



HORTILIGHT LED SYSTEMS

500W**F50**

High-output horticulture LED system

HL-F50

Power Spectrum Control

**HIGH OUTPUT / SPECTRUM CONTROL / GREENHOUSE READY**

A rugged 500W platform combining Samsung horticulture LEDs, selectable spectral output and passive thermal management.

500 W

POWER

2.8 $\mu\text{mol/J}$

STANDARD PPE

~1,400 $\mu\text{mol/s}$

PHOTON FLUX

IP66 / IK10

PROTECTION

Technical Specification / Release V6.0

TECHNOLOGY

F50 light engine & control

The F50 is designed as a high-output, controllable horticultural fixture for demanding greenhouse and indoor applications.



01

SAMSUNG LH351H

Horticulture top-bin LED diodes.

02

MEANWELL DRIVER

Premium driver platform with power factor above 95%.

03

POWER SPECTRUM CONTROL

Spectrum output can be adjusted from 50% to 100% using an external dimming device.

04

3-IN-1 DIMMING

Control via 0-10V, PWM or resistance (Ω); DALI and Zigbee options are available.

05

PASSIVE COOLING

Aluminium heatsink and frame dissipate heat without moving cooling parts.

06

RUGGED HOUSING

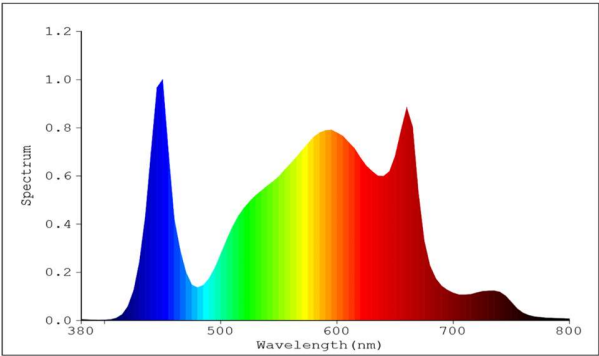
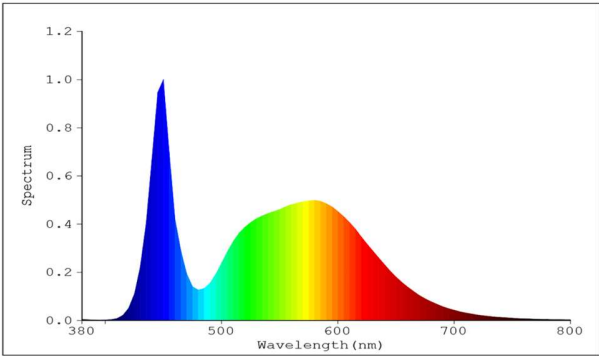
IP66 waterproof and IK10 impact protection.

CONTROL OPTION

An optional LED controller can be used for timer functions, lighting schedules and simulated sunrise/sunset transitions.

Two operating profiles

The supplied F50 documentation shows a lower-output growth spectrum and a higher-output full-spectrum bloom profile.



GROWTH MODE

~250 W

Reduced-output profile for growth-stage operation.

FULL-SPECTRUM BLOOM

~500 W

Advanced bloom spectrum with stronger red-region output.

SPECTRUM CONTROL

With a compatible dimming device, output can be adjusted from 50% to 100%, enabling transition from growth mode toward full-spectrum bloom. The manufacturer also specifies sunrise and sunset customization.

OPTICAL DESIGN

Beam angle matched to mounting height

Standard light distribution is 120°. Optional 30°, 60° and 90° optics allow the beam to be adapted to mounting height and crop geometry.

120°

STANDARD

Broad distribution

90°

OPTION

Medium-wide beam

60°

OPTION

Concentrated beam

30°

HIGH-ROOF

Specified for high-roof greenhouse use

INSTALLATION ENVELOPE

406 × 250 × 233 mm

FIXTURE SIZE

14.9 kg

WEIGHT

>15 cm

HEIGHT ABOVE PLANTS

GREENHOUSE INTEGRATION

An optional bracket supports mounting to a C-profile or lattice. The optional photo controller can adjust lighting in response to ambient natural light levels.

ENGINEERING DATA

Technical specification

LED DRIVER	MeanWell	POWER CONSUMPTION	~500 Watt
LED DIODES	Samsung LH351H	POWER GROWTH MODE	~250 Watt
LED TYPE	Horticulture top-bin	POWER FACTOR	>98%
SPECTRUM CONTROL	50% - 100%	DIMMING	0-10V, PWM, Ω
LIGHT DISTRIBUTION	120° [30°, 60°, 90°]	VOLTAGE RANGE	120V / 230V
LIFESPAN	Up to 50,000 hours	FREQUENCY	50 / 60 Hz
HEIGHT ABOVE PLANTS	>15 cm	AMBIENT AIR	-20 to +40 °C
LED EFFICIENCY	2.8 μmol/J	WATERPROOF LEVEL	IP66
LED PHOTON FLUX	~1,400 μmol/s	IMPACT PROTECTION	IK10
F50 SIZE	406 × 250 × 233 mm	WEIGHT	14.9 kg

APPLICATION

Suitable for greenhouse and indoor cultivation, all phases of plant growth, and both hydroponic and soil-based growing.

COMPLIANCE & WARRANTY

CE / ETL / RoHS Specified compliance	3 YEAR WARRANTY Manufacturer specification
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SAFETY NOTES

- Select lighting time according to plant species.
- Do not look directly into the operating LED light.
- Connect the fixture to a properly grounded power socket.