



Hortilight LED systems

# 500W HortiLight F50

Technical Specification

Release Version: V6.0

Release Date: 2024/06/01

## Main advantages HortiLight F50

### 1. Energy Efficient

The HortiLight F50 is designed to be highly energy-efficient. Compared to traditional HPS grow lights, it provides superior light intensity and faster plant growth while consuming only 30% to 50% of the energy, resulting in significant electricity savings.

### 2. High Efficiency

The HortiLight F50 offers various spectral options and achieves an impressive LED efficiency of up to 3.2  $\mu\text{mol}/\text{J}$  with its advanced bloom spectrum. The standard full-spectrum version, featuring a 120° beam angle, delivers a solid LED efficiency of 2.7  $\mu\text{mol}/\text{J}$ , ensuring optimal plant growth across different stages.

### 3. Long Lifespan

Powered by Samsung's Horticulture Series LEDs, the HortiLight F50 is built for durability in horticultural environments. These high-bin LEDs are specifically designed to withstand extreme temperatures, humidity, and exposure to chemicals, ensuring reliable performance and a long operational life. (The Samsung LH351B LED has an impressive lifetime up to 280,000 hours!)

### 4. Easy Setup

Setting up the HortiLight F50 is straightforward. Simply connect the power cord to a 120V or 230V main power source. For spectrum control, you can attach a dimmer cord to a PWM, 0-10V, or resistance dim device (DALI and Zigbee options are available).

### 5. Power Spectrum Control

The HortiLight F50 features an adjustable full-spectrum mode to enhance plant growth and photomorphogenesis. Using a dimming device (sold separately), the spectrum can be adjusted from 50% to 100%, allowing you to transition from growth mode to full-spectrum bloom. Additionally, the spectrum can be customized for sunrise and sunset effects, further optimizing plant development.

### 6. Impact- & waterproof Protection

With an IK10 impact protection rating and an IP66 waterproof level, the HortiLight F50 is highly resistant to damage and is suitable for use in challenging environments like open-roof greenhouses, such as Venlo or Cabrio-style greenhouses.

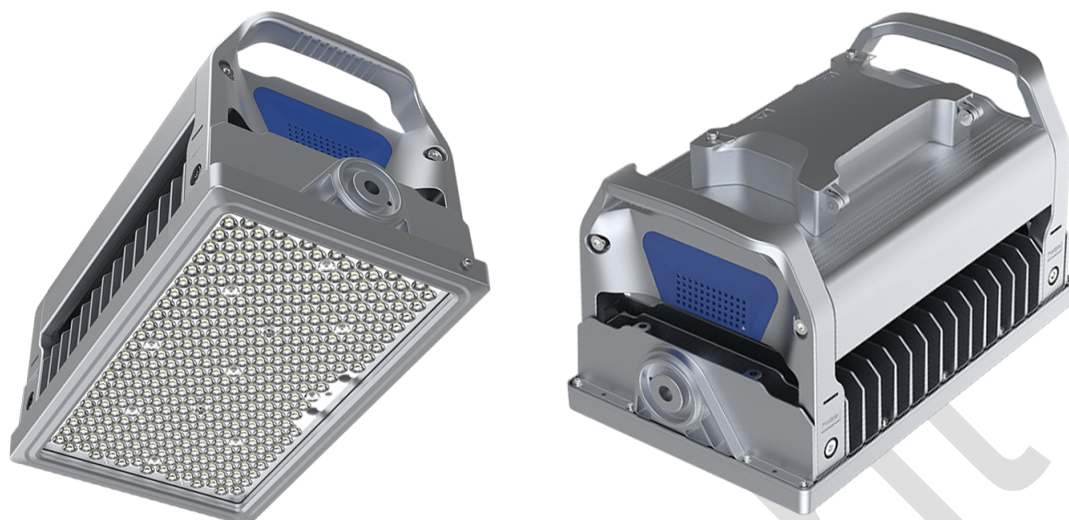
### 7. Advanced thermal design

To ensure optimal cooling, the HortiLight F50 uses a passive cooling system, with its aluminum heatsink and frame facilitating effective heat dissipation. This passive cooling method eliminates the need for moving parts, making the system more energy-efficient and virtually maintenance-free.

