

This low cost chip (around \$0.03) is in some solar/battery lamps. It may be useful to hobby projects, but I couldn't find the english-language spec sheet, so I translated from <https://detail.1688.com/offer/1031982265.html>

0119A (solar lawn lamp) LED driver chip

0119A is a dedicated single battery-powered solar lawn lamp drive control circuit, which has an integral charge control and the drive control circuit of two parts; a charging control section to complete the solar panel (hereinafter referred to as energy board) level detection, charge control and battery current anti-intrusion and other functions; the drive control section to complete the rechargeable battery (hereinafter referred to as cell) level detection, generates a pulse wave, the manual standby and maximum peak current limiting. The circuit requires only a peripheral inductive element, can form STEP-UP-type switching power supply system, and the charging efficiency and drive the highest efficiency values in excess of 80%. The circuit has high efficiency, low power consumption, operating voltage as low as 0.80V, charging can be done automatically and drive functions and other characteristics, especially suitable for single-cell powered lighting solutions, often used for outdoor solar lawn lights, solar landscape lights, small solar street lamps.

Product Features

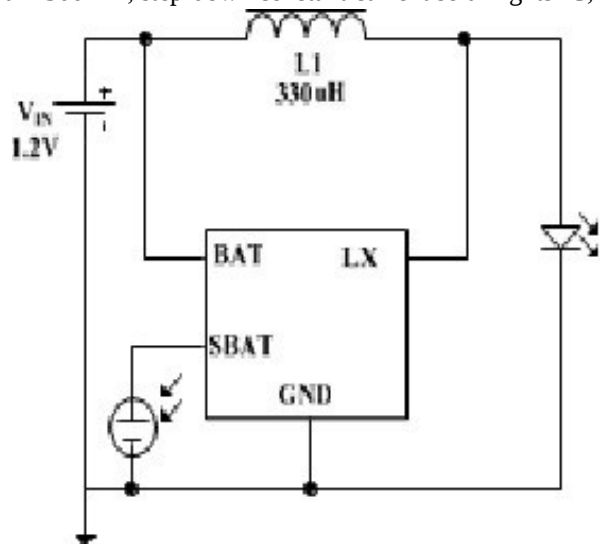
- Simple peripheral circuit components for a variety of LED driver, and you can select the photoresistor solar panels and light control.
- Low voltage applications: 0.80V ~ 2.4V;
- Over-discharge protection: voltage is lower than 0.9V, the system is closed and latched open until the next night.
- Output Current: 1.0V ~ 1.3V between the output constant current output, 0.9V or less current rapid decline;
- High efficiency: 80%
- TO-94 package

Advantage Supply:

- 1.2v (a battery) ANA618 efficiency up to 90% of the periphery of only one inductor solar lawn IC;
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- 1.2V (one cell) ANA608 efficiency up to 90% consistency, a high stability of solar lawn IC;
- 2.4v (two batteries in series) ANA609 two dedicated battery, up to 90% efficiency, consistency, a high stability of solar lawn IC;
- 1.2V (one cell) ANA650 maximum 100MA, steady and flashing two modes solar lawn IC / spike lights IC;
- 1.2V-2.4V (a battery or two batteries in series) 0116 Optional light control sensitive solar panel solar lawn IC;
- 1.2V-2.4V (a battery or two batteries in series) 0119 discharge protection, 1.0v or more constant, solar lawn IC;
- 3.6V (three cells in series) 0122 (a battery) 3.6V maximum 300MA, step-down constant current solar lights IC;
- 1.2V (a battery) 0120 (a battery) Solar candle lights IC;
- 1.2v (a battery) QX5252F (TO-94) Solar Lawn IC;
- 1.2V (one cell) QX5252E (DIP8) solar lawn IC;
- 1.8-3.0V (two batteries in series) QX5253 (DIP8) solar lawn IC.

TO-94 pinout (facing narrower side):

1. SBAT
2. BAT
3. GND
4. LX



Model	Battery powered	Output voltage	#LEDs	Efficiency	application	Package
ANA608	Solar charger (A rechargeable battery)	0.85V-1.5V	1-3	85%	Solar lawn, colorful sun jar ; Portable lamps, chandeliers pots, plug lights	TO-94
ANA609	Solar charger (Verse 2 rechargeable batteries)	1.8V-3.0V	1-3	80%	Solar lawn, colorful sun jar ; Portable lamps, chandeliers pots, plug lights	TO-94
ANA618	Solar charger (A rechargeable battery)	0.85V-1.5V	1-3	85%	Solar lawn, colorful sun jar ; Portable lamps, chandeliers pots, plug lights	TO-94
ANA650	Solar charger (A rechargeable battery)	0.85V-1.5V	1-60	80%	Solar lawn lights, spike lights ; Portable lamps, chandeliers pots, plug lights	DIP-8
116	Solar charger (A rechargeable battery)	0.85V ~ 3.0V	1-7	80%	Solar lawn, colorful sun jar, portable lamps, flower pots chandeliers, lamp insert	TO-94
119	Solar charger (A rechargeable battery)	.8V ~ 3.0V	1-7	80%	Solar Christmas lights, solar lights string lights	TO-94
120	Solar charger (A battery)	0.9V ~ 1.5V	1-7	80%	Solar candle lights, random variations in brightness ;	P-8
122	Solar charger (Three rechargeable batteries or lithium batteries)	2.4V ~ 5.0V	1-40	80%	Solar lawn, colorful sun jar, solar garden lights, portable lamps, flower pots chandeliers, lamp insert ;	P-8
QX5252F	Solar charger (A rechargeable battery)	0.85V-1.5V	1-7	80%	Solar lawn, colorful sun jar ; Portable lamps, chandeliers pots, plug lights	TO-94
QX5252E	Solar charger (A rechargeable battery)	0.85V-1.5V	1-30	80%	Solar lawn, colorful sun jar, solar garden lights, portable lamps, flower pots chandeliers, lamp insert ;	P8
QX5253	Solar charger (Verse 2 rechargeable batteries)	1.8V-3.0V	1-60	80%	Solar lawn, colorful sun jar, solar garden lights, portable lamps, flower pots chandeliers, lamp insert ;	P8