

# CIS-N-LED series (10 - 20 A)

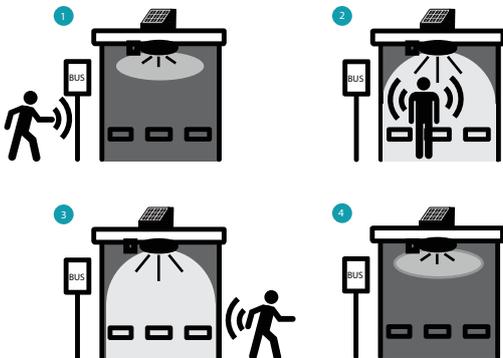
Solar Charge Controller with Integrated LED Driver



## 3 in 1: Charge controller, flexible timer & LED driver

- True color PWM dimming
- Input for motion detector (PIR)
- Fully protected (IP68) construction

Motion detection regulates the light's brightness to conserve energy.



The CIS-N-LED is a 3 in 1 solution that increases lifetime, reliability, efficiency and cost effectiveness. It is the perfect charge controller for solar lighting applications such as streetlights or bus shelters, and its motion detection capabilities regulate LED brightness to conserve energy.

To further conserve energy and extend your system's lifetime, the CIS-N-LED has two low voltage disconnect levels. The levels can be programmed using one of Phocos' handheld remote control accessories CIS-CU/CIS-CU-LCD or the MXI-IR USB device and our free CISCOM PC software.

### Compact Solution

- One device delivers charge controller, flexible timer and LED driver.
- Current required to power the LEDs is supplied by CIS-N-LED

### Developed for Rough Environments

- Designed specifically for solar LED lamps and streetlights
- Fully encapsulated (class IP68)

### Powerful Programming

- Optimize your system with our CISCOM simulation software
- An on/off timer combined with an adjustable dimming function provides extended operation and energy savings

### Application Examples

- Solar street lights
- Bus shelters
- Solar Message Boards
- Warning systems
- Transportation



## Technical Data

Type	CIS-N-LED	CIS-N-LED	CIS-N-LED	CIS-N-LED	CIS-N-LED	CIS-N-LED
	350mA	600 mA	700 mA	1050 mA	1400 mA	2800 mA
System voltage	12/24 V auto recognition					
Max. charge current	10 A (15 A, ≤ 122 °F/50 °C)			20 A (30 A, ≤ 50 °C)		
Float charge	13.8/27.6 V (77 °F/25 °C)					
Main charge	14.4/28.8 V (77 °F/25 °C), 0.5 h (daily)					
Boost charge	14.4/28.8 V (77 °F/25 °C), 2 h Activation: battery voltage < 12.3/24.6 V					
Equalization	14.8/29.6 V (77 °F/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	50 V					
Temperature compensation (Charge voltage)	-4.2 mV/K (2 V cell)					
Idle self consumption	5 – 8 mA					
Grounding	Negative ground					
Ambient temperature	-40 to 140°F (-40 to +60 °C)					
Max. elevation	13,000 ft (4,000 m above sea level)					
Battery type	Lead acid (GEL, AGM, flooded)					
Load 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	3.9 in (10 cm)					
Dimensions (W x H x D)	3.2 x 3.7 x .79 in (82 x 94 x 20 mm)			3.6 x 3.9 x .87 in (92 x 99 x 22 mm)		
Weight	7.4 oz (210 g)			8.8 oz (250 g)		
Wire cross section	AWG 13 (2.5 mm <sup>2</sup> )					
Type of protection	IP68					

LED driver data	CIS-N-LED	CIS-N-LED	CIS-N-LED	CIS-N-LED	CIS-N-LED	CIS-N-LED
	350 mA	600 mA	700 mA	1050 mA	1400 mA	2800 mA*
Output voltage	15-49 V for 12V system (5-15 LEDs in series), 30-49 V for 24 V system (10-15 LEDs in series)					
Nominal output current per sting	350 mA	600 mA	700 mA	1050 mA	1400 mA	2800 mA
Max. load power	15 W	25 W	30 W	45 W	60 W	60 W (12 V)/120 W (24 V)
Dimming level	0 – 100% (adjust step 10%)					
PIR-input	4 – 30 V with respect to battery negative, ≥ 0.7 mA; limited protection up to 50 V					

\*12 V: 15-24 V (5-8 LEDs in series)

### Available Accessories



**CIS-CU**  
Infrared programming remote for CIS series controllers



**MIXI-IR**  
Infrared to USB programming accessory for CIS series controllers Interface to CISCOM software



**CIS-CU-LCD**  
Infrared programming remote for CIS series controllers



**CISCOM**  
Programming software for PCs