



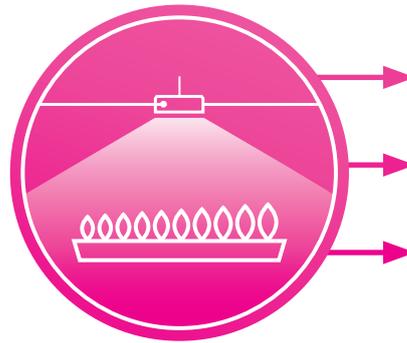
THE DUTCH POWERHOUSE  
**EMBRACE XL**

EXTREME PERFORMANCES FOR  
INDOOR AND VERTICAL FARMING

# EMBRACE XL

## THE WATER-COOLED MULTI-LAYER FIXTURE

Oreon is well known for its water-cooled LED grow lights. The innovative technology ensures highly efficient LED lighting in greenhouses and a stable cultivation climate. The new multi-layer fixture Embrace XL is specifically designed to distribute light uniformly, even with a little distance between fixture and crop. The Embrace XL can be used for close-to-crop applications such as multi-layer systems, growrack systems and under gutter illumination in a greenhouse.



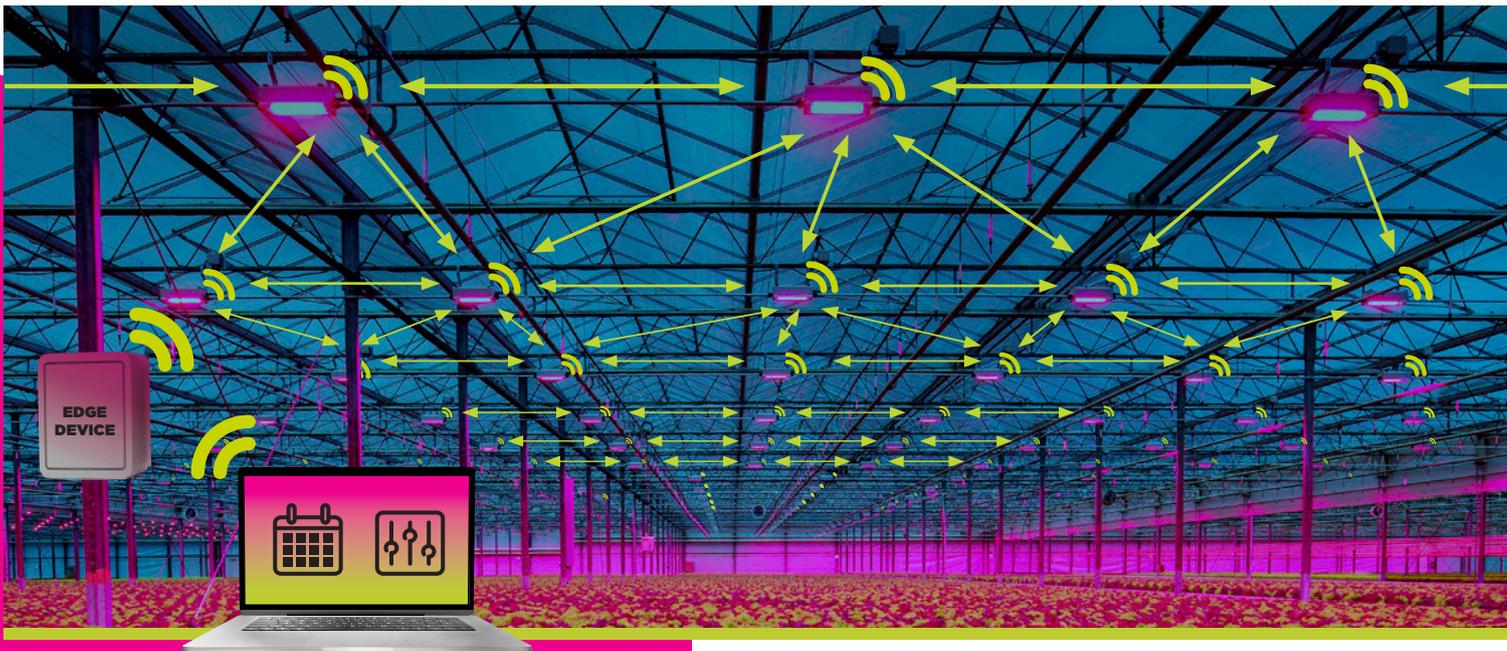
**CLIMATE CONTROL**  
heat removal by water cooling

**ULTRA WIDE OPTICS**  
high uniformity in every situation

**ADJUSTABLE SPECTRUM**  
dynamical for maximum flexibility

# OREON

## LED CONTROL CENTER



The Oreon LED Control Center (OLCC) enables the grower to control their assimilation lighting with unmatched precision. The lighting installation is dynamically controlled by a fine mesh network, which is formed by all the lamps in the greenhouse or cultivation area. This allows the grower to respond to fluctuating light needs and energy rates. The result is the exact desired amount of light at any time or place at the lowest possible cost.

**Oreon lighting, in combination with the Oreon LED Control Center, offers the most ambitious growers the opportunity to illuminate their crop smartly, flexibly and optimally.**

### GROW AREA

Assign fixtures to unlimited number of groups

Adjusting per group

Group assignment is flexible.

