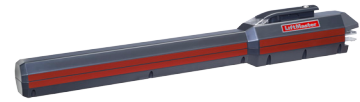


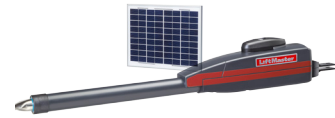
LiftMaster® Solar Gate Cycles per Day Reference Guide

LiftMaster Solar Gate Operators feature a best-in-class power management system that delivers power when needed most to operate the gate while minimizing power consumption at all other times. Power is provided to the gate operator via batteries. The batteries are charged from a solar panel(s) connected to the operator. The number of solar panels required is determined by whether the application is for a single or dual-gate, daily cycle rate, control board current consumption by feature and accessory, and region of the country.

Solar panel(s) must be located in an open area clear of obstructions and shading for the entire day. Snow, heavy fog or heavy rain affect solar panel performance and charge rate. Solar panels should be cleaned regularly to ensure proper operation. LiftMaster Gate Operators utilizing the solar option in cold weather climates where temperatures reach below -32°F (0°C) for more than 2 consecutive weeks require 33Ah batteries in lieu of standard 7Ah batteries. This is due to the effect of cold weather on batteries and a reduced number of hours of sunlight during the winter months. (see back page for details)



LA500PKGU



LA412PKGU



LA400PKGU



CSW24U



CSL24U



RSW12U



RSL12U

LA500PKG / LA400PKG



Current consumption by control board feature 24V (LA500PKG, LA400PKG) configurations. Add up current draw by feature and accessory to determine total current draw.

Control Board Feature	Current Draw (mA)
Main board with no radios learned	2.7
One or more LiftMaster® remote controls learned	+1
MyQ® device or wireless dual-gate learned	+2.4
Expansion board	+11.1
Per loop detector LOOPDETL (up to 3 loop detectors can be plugged in to the expansion board)	+3.8
Monitored Wireless Edge Kit (Model LMWEKITU receiver accepts up to (4) edge transmitters and each transmitter accepts up to (2) wired edges for a total system of (8) Monitored LiftMaster Edges, (1) receiver per gate operator.)	+5.8

Note: If the additional features on the expansion board are not used, it may be unplugged to conserve additional power draw (11mA)

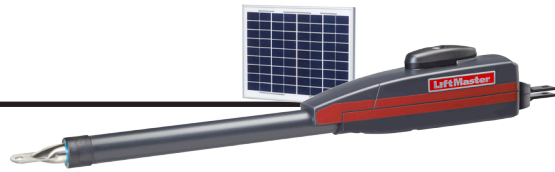
LA500PKG		Single-gate solar cycles per day						Dual-gate solar cycles per day					
	Total System Current Draw (mA)	Zone 1 (6 Hrs Sunlight/Day)		Zone 2 (4 Hrs Sunlight/Day)		Zone 3 (2 Hrs Sunlight/Day)		Zone 1 (6 Hrs Sunlight/Day)		Zone 2 (4 Hrs Sunlight/Day)		Zone 3 (2 Hrs Sunlight/Day)	
		7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries
10W* Solar Panel NOTE: Must Use 24V Solar Panel	5	52	56	30	33	11	12	22	24	13	14		
	15	43	47	23	25			19	20		11		
	20	39	43	19	21			17	19				
	40	24	27					10	12				
	60	10	13										
20W Solar Panel NOTE: 20W would be (2) 10W 12V panels in series	5	113	132	67	79	27	32	48	57	29	34	12	14
	15	103	122	59	70	20	24	44	52	25	30		10
	20	98	117	54	65	16	21	42	50	23	28		
	50	71	88	30	40			30	38	13	17		
	100	29	45					13	19				
40W Solar Panel NOTE: 40W would be (2) 20W 12V panels in series	5	212	299	128	181	53	75	91	129	55	78	23	32
	15	201	288	118	170	44	66	86	124	51	73	19	29
	20	196	282	113	165	40	62	84	121	49	71	17	27
	100	114	194	41	86			49	83	18	37		
	200	27	93					11	40				
60W* Solar Panel NOTE: Must Use 24V Solar Panel	5	263	300	159	286	66	120	113	203	68	123	28	52
	15	252	300	149	275	57	111	108	197	64	118	25	48
	20	246	300	143	269	53	106	106	195	62	115	23	45
	100	160	300	67	181		35	69	153	29	78		15
	250	24	187		39			10	80		17		

