



## **Carmanah EverGEN™ Solar LED Lighting Occupancy Sensing & Advanced Occupancy Sensing FAQ**

### ***What EverGEN product lines offer occupancy sensing capabilities?***

Product Line	Advanced Occupancy Sensing	Occupancy Sensing
EverGEN 1700	Yes	No
EverGEN 1500	No	Yes
EverGEN 10-80	No	No

### ***What is Advanced Occupancy Sensing?***

Advanced Occupancy Sensing activates all the lights in a network when one of the lights within the network senses motion. Advanced Occupancy Sensing is only available with the EverGEN 1700 Series.

### ***How does Advanced Occupancy Sensing work?***

Advanced Occupancy Sensing uses a standard PIR occupancy sensor. When one light in the network senses motion, it activates other lights in the network to ramp from off to on, or from low to high, using a 2.4 GHz mesh network.

### ***What fixtures are compatible with occupancy sensing capabilities?***

Both THE EDGE™ direct mount and LEDway™ BetaLED™ fixtures can support occupancy sensing. Occupancy sensing is not available with THE EDGE floodlight fixture.

### ***Where is the occupancy sensor housed?***

The sensor is housed in the LED fixture.

### ***What kind of light distributions are available with occupancy sensing and Advanced Occupancy Sensing?***

All standard IES distributions are available with occupancy sensing and Advanced Occupancy Sensing: Type II, III, IV and V.

### ***What kind of operating profiles are available with occupancy sensing and Advanced Occupancy Sensing?***

Please refer to the operating profile FAQ for detailed information on the profiles available.

### ***What activations are available with the occupancy sensing in the EverGEN 1500?***

Both off-on and low-high activations are available in the EverGEN 1500. In addition, occupancy sensor operation can be combined with operating profiles that will maintain light levels at a certain level for a given time after dusk and before dawn.

See the operating profile FAQ for more information.

### ***What activations are available with Advanced Occupancy Sensing in the EverGEN 1700?***

Advanced Occupancy Sensing can be programmed with off-on or low-high (bi-level) activations. In addition, operating profiles that maintain light levels at a certain level for a given time after dusk and before dawn are available. See the operating profile FAQ for more information.

### ***What does full network activation mean in relation to Advanced Occupancy Sensing?***

Full network activation is an activation setting used with Advanced Occupancy Sensing. This setting allows one light in the network to sense motion and trigger all the other lights in the network to switch from low to high, or from off to on.

### ***What does set distance activation mean in relation to Advanced Occupancy Sensing?***

*Set distance activation* is an activation setting used with Advanced Occupancy Sensing. This setting allows one light in the network to sense motion and trigger lights within a set distance of the motion to switch from low to high, or from off to on.

The factory default activation parameter for set distance activation is a 200ft (61m) radius but it is field configurable for between 100ft and 500ft (30m to 152m).

### ***What is the default delay time for occupancy sensing and Advanced Occupancy?***

Factory set delay time is 30 seconds but is field configurable for between 30 seconds and five minutes.

It is important to note that systems will be configured for a maximum on-time each night. Exceeding this maximum will exceed the available power. Once the maximum on-time has been exceeded the delay time will not be activated, and the light will return to the low or off state five seconds after motion is detected.

### ***How does the delay timer work?***

Once the device senses motion, the sensor automatically turns the light from off to on, or low to high. When motion is no longer detected, the sensor concludes that the space is unoccupied. This initiates the delay timer. If the delay timer expires and no motion is detected, the light returns to the off or low state. If motion is detected, the delay timer stops and resets itself, and the light remains in the on or high state..

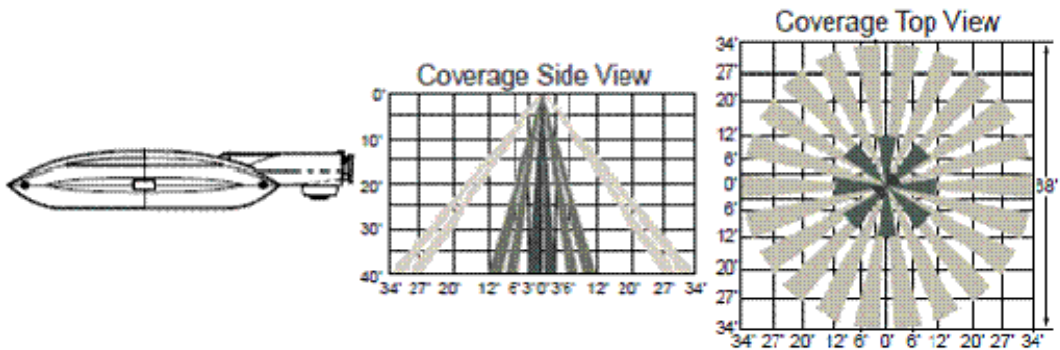
### ***What is the ramping time for light transitions?***

Lights will ramp up over a two second time period and will ramp down over five seconds.

### ***What area does the occupancy sensor cover?***

The occupancy sensor has a 360 lens and has a maximum coverage of 40 ft. (12.2 m) in diameter from a 20 ft. (6.1 m) mounting height.

**Figure 2 Area Light**



The limits of the standard PIR sensor range are overcome with the use of Advanced Occupancy Sensing which allow for the activation of an entire system of lights when just one light senses motion.

***What is the purpose of incorporating occupancy sensing or Advanced Occupancy Sensing into a Carmanah EverGEN lighting system?***

Incorporating occupancy sensing or Advanced Occupancy Sensing into a Carmanah solar LED lighting system allows for the most efficient and effective use of available energy. By dimming or turning lights off when light is not needed, or by illuminating the area only when motion is detected, energy is conserved and light levels are maximized. This allows for smaller system size and reduced overall project cost.