.05	4.75	5.06	15	98	12	2	27
Uganda	Arua	3	31	1211	5.80	4.97	5.10	15	98	12	2	25
Uganda	Entebbe	0	32	1155	5.36	4.45	4.45	15	86	9	5	28
Uganda	Fort Portal	1	30	1539	5.58	4.66	4.77	15	90	10	4	22
Uganda	Kabale	-1	30	1870	5.08	4.01	4.12	15	79	7	7	25
Uganda	Kampala-Kol	0	33	1140	5.86	4.57	4.76	15	90	10	4	23
Uganda	Lira	2	33	1085	6.12	4.94	5.17	15	98	12	2	22
Uganda	Mbale	1	34	3412	5.82	4.59	4.72	15	90	10	4	24
Uganda	Moroto	3	35	1347	6.29	4.95	5.17	15	98	12	2	22
Zambia	Chipata	-14	33	1234	6.41	4.57	4.86	15	94	11	3	27
Zambia	Choma	-17	27	1447	6.73	3.36	4.49	40	86	9	5	26
Zambia	Kabompo	-14	24	1286	6.73	4.86	5.12	15	98	12	2	24
Zambia	Kasama	-10	31	1655	6.22	4.73	4.73	15	90	10	4	24
Zambia	Kawambwa	-10	29	1584	5.83	4.71	4.71	15	90	10	4	25
Zambia	Livingstone	-18	26	1179	6.05	4.50	5.13	15	98	12	2	24
Zambia	Lundazi	-12	33	167	6.64	4.69	4.78	15	90	10	4	22
Zambia	Lusaka	-15	28	1531	6.22	4.38	4.78	15	90	10	4	22
Zambia	Mongu	-15	23	1259	6.04	4.83	5.15	15	98	12	2	23
Zambia	Mpika	-12	32	1677	6.59	4.68	4.68	15	90	10	4	26
Zambia	Ndola	-13	29	1519	6.32	4.68	4.80	15	90	10	4	21
Zambia	Petauke	-14	31	1239	6.41	4.49	5.01	15	98	12	2	29
Zambia	Samfya	-11	30	142	6.36	5.12	5.12	15	98	12	2	24
Zimbabwe	Bulawayo	-20	29	1344	6.15	4.25	5.39	20	105	14	0	29
Zimbabwe	Chipinge	-20	33	1132	6.05	3.92	5.15	25	98	12	2	23
Zimbabwe	Gwaai	-19	28	999	6.15	4.37	5.36	20	101	13	1	22
Zimbabwe	Harare	-18	31	1472	6.34	4.26	5.11	20	98	12	2	25
Zimbabwe	Karoi	-17	30	1344	6.32	4.24	4.75	20	90	10	4	23
Zimbabwe	Triangle Hill	-21	31	421	6.32	3.73	4.97	30	94	11	3	22



Watt  
recharge  
Days

Larger Panel?
Larger Panel?
Larger Panel?
Larger Panel?
Larger Panel?
Larger Panel?
Larger Panel?



Watt  
recharge  
Days

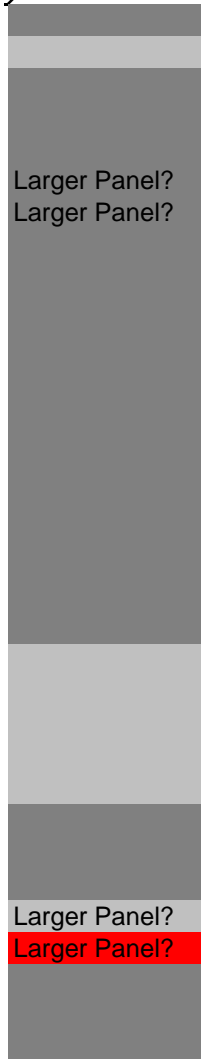
Larger Panel?

Larger Panel?

Larger Panel?

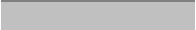
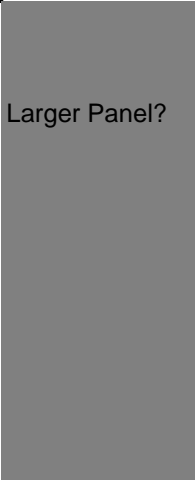


Watt  
recharge  
Days





Watt  
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Watt  
recharge  
Days