LA400PKG		Single-gate solar cycles per day						Dual-gate solar cycles per day					
	Total System Current Draw (mA)	Zone 1 (6 Hrs Sunlight/Day)		Zone 2 (4 Hrs Sunlight/Day)		Zone 3 (2 Hrs Sunlight/Day)		Zone 1 (6 Hrs Sunlight/Day)		Zone 2 (4 Hrs Sunlight/Day)		Zone 3 (2 Hrs Sunlight/Day)	
		7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries
10W* Solar Panel NOTE: Must Use 24V Solar Panel	5	81	87	47	51	18	19	35	37	20	22		
	15	68	74	36	39			29	32	15	17		
	20	61	68	30	34			26	29	13	14		
	40	37	43		13			16	18				
	60	16	21										
20W Solar Panel NOTE: 20W would be (2) 10W 12V panels in series	5	100	100	100	100	42	50	76	89	45	53	18	21
	15	100	100	92	100	31	38	69	82	39	47	13	16
	20	100	100	85	100	25	33	66	79	36	44	11	14
	50	100	100	47	63			48	59	20	27		
	100	46	70					20	30				
40W Solar Panel NOTE: 40W would be (2) 20W 12V panels in series	5	100	100	100	100	83	100	100	100	86	100	35	51
	15	100	100	100	100	70	100	100	100	79	100	30	45
	20	100	100	100	100	63	97	100	100	76	100	27	42
	100	100	100	65	100			77	100	28	58		
	200	42	100		11			18	63				

* Not currently offered in accessory line

** Numbers above for solar daily cycles are representative of wired dual-gate installation. If your installation is a wireless dual-gate setup use single gate cycle estimate and add in power draw for wireless dual-gate feature.

LA412PKG



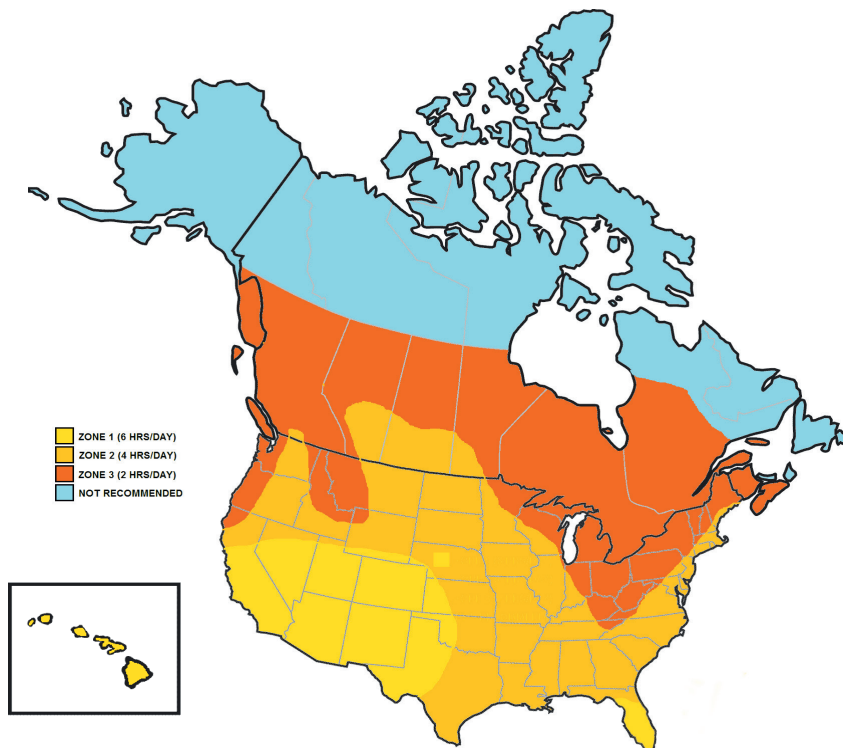
Current consumption by control board feature 12V (LA412PKG) configurations.
Add up current draw by feature and accessory to determine total current draw.

