

SolarLUX Lighting Solutions

# 320W Samsung Quantum

Technical Specification

Release Version: V2.0

Release Date: 2023/08/15

## Main advantages 320W Samsung Quantum

### 1. High efficiency and Energy saving

The Samsung Quantum Board is a high efficiency LED grow light. Tests have shown that LED grow lights provide plants with greater light intensity and growth rate than HPS grow lights while consuming only 30% to 50% of the electricity.

### 2. Long lifespan

The Quantum Boards are equipped with high-quality components, such as Samsung and Seoul LEDs and high-efficiency LED Drivers. The LEDs are computer SMT mounted on the circuit board, which ensures high quality and high reliability with long life.

### 3. LED spectrum

The Samsung Quantum features 3000K, 6500K, 660nm Samsung LEDs and 395nm & 730nm Seoul LEDs with an efficiency of 2.6  $\mu\text{mol}/\text{J}$ .

### 4. Dual spectrum switch

The 320W Samsung Quantum features a switch that control the 395 nm ultraviolet light and 730 nm far-red light. In addition, additional 660nm red light is switched on for an optimal R/RF ratio.

### 5. Daisy-chain dimming

The Samsung Quantum is equipped with a dimming button that allows the light intensity to be adjusted according to the needs of plants in each phase of the light cycle. In addition, several Quantum Boards can be daisy-chained, so that all lamps can be operated with one dim button.

### 6. Plug & play

Only a simple installation is required; Connect the LED driver unit to the Quantum Board and plug into a grounded 230 volt outlet. The LED Driver can be mounted on top of the Quantum Board or hung inside or outside the grow room.

### 7. Waterproof

The Samsung Quantum Board is splash-proof. The LEDs are attached to the aluminum frame and have a water-resistant coating.

### 8. Advanced thermal design

The LEDs are passively cooled by the aluminum frame of the Quantum Board. The aluminum PCB is directly attached to the aluminum body of the Samsung Quantum for excellent heat dissipation. Passive LED cooling is preferred above active cooling. No moving parts are needed, which is energy efficient and requires no maintenance.

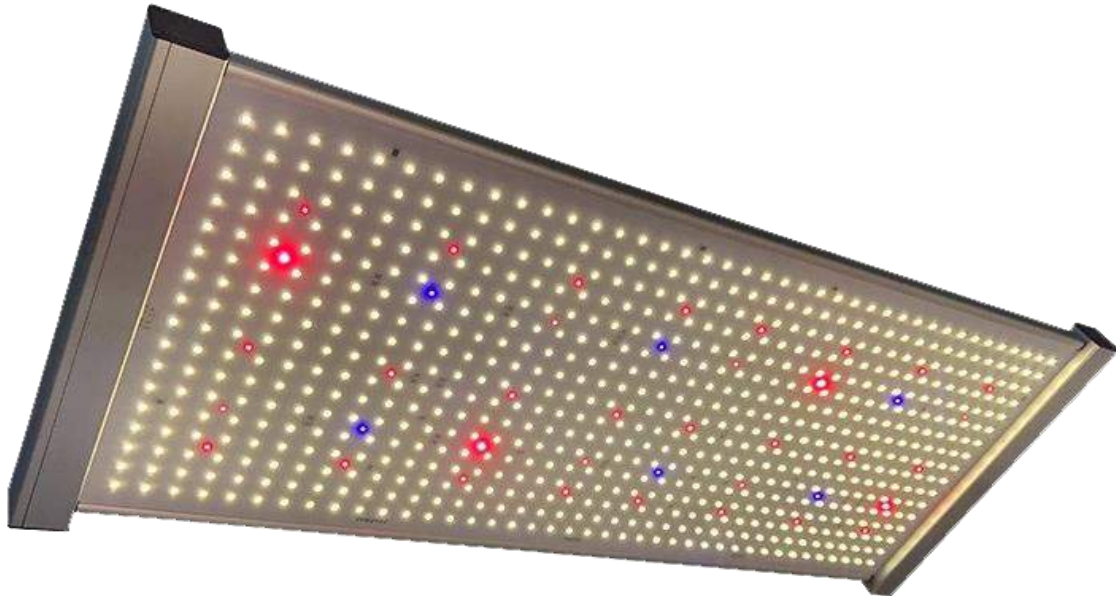
### 9. SPC technology for excellent performance

SPC technology guarantees the LEDs are more stable. If one of the LEDs fails, it will not affect the other LEDs. The SPC design makes the Quantum Board solid and safe.

