

CIS-N-LED (10 A)

Solar Charge Controller with integrated LED Driver



- Combines three functions in one: charge controller + flexible timer + LED drivers
- Developed for rough environments especially indicated for solar LED lamps, and solar LED streetlights
- Fully protected by the encapsulated case (protection class IP68): increased lifetime and reliability, reduced costs
- Flexible dimming functions
- Auto-saving function: two voltage disconnects levels
- Small size: fits everywhere
- True color PWM dimming
- Input for motion detector (PIR)

CIS-N-LED:

Specially developed for rough environments and for the requirements of users of solar LED lamps and solar LED street lights: the CIS-N-LED. The highlight of the CIS-N-LED is that it combines three functions in one fully protected case: charge controller + flexible timer + LED-driver. The current required to power LEDs is directly supplied by the charge controller. Customers get a compact solution included in one single casing, with many advantages:

- The built-in LED driver, timer and charge controller are harmonically combined and protected by a fully encapsulated housing (IP68), increasing system reliability, lifetime and also lowering investment costs.
- An on/off timer combined with an adjustable dimming function renders flexibility extending operation time and furthermore, saving energy as well.

• The CIS-N-LED also exhibits an auto-protect function: by means of its two low voltage disconnect levels, the LEDs' light will automatically be dimmed as the battery charge goes low. Levels can be programmed by means of a remote control unit (CIS-CU).

• Dimming-override input
Input for a signal from a motion detector (PIR), will override the dimming function and set the light to full brightness in case a person is detected. In this way, one can set a low dimming level to ensure a minimum light level, enough for a safe orientation, also saving energy. When motion is detected, the light is switched to 100%. The activation time is set on the external motion detector.

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Solar Charge Controller with integrated LED Driver

Type	CIS-N-LED 700 mA
System voltage	12/24 V auto recognition
Max. charge current	10 A
Float charge	13.8/27.6 V (25 °C)
Main charge	14.4/28.8 V (25 °C), 0.5 h (daily)
Boost charge	14.4/28.8 V (25 °C), 2 h Activation: battery voltage < 12.3/24.6 V
Equalization	14.8/29.6 V (25 °C), 2 h Activation: battery voltage < 12.1/24.2 V (at least every 30 days)
Deep discharge protection	11.00-12.02/22.00-24.04 V by SOC
Cut-off voltage	11.0/22.0-11.9/23.8 V by voltage (adjustable step 0.1/0.2 V)
Reconnect level	12.8/25.6 V
Overvoltage protection	15.5/31.0 V
Undervoltage protection	10.5/21.0 V
Max. panel voltage (Overvoltage protection by varistor)	50 V
Temperature compensation (Charge voltage)	-4.2 mV/K (2 V cell)
Idle self consumption	5 – 8 mA
Grounding	Negative grounded
Ambient temperature	-40 to +60 °C
Max. altitude	4,000 m above sea level
Battery type	Lead acid (GEL, AGM, flooded)
Adjustment range:	
Evening/morning hours timer	0 – 15 h / 0 – 14 h
Night/day detection	2.5 – 10.0 V/5.0 – 20.0 V (adjust step 0.5/1.0 V), 4.0 – 11.5 V/8.0 – 23.0 V (adjust step 0.5/1.0 V)
Connection wire length	10 cm
Dimensions (W x H x D)	82 x 94 x 20 mm
Weight	210 g
Wire cross section	2.5 mm ² (AWG 13)
Type of protection	IP68 (1.5 m, 72 h)

LED driver data	CIS-N-LED 700 mA
Output voltage	15 V to 49 V for 12 V system (5 to 15 LEDs in series) 30 V to 49 V for 24 V system (10 to 15 LEDs in series)
Nominal output current per sting	700 mA
Max. load power	30 W
Dimming level	0 – 100% (adjust step 10%)
PIR-input	4 – 30 V with respect to battery negative, \geq 0.7 mA; limited protection up to 50 V

Datasheet_CIS-N-LED_2/2_e_2015-01-12_Subject to change without notice