

Solar Calculator based on using 17.5V solar panel charging 12 V lead acid battery

100% Intensity of sunlight									
Solar Panel Size	charging time on various battery size								
	12V - 20AH	12V - 34AH	12V - 40AH	12V - 60AH	12V - 120AH	12V - 180AH	12V - 240AH	12V - 300AH	
30 W	8 hrs	14 hrs	17 hrs	25 hrs	50 hrs	75 hrs	100 hrs	125 hrs	
40 W	6 hrs	11 hrs	13 hrs	19 hrs	38 hrs	56 hrs	75 hrs	94 hrs	
60 W	4 hrs	7 hrs	8 hrs	13 hrs	25 hrs	38 hrs	50 hrs	63 hrs	
80 W	3 hrs	5 hrs	6 hrs	9 hrs	19 hrs	28 hrs	38 hrs	47 hrs	
100 W	3 hrs	4 hrs	5 hrs	8 hrs	15 hrs	23 hrs	30 hrs	38 hrs	
120 W	N.R.	4 hrs	4 hrs	6 hrs	13 hrs	19 hrs	25 hrs	31 hrs	
140 W	N.R.	N.R..	4 hrs	5 hrs	11 hrs	16 hrs	21 hrs	27 hrs	
180 W	N.R.	N.R.	N.R.	4 hrs	8 hrs	13 hrs	17 hrs	21 hrs	
220 W	N.R.	N.R.	N.R.	N.R.	7 hrs	10 hrs	14 hrs	17 hrs	
50% Intensity of sunlight									
Solar Panel Size	charging time on various battery size								
	12V - 20AH	12V - 34AH	12V - 40AH	12V - 60AH	12V - 120AH	12V - 180AH	12V - 240AH	12V - 300AH	
30 W	17 hrs	28 hrs	33 hrs	50 hrs	100 hrs	150 hrs	200 hrs	250 hrs	
40 W	13 hrs	21 hrs	25 hrs	38 hrs	75 hrs	113 hrs	150 hrs	188 hrs	
60 W	8 hrs	14 hrs	17 hrs	25 hrs	50 hrs	75 hrs	100 hrs	125 hrs	
80 W	6 hrs	11 hrs	13 hrs	19 hrs	38 hrs	56 hrs	75 hrs	94 hrs	
100 W	5 hrs	9 hrs	10 hrs	15 hrs	30 hrs	45 hrs	60 hrs	75 hrs	
120 W	4 hrs	7 hrs	8 hrs	13 hrs	25 hrs	38 hrs	50 hrs	63 hrs	
140 W	4 hrs	6 hrs	7 hrs	11 hrs	21 hrs	32 hrs	43 hrs	54 hrs	
180 W	N.R.	5 hrs	6 hrs	8 hrs	17 hrs	25 hrs	33 hrs	42 hrs	
220 W	N.R.	4 hrs	5 hrs	7 hrs	14 hrs	20 hrs	27 hrs	34 hrs	
25% Intensity of sunlight									
Solar Panel Size	charging time on various battery size								
	12V - 20AH	12V - 34AH	12V - 40AH	12V - 60AH	12V - 120AH	12V - 180AH	12V - 240AH	12V - 300AH	
30 W	33 hrs	57 hrs	67 hrs	100 hrs	200 hrs	300 hrs	400 hrs	500 hrs	
40 W	25 hrs	43 hrs	50 hrs	75 hrs	150 hrs	225 hrs	300 hrs	375 hrs	
60 W	17 hrs	28 hrs	33 hrs	50 hrs	100 hrs	150 hrs	200 hrs	250 hrs	
80 W	13 hrs	21 hrs	25 hrs	38 hrs	75 hrs	113 hrs	150 hrs	188 hrs	
100 W	10 hrs	17 hrs	20 hrs	30 hrs	60 hrs	90 hrs	120 hrs	150 hrs	
120 W	8 hrs	14 hrs	17 hrs	25 hrs	50 hrs	75 hrs	100 hrs	125 hrs	
140 W	7 hrs	12 hrs	14 hrs	21 hrs	43 hrs	64 hrs	86 hrs	107 hrs	
180 W	6 hrs	9 hrs	11 hrs	17 hrs	33 hrs	50 hrs	67 hrs	83 hrs	
220 W	5 hrs	8 hrs	9 hrs	14 hrs	27 hrs	41 hrs	55 hrs	68 hrs	
12.5% Intensity of sunlight									
Solar Panel Size	charging time on various battery size								
	12V - 20AH	12V - 34AH	12V - 40AH	12V - 60AH	12V - 120AH	12V - 180AH	12V - 240AH	12V - 300AH	
30 W	67 hrs	113 hrs	133 hrs	200 hrs	400 hrs	600 hrs	800 hrs	1000 hrs	
40 W	50 hrs	85 hrs	100 hrs	150 hrs	300 hrs	450 hrs	600 hrs	750 hrs	
60 W	33 hrs	57 hrs	67 hrs	100 hrs	200 hrs	300 hrs	400 hrs	500 hrs	
80 W	25 hrs	43 hrs	50 hrs	75 hrs	150 hrs	225 hrs	300 hrs	375 hrs	
100 W	20 hrs	34 hrs	40 hrs	60 hrs	120 hrs	180 hrs	240 hrs	300 hrs	
120 W	17 hrs	28 hrs	33 hrs	50 hrs	100 hrs	150 hrs	200 hrs	250 hrs	
140 W	14 hrs	24 hrs	29 hrs	43 hrs	86 hrs	129 hrs	171 hrs	214 hrs	
180 W	11 hrs	19 hrs	22 hrs	33 hrs	67 hrs	100 hrs	133 hrs	167 hrs	
220 W	9 hrs	15 hrs	18 hrs	27 hrs	55 hrs	82 hrs	109 hrs	136 hrs	
Note: N.R. - Not recommended									