### 10. Environment friendly

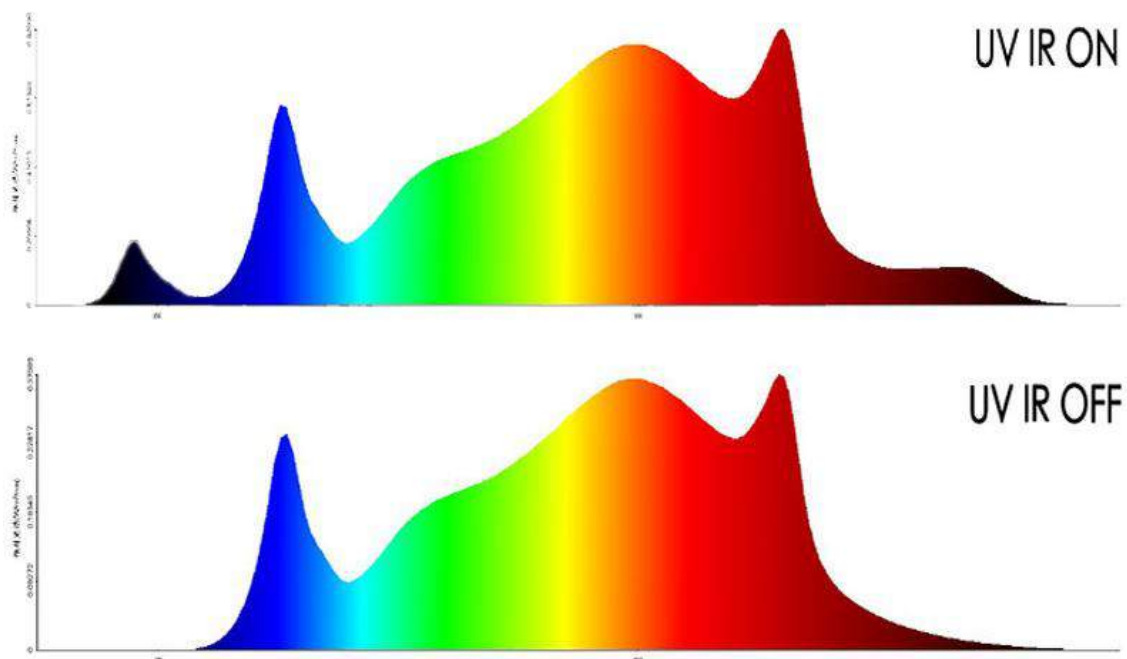
An LED Quantum Board does not contain the harmful substances of HPS & MH; no hazardous waste to deal with, making our earth cleaner and greener. LEDs are superior to other lighting technologies in terms of negative environmental and health impacts during the manufacturing process. Producing LEDs takes much less energy than manufacturing other lighting. LEDs contain no mercury and little or no toxins such as iodine and lead.

## 320W Samsung Quantum

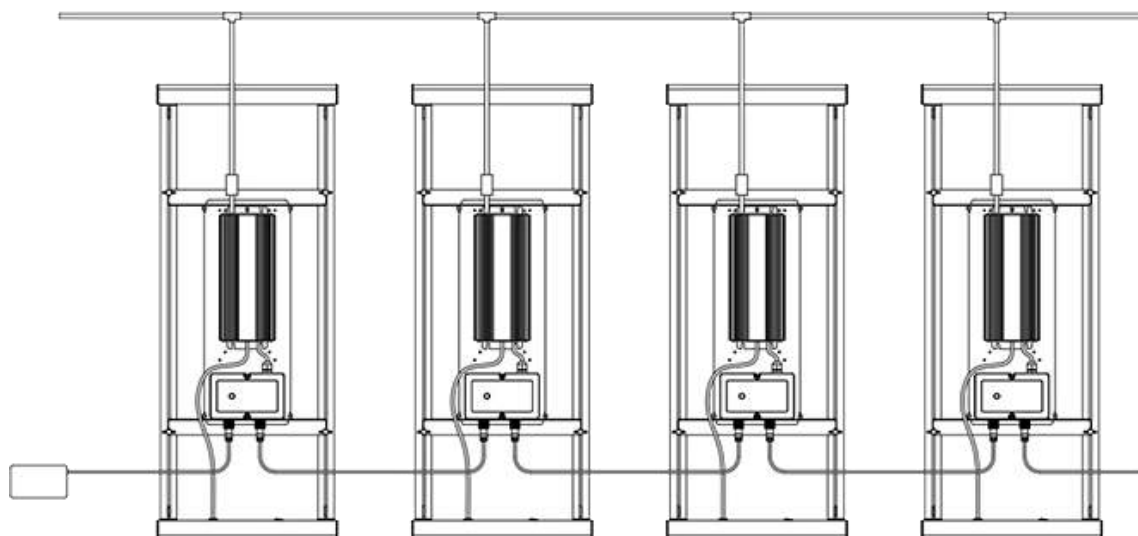


1. A Samsung Quantum Board is suitable for indoor and greenhouse lighting.
2. The 320W Quantum Board replaces a 600 Watt HPS grow light.
3. Ideal for all phases of plant growth and works well in any garden, both hydroponics and soil.
4. Utilizes a broad spectrum of light necessary for plant photosynthesis.

## Samsung Quantum Dual Spectrum



## Quantum Board daisy-chain dimming &amp; timer



## Technical specification 320W Quantum Board

Item	Value	Item	Value
LED chips	Samsung & Seoul	HPS equivalent	600 Watt
LED wavelength	Full-spectrum	Power factor	> 95%
LED efficacy	2,6 $\mu\text{mol} / \text{J}$	Power consumption	$\sim 320$ Watt
Dual spectrum switch	395nm, 730nm & 660nm	Dim control	10 – 100%
Light distribution	120° beam angle	Voltage AC	100V – 277V
Height above plants	> 25 cm	Work frequency	50Hz / 60Hz
Ideal lighting area	$\sim 1,0 - 1,5$ m <sup>2</sup>	Working environment	-20 $\sim$ + 40°C
Lifespan	Up to 50.000 hours	Waterproof level	Splash proof
Size Q320	800*320*32 mm	Weight	5,5 Kg

## Samsung Quantum series certification and warranty



## Note:

1. Select different lighting time depending on plant species.
2. Do not look directly at the LED light without wearing sunglasses.
3. The power socket must be connected to earth.
4. Good after sales service; 3-year limited warranty.