



# Solar Lighting 101

**OVERVIEW:** CSC LED's solar area lights are an affordable and convenient way to add lighting to an area without available power; however, solar lighting does have its limitations. It is important that users understand the capabilities and shortcomings of their use in northern climates.

If you absolutely must have light in an area at all times, solar LED is probably not the best option for you. Some solar lighting can be engineered to work in worst case scenarios but these products come at a great cost and more complexity.

The available solar radiation in Canada is significantly lower than more southern regions. In winter months, Canadian nights are much longer and shorter days mean less available sunlight to charge the fixture's batteries. Winter days also tend to be cloudier and you must be prepared for your solar light to work for less hours, or not at all, during prolonged overcast periods.

Please note the inability to charge or operate during prolonged overcast periods is not a valid reason for warranty return. Please be mindful these are solar powered products and little to no sun will adversely affect operation.

**TEMPERATURE:** Our solar street light products should not be installed in areas with sustained temperatures below  $-20^{\circ}\text{C}$ . This includes areas that regularly see multiple weeks below  $-20^{\circ}$  (Nunavut as an example). Toronto, Ottawa, Montreal, Winnipeg, etc which have dips below  $-20^{\circ}$  for 1 or 2 weeks at a time are not a problem.

**OPERATING MODES:** Our SSLs have 3 operating modes. Mode 3 is the most energy conservative and highly recommended for most Canadian applications. Mode 3 gives 30% light output with 100% light output during motion detection. Light will revert to 30% after 30 seconds. The fixture will continue to operate as stated until dawn or until battery fully discharges.

**ORIENTATION AND PLACEMENT:** In order to maximize charging and operating time, it is important to install as described below:

- Install in an unobstructed location with minimal to no shade and without surrounding structures to block the sun.
- Install with the solar panel facing south or southwest.
- Tilt the solar panel to at least  $30^{\circ}$ . Light engine's can be rotated to compensate for the fixture tilt.

Please see our Frequently Asked Questions (FAQ) on the next page for more details.



# Solar Lighting FAQ

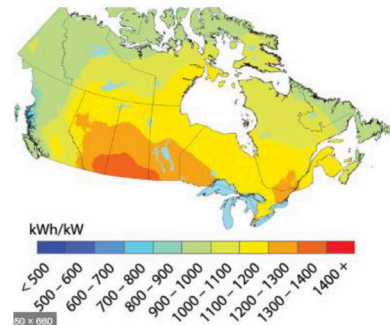
## How long will my solar light stay on?

There are a number of factors that will determine total on-time. Panel orientation, state of charge (is the battery fully charged), operating mode (M3 has the most longevity), frequency of motion events, and ambient temperature. With a fully charged battery, the solar light in mode 3 should remain on for at least 8 hours.



## How long will it take for my battery to fully charge?

Assuming you have a fully discharged battery, approximately 8.5 hours of sunshine will be required to fully recharge the battery. While a small amount of charging may take place under overcast conditions, it is a fraction of direct sunlight and quite insignificant overall.



Canada's Solar Radiation Map

## Do I need a photocell?

No. The solar panel detects light and doubles as a photocell.

## How bright are the solar lights?

The SSL series uses industry best, 200 lm/W LED chips by Lumiled. Our 10W fixtures are 2,000 lm at full output, and our 40W fixture is 8,000 lm at full output.



## How do they mount?

All fixtures come with a slip fitter mount intended for use with a standard 2-3/8" tenon (bullhorn). For wall mount or wooden pole applications, we do offer an optional mounting arm at an extra charge (SSL-MNT).

## Can I change the operating mode without having to climb up to the light after installation?

Yes. We have an optional handheld remote control that is sold separately and will allow changes to the operating mode from ground level (SSL-REMOTE).

