

## Light Pollution

According to the "World Atlas of Artificial Night Sky Brightness," 80 percent of the world's population lives under skyglow, an unnaturally bright nighttime sky created by artificial light use, which impacts our circadian rhythm, wildlife patterns and climate change.

As a responsible permanent holiday lighting manufacturer, we go to extra lengths to reduce the impact we have on light pollution. In fact, Oelo's 36v lighting system meets the following International Dark Sky Association's (IDSA) Fixture Seal requirements:

**Dark Sky Lighting Requirements:** Allowable uplight should not exceed 50 lumens from the light source and recommends "shielding" light to decrease visibility from the horizontal plane.

**How Oelo meets this standard:** Each Oelo LED only produces **10.13 lumens**, and the luminosity distribution of each LED is angled 115 degrees downward further reducing the upward light intensity. Additionally, the Oelo system is one of the few permanent holiday lighting systems on the market that can be mounted downward for a true downlighting effect. Meanwhile, traditional incandescent patio lighting bulbs emit light omnidirectional (360 degrees), which requires fixture housings or reflectors to direct light to the desired area.

**Dark Sky Lighting Requirements:** Dark Sky compliant lighting has a maximum correlated color temperature that does not exceed 3000K on the Kelvin scale to create a warmer tone.

**How Oelo meets this standard:** Oelo's LEDs use an RGB LED chip with 1 red, 1 green and 1 blue diode. The mixing of these three different diodes produces more than **16 million colors**; using Oelo's smartphone color-changing app, owners can create warm light with a tap of the color wheel. Conversely, most home exterior lighting uses "Soft White" incandescent bulbs that can produce up to 3000K and need sconces to direct the light.

**Dark Sky Lighting Requirements:** IDSA favors dimmable LEDs (1-10% of the full rating) and smart controls to moderate times of operation.

**How Oelo meets this standard:** Not only are Oelo's lights **100% dimmable**, but Oelo's cloud-based system has a built-in timer and calendar feature that helps the home or business owner designate optimal times of operation of their lighting system. The system also features a "Spotlight" function that allows for select LEDs to be illuminated to focus light only where it is needed, like entries and walkways, to create security lighting that is less glaring than traditional motion sensor lights.

**The Dark-Sky Approved standard:** Dark Sky compliant outdoor lighting products must have an independent laboratory safety certification.

**How Oelo meets this standard:** Oelo's permanent lighting system is **UL 879** rated, meeting the Underwriters Laboratories requirements for "lighting systems ... that outline the structural features of a building by ... rechanneling available light" and involves all forms of illumination, including LEDs. Oelo's system also touts an **IP68 waterproof rating**, which protects the lighting from moisture, and a **V-0 flame rating**, indicating Oelo's LEDs are highly resistant to ignition and **self-extinguish within 10 seconds**.