Control Board Feature	Current Draw (mA)
Main board with no radios learned	4.2
One or more LiftMaster® remote controls learned	+1.5
MyQ® device or wireless dual-gate learned	+3.9
Expansion board	+18.5
Per loop detector LOOPDETLM (up to 3 loop detectors can be plugged in to the expansion board)	+6.6
Monitored Wireless Edge Kit (Model LMWEKITU receiver accepts up to (4) edge transmitters and each transmitter accepts up to (2) wired edges for a total system of (8) Monitored LiftMaster Edges, (1) receiver per gate operator.)	+11

Note: If the additional features on the expansion board are not used, it may be unplugged to conserve additional power draw (11mA)

LA412PKG		Single-gate solar cycles per day						Dual-gate solar cycles per day					
	Total System Current Draw (mA)	Zone 1 (6 Hrs Sunlight/Day)		Zone 2 (4 Hrs Sunlight/Day)		Zone 3 (2 Hrs Sunlight/Day)		Zone 1 (6 Hrs Sunlight/Day)		Zone 2 (4 Hrs Sunlight/Day)		Zone 3 (2 Hrs Sunlight/Day)	
		7Ah batteries	33Ah battery	7Ah batteries	33Ah battery	7Ah batteries	33Ah battery	7Ah batteries	33Ah battery	7Ah batteries	33Ah battery	7Ah batteries	33Ah battery
10W Solar Panel	6	100	100	82	86	32	34	59	62	35	37	14	15
	25	100	100	63	67	17	19	50	53	27	29		
	30	100	100	58	63	14	15	48	51	25	27		
	50	91	98	40	44			39	42	17	19		
	100	43	49					19	21				
20W Solar Panel	6	100	100	100	100	73	82	100	100	76	85	31	35
	25	100	100	100	100	55	64	100	100	67	76	24	27
	30	100	100	100	100	51	59	100	100	65	73	22	25
	100	100	100	77	95			78	92	33	41		
	200	75	100					32	44				
30W Solar Panel Note: 30W would be (3) 10W 12V panels in parallel	6	100	100	100	100	100	100	100	100	100	100	47	57
	25	100	100	100	100	90	100	100	100	100	100	39	48
	30	100	100	100	100	85	100	100	100	100	100	37	46
	100	100	100	100	100	22	39	100	100	66	86		17
	200	100	100	51	91			83	100	22	39		

The map and daily cycle rate shown are approximations based upon the average solar radiation and the temperature effects on batteries in the given regions. Local geography and weather conditions may require additional solar panels. Solar optimized or wireless accessories are recommended in order to minimize power draw, as added accessories draw power and affect the daily cycle rate. For full details please reference the manual.



RSL12U / RSW12U



Current consumption by control board feature 12V (RSW12U, RSL12U) configurations. Add up current draw by feature and accessory to determine total current draw.

