

## The Owl™ Outdoor LED Wall Pack Component Guide



**The Owl Pack** features an industry-standard appearance for an outdoor LED wall pack, but this supplement will show you how its design and assembly make it an LED Waves exclusive.

The Owl Pack series is designed, built and tested onsite at LED Waves headquarters in the USA, giving each unit the quality assured by our 5 year warranty.

Let's take a look at some of the high end components and special features that work together in this exclusive product – all to ensure that the Owl Pack works stronger and longer than any other outdoor flood on the market.

### Bridgelux® Vero Array



This cutting edge technology from California's Bridgelux features chip-on-board (COB) construction – eliminating soldering (and potential break points) and strengthening the design of the LED board. Made for high drive currents, the Vero performs with outstanding brightness and 20% higher efficacy over other COB LEDs in its class.

LM-80 data from Bridgelux indicates that each Vero offers more than 70% lumen maintenance over 50,000 hours of operation, even tested at more than 2x the normal drive current. Our UL LM-79 test reports show that each Owl Pack delivers over 90 lumens per Watt. Contact an LED Waves sales representative for supporting documentation for any particular unit.

On top of reducing energy and replacement costs, the Vero helps the Owl Pack outperform traditional outdoor lighting technology with better light quality. Typical High Pressure Sodium and Mercury Vapor lamps have a Color Rendering Index (CRI) score of 30. The Owl Pack has a minimum CRI of 70 (average 72), improving nighttime visibility and safety.

- **Zero disorienting pixelation**
- **Outstanding quality of light**

Each Owl Pack employs one Vero chip to transmit a high concentration of light with crisp beam edges, and zero disorienting pixelation. No other outdoor LED flood delivers this outstanding quality of light.



**Vero-10**

Used on 10W & 20W units



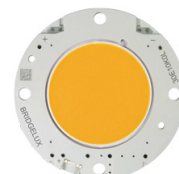
**Vero-13**

Used on 30W unit



**Vero-18**

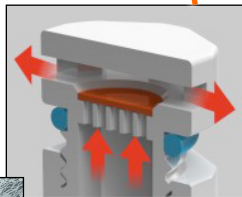
Used on 50W unit



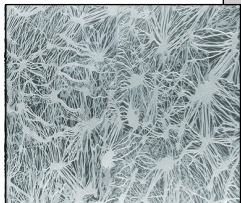
**Vero-29**

Used on 70W, 100W & 200W units

## Membrane Vents



Membrane Vent



Membrane

Known for driving technological innovations for electronics across every industry, membrane vents brings a unique lighting ventilation solution to the Owl Pack series from LED Waves.

Proper ventilation in any electronic device is the key to longevity, as oxidation or any accumulation of dust, water vapor, or other outside particles deteriorates the working components. Heat and hydrogen - byproducts of operating the power supply - add stress to the electronics and can create an explosive environment within a watertight enclosure.

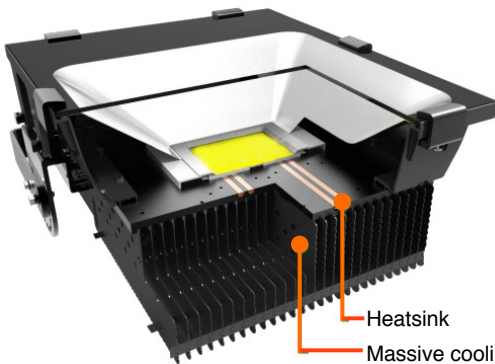
Each Owl Pack features a Membrane Vent to equalize this internal environment, while maintaining outside protection from the elements. Located at the bottom of the Owl Pack, this vent is specially designed for outdoor lighting applications.

Its membrane is composed of expanded polytetrafluoroethylene (ePTFE) – a microporous, UV and temperature-resistant material that continuously allows gas and vapors to pass freely out of the enclosure.

The membrane consists of billions of pores, each 20,000 times smaller than a drop of water. This prevents most liquids (including cleaning solutions), dust, and other harmful particles from passing through the vent.

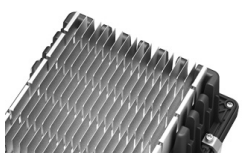
The result is a smoother operating IP65-rated LED flood light – that won't get flooded.

## Thermal Management System

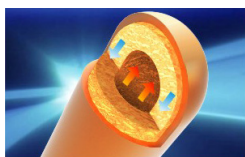


Heatsink

Massive cooling module



Finely machined aluminum heat sink blades



Copper heat dissipating pipes with liquid core

Heat is another enemy to LED light fixtures, as high temperatures overwork the electronics and wear them out prematurely. Each Owl Pack is built with a thermal management system specially engineered for the heat output of its respective power supply.

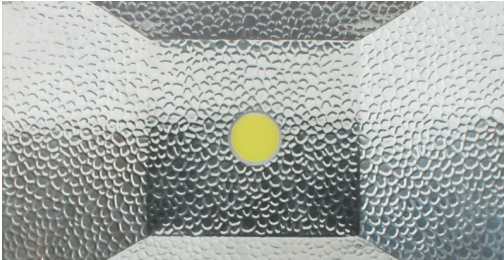
The heat sink on the back of the Owl Pack features the same thermal management principle we apply to every LED light made in the USA by LED Waves. Each heat sink is composed of row upon row of aluminum blades, each finely machined to optimize surface area upon which hot air travels.

What sets the Owl Pack apart is a series of copper pipes that connect the heat sink to the internal electronics. The liquid core of this highly conductive metal offers a better thermal transfer rate of any other metal.

Though the materials themselves are expensive, their lightweight, malleable qualities lower production costs for LED Waves. As a supplier and manufacturer, LED Waves is then able to transfer these savings onto you, our valued customer.

## Durable, Weatherproof Housing

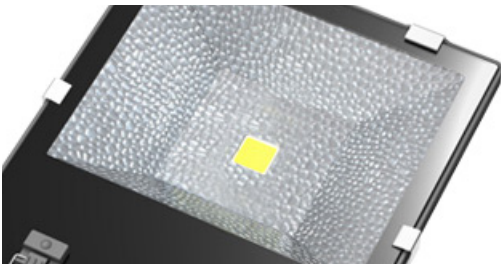
With such high-end components inside, we can't afford to skimp on the housing.



Pure aluminum reflector

Surrounding the Owl Pack LED light source is a pure aluminum reflector. This material resists oxidation and color fading, upholding the light output for the entire operating life of the unit.

A panel of shatterproof tempered glass shields the LED and optics from the elements. It's cut 4mm thick to provide the most protection while transmitting the most light (93%).



Shatterproof tempered glass

All connectors and moving parts are made of stainless steel to provide long-term protection against corrosion from water (including acid rain), alkaline, salt, and other windborne particles.

The Owl LED wall pack housing is sealed together with waterproof silicon rubber. The entire assembly is then coated with an electrophoretic paint that offers corrosion protection tested by 200 hours of continual salt spray.

All this work goes into creating a rugged outdoor flood that truly outlasts.



All parts are made of stainless steel



Waterproof housing