### 8. Environment friendly

The HortiLight F50 is a more eco-friendly lighting solution compared to traditional HPS lights. Unlike HPS lamps, LEDs do not contain harmful substances such as mercury or iodine, and they are manufactured with far less energy. This means fewer toxic materials, such as lead, and no hazardous waste to dispose of, contributing to a cleaner, greener environment.

## Pictures HortiLight F50

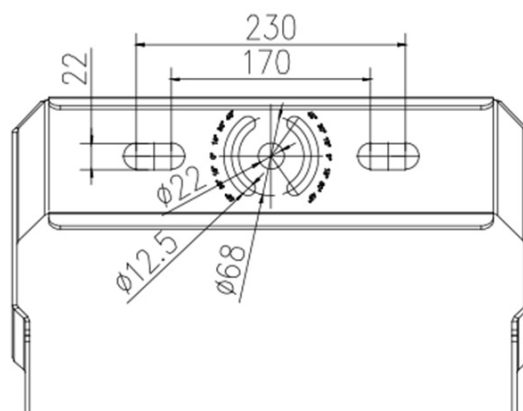


## Application HortiLight F50

1. A HortiLight F50 grow light is suitable for (cabrio) greenhouse lighting.
2. The HortiLight F50 replaces 1000W HPS grow light.
3. Adjustable spectrum to optimize plants photosynthesis and photomorphogenesis.
4. Ideal for all phases of plant growth and works well in any garden, either hydroponics or soil based.
5. OEM/ODM or customized integrated grow lighting solutions are available on request.

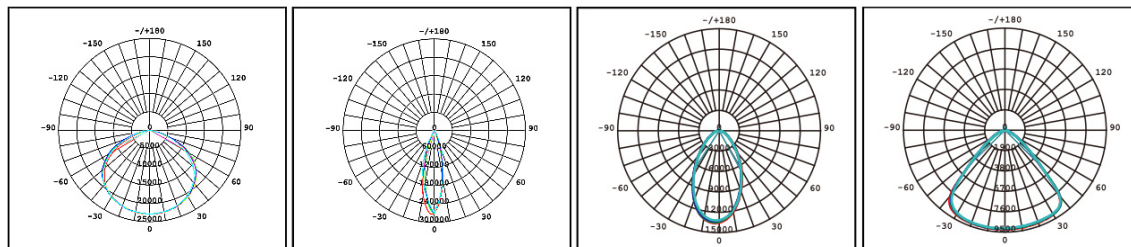
## Photo controller & Bracket [optional]

An optional bracket is available for easy mounting on a C-profile or lattice, enabling seamless plug-and-play switching from HPS to LED without complications. Additionally, the optional photo controller allows for automatic adjustment of the lighting based on ambient natural light levels, ensuring optimal light conditions for plant growth.



## Photometric diagrams

Beam angle: standard 120° [optional 30° / 60° / 90°]



Adjust the beam angle according to the distance between the lamp and the plants to ensure uniform illumination across the plant surface. For optimal PAR flux at crop level, a 30° beam angle is ideal when the HortiLight F50 is used at the top of a modern, high-roof greenhouse. This setup maximizes light intensity where it's needed most.

## Technical specification HL-F50SE

Item	Value	Item	Value
LED drivers	MeanWell	Power consumption	~ 500 Watt
LED diodes	Samsung LH351H	Power growth mode	~ 250 Watt
LED type	Horticulture top-bin	Power factor	> 95%
Spectrum control	50% – 100%	Dimming   3 in 1	0-10V, PWM, $\Omega$
Light distribution	120° [30°,60°,90°]	Voltage range	120V, 230V
Lifespan	Up to 50.000 hours	Frequency	50Hz / 60Hz
Height above plants	> 10 cm	Ambient air	-20 ~ + 40°C
LED efficiency	2,7 $\mu\text{mol}/\text{J}$	Waterproof level	IP66
LED photon flux	~ 1.350 $\mu\text{mol}/\text{s}$	Impact protection	IK10
HortiLight F50 size	406*250*233mm	Weight	14,9 Kg

## Certification and Warranty of HortiLight F50



### Note:

1. Select different lighting time depending on plant species.
2. Don't look into the LED light directly without wearing sunglasses.
3. Power socket should be connected to the ground/earth.
4. The HortiLight F50 is CE, ETL and RoHS compliant.
5. Good after sales service; 5-year warranty.