Control Board Feature	Current Draw (mA)
Main board with no radios learned	4.2
One or more LiftMaster® remote controls learned	+1.5
MyQ® device or wireless dual-gate learned	+3.9
Expansion board	+18.5
Per loop detector LOOPDETLM (up to 3 loop detectors can be plugged in to the expansion board)	+6.6
Monitored Wireless Edge Kit (Model LMWEKITU receiver accepts up to (4) edge transmitters and each transmitter accepts up to (2) wired edges for a total system of (8) Monitored LiftMaster Edges, (1) receiver per gate operator.)	+11

Note: If the additional features on the expansion board are not used, it may be unplugged to conserve additional power draw (11mA)

RSL12U		Gate solar cycles per day								
	Total System Current Draw (mA)	Zone 1 (6 Hrs Sunlight/Day)			Zone 2 (4 Hrs Sunlight/Day)			Zone 3 (2 Hrs Sunlight/Day)		
		7Ah battery	Two 7Ah batteries	33Ah battery	7Ah battery	Two 7Ah batteries	33Ah battery	7Ah battery	Two 7Ah batteries	33Ah battery
10W Solar Panel	6	33	36	38	19	22	23			
	25	27	31	33	15	17	18			
	30	26	29	31	13	15	17			
	50	21	24	26		11	12			
	100		11	13						
20W Solar Panel NOTE: 20W would be (2) 10W 12V panels in parallel	6	50	50	50	37	47	50	15	19	22
	25	50	50	50	32	41	47	11	15	17
	30	50	50	50	30	40	45		13	16
	100	33	48	50	12	20	25			
	200		20	27						
30W Solar Panel Note: 30W would be (3) 10W 12V panels in parallel	6	50	50	50	46	50	50	19	29	35
	25	50	50	50	40	50	50	14	24	30
	30	50	50	50	39	50	50	13	23	28
	100	47	50	50	20	41	50			10
	200	19	50	50		14	24			

RSW12U		Gate solar cycles per day								
	Total System Current Draw (mA)	Zone 1 (6 Hrs Sunlight/Day)			Zone 2 (4 Hrs Sunlight/Day)			Zone 3 (2 Hrs Sunlight/Day)		
		7Ah battery	Two 7Ah batteries	33Ah battery	7Ah battery	Two 7Ah batteries	33Ah battery	7Ah battery	Two 7Ah batteries	33Ah battery
10W Solar Panel	6	41	46	48	24	27	29		11	11
	25	34	39	41	18	21	22			
	30	33	37	39	17	19	21			
	50	26	30	32	11	13	15			
	100	11	14	16						
20W Solar Panel NOTE: 20W would be (2) 10W 12V panels in parallel	6	50	50	50	47	50	50	19	24	27
	25	50	50	50	40	50	50	13	18	21
	30	50	50	50	38	50	50	12	17	20
	100	42	50	50	15	26	32			
	200		25	34						
30W Solar Panel Note: 30W would be (3) 10W 12V panels in parallel	6	50	50	50	50	50	50	24	37	44
	25	50	50	50	50	50	50	18	30	37
	30	50	50	50	49	50	50	16	28	35
	100	50	50	50	25	50	50			13
	200	24	50	50		17	30			

CSW24U / CSL24U



Current consumption by control board feature 24V (CSW24U, CSL24U) configurations. Add up current draw by feature and accessory to determine total current draw.

Control Board Feature	Current Draw (mA)
Main board with no radios learned	2.7
One or more LiftMaster® remote controls learned	+1
MyQ® device or wireless dual-gate learned	+2.4
Expansion board	+11.1
Per loop detector LOOPDETLM (up to 3 loop detectors can be plugged in to the expansion board)	+3.8
Monitored Wireless Edge Kit (Model LMWEKITU receiver accepts up to (4) edge transmitters and each transmitter accepts up to (2) wired edges for a total system of (8) Monitored LiftMaster Edges, (1) receiver per gate operator.)	+5.8

Note: If the additional features on the expansion board are not used, it may be unplugged to conserve additional power draw (11mA)