### EDGE DEVICE

Only wired ethernet connection needed

IOT Edge Device connects network to cloud platform

### CLOUD

Access through Oreon cloud platform

Create unlimited schedules

No limit on number of changes per day

# EMBRACE XL

## THE DUTCH POWERHOUSE



### TECHNICAL DATASHEET MULTI-LAYER FIXTURE

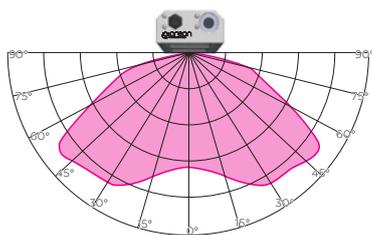
#### Light output

Version	Max Photon Flux (μmol/s)*	Energy Consumption		Max Imparted Heat (W)
		Max Consumed Power (W)	Max Efficiency (μmol/J)	
<b>EMBRACE XL</b>				
<b>R/B</b>				
Red	824	220	3.8	92
Blue	134	58	2.3	
Total	958	278	3.4	
<b>R/B/W</b>				
Red	674	180	3.8	101
Blue	134	58	2.3	
White	120	60	2.0	
Total	928	298	3.1	
<b>R/B/FR</b>				
Red	674	180	3.8	97
Blue	134	58	2.3	
Far-red	129	39	3.3	
Total	937	277	3.4	

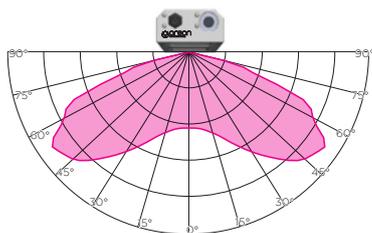
All data for 2:1 and 3:1 reflector combined

\* Output is defined as the total photon flux between 400-800nm.  
Typical values for stable operation at 77°F | 25°C cooling water temperature

#### 2:1 light distribution



#### 3:1 light distribution



## Specifications

Housing material	Aluminium (IK10). Finishing: anodized / antifouling powder coating (dirt repellent)
LED protection cover	High transmission glass (transmission >98%) (IK07)
Ingress Protection	IP67 (dust- and watertight, hermetically sealed). Fixtures can be cleaned by using pressurized water, the complete electrical circuit is sealed waterproof.
Lifespan / Warranty	L90 B05 - 50,000 hours / 5 year warranty

## Technical data

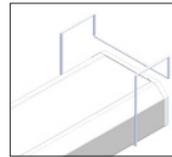
Power factor	> 0.96 @ 400 VAC
Total Harmonic Distortion (THD)	< 11% (THD)
Voltage range driver	230 - 480 VAC
Current range	2.1 - 1 A
Frequency range	50/60 Hz
Inrush current	max. 40A (t < 2.5ms) @ 480 VAC
Leakage current	< 0.75 mA @ 480 VAC
Isolation class	Class I
Operation conditions	32 to 113°F   0 to 45°C / 95% RH
Storage conditions	32 to 140°F   0 to 60°C / 85% RH

## Cooling liquid and circuit

Cooling liquid	Water (pH 4-8)
Cooling liquid temperature	From dew point to 113°F   45°C
Water connection	Pipe thread ISO 228-G 3/8" (2x)
Required flow velocity	Flow velocity must be at least 0.2 m/s and should not exceed 1.5m/s.
Flow velocity formula	$v = Q \cdot n / 7200$ (velocity in m/s, channel inner diameter 15 mm) v: minimally required flow velocity of water in the cooling channel of the lamp. (m/s) Q: heat imparted per fixture (Watt), n: number of fixtures in series on a cooling pipe.

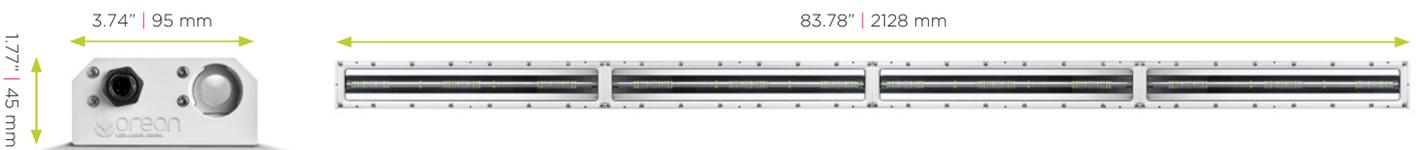
## Mounting

Installation of the Embrace XL fixtures with dedicated wire brackets.  
Contact Oreon for more info on the various options.



## Weight and dimensions

Nett weight	20.06 lb   9,1 kg
Product dimensions (L x W x H)	83.78" x 3.74" x 1.77"   2128 mm x 95 mm x 45 mm
Carton dimensions 1 pcs (L x W x H)	84.72" x 4.5" x 3.0"   2152 mm x 115 mm x 75 mm



## Logistic specifications

Transport Embrace XL in consultation with the customer, depending on project / quantity / location.  
HS-code 9405 4239 90

## Compliance

Pending

V230608

## Oreon

Lorentzlaan 6  
3401 MX IJsselstein  
The Netherlands

T +31 30 760 0660  
E info@oreon-led.com  
W www.oreon-led.com