CSW24U	Total System Current Draw (mA)	Gate solar cycles per day					
		Zone 1 (6 Hrs Sunlight/Day)		Zone 2 (4 Hrs Sunlight/Day)		Zone 3 (2 Hrs Sunlight/Day)	
		7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries
10W* Solar Panel NOTE: Must Use 24V Solar Panel	5	19	20	11	12		
	15	16	17				
	20	14	16				
	40		10				
	60						
20W Solar Panel NOTE: 20W would be (2) 10W 12V panels in series	5	41	48	25	29		12
	15	38	45	21	26		
	20	36	43	20	24		
	50	26	32	11	15		
	100	11	16				
40W Solar Panel NOTE: 40W would be (2) 20W 12V panels in series	5	78	110	47	66	19	28
	15	74	106	43	63	16	24
	20	72	104	41	61	15	23
	100	42	71	15	32		
	200		34				
60W* Solar Panel NOTE: Must Use 24V Solar Panel	5	97	173	58	105	24	44
	15	92	169	54	101	21	41
	20	90	166	53	99	19	39
	100	59	131	25	67		13
	250		68		14		

CSL24U	Total System Current Draw (mA)	Gate solar cycles per day					
		Zone 1 (8 Hrs Sunlight/Day)		Zone 2 (4 Hrs Sunlight/Day)		Zone 3 (2 Hrs Sunlight/Day)	
		7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries	7Ah batteries	33Ah batteries
10W* Solar Panel NOTE: Must Use 24V Solar Panel	5	26	28	15	17		
	15	22	24	12	13		
	20	20	22		11		
	40	12	14				
	60						
20W Solar Panel NOTE: 20W would be (2) 10W 12V panels in series	5	57	67	34	40	14	16
	15	52	62	30	36	10	12
	20	50	60	28	33		11
	50	36	45	15	20		
	100	15	23				
40W Solar Panel NOTE: 40W would be (2) 20W 12V panels in series	5	108	152	65	92	27	38
	15	103	147	60	87	23	34
	20	100	144	58	84	21	32
	100	58	99	21	44		
	200	14	47				
60W* Solar Panel NOTE: Must Use 24V Solar Panel	5	134	240	81	146	34	61
	15	128	234	76	140	29	56
	20	125	231	73	137	27	54
	100	82	181	34	92		18
	250	12	95		20		

* Not Currently Offered in Accessory Line

LiftMaster Solar Gate Operators are engineered to have low idle current draw including radio receiver to maximize battery life and solar performance. It is important to note, the following environmental factors can adversely affect battery performance in solar applications.

- Cold temperature (below 32°F (0°C))
- Snow cover on solar panel
- Reduced hours of sunlight in winter months

In geographic areas that experience cold temperatures below 32°F (0°C) for more than two weeks in addition to any of the factors listed above, the following steps can be taken to ensure best performance:

- Replace the standard 7Ah batteries with 33Ah batteries. (For linear actuators, use the optional XL control box model XLSOLARCONTU)
- In states adjacent to Canada and Canadian provinces, increase the angle of the solar panels by an additional 15 degrees (60 degrees total). This will optimize the solar panels for the winter months and reduce the buildup of snow and ice on the panels.

Important note: Daily cycle rate and standby time will be reduced by at least 50% when temperatures reach extreme cold temperatures below -4°F (or -20°C) for periods of more than two weeks.

For best performance during the winter months, snow and ice should be removed from the solar panel, moving parts on the gate and gate operator. In addition all snow should be removed from the path of the gate to prevent nuisance reversals.

OPTIONAL POWER SUPPLY FOR COLD WEATHER APPLICATIONS	
Gate Operator	Optional Power Supply
LA500PKG, LA412PKG, LA400PKG	XLSOLARCONTU ((2) 33Ah batteries not included)
CSW24U, CSL24U	(2) 33Ah batteries recommended in lieu of standard 7Ah batteries
RSW12U, RSL12U	(1) 33Ah batteries recommended in lieu of standard 7Ah batteries

If heavy amounts of snow are expected over several days, the manual disconnect may be engaged and the gate left open to allow access and snow removal. Once the snow is removed, simply reengage the manual disconnect to resume normal operation.

**For technical questions on solar installations,
please contact LiftMaster Technical Support
800.528.2806**