

# urban-gro®



SCIENTIFICALLY  
ENGINEERED

## BIOS Icarus Vi

- ✓ Lights Plans Designed by urban-gro
- ✓ Product Provided by urban-gro
- ✓ Soleil® Wireless Controls Offered by urban-gro

### Features And Benefits

- Traditional off-board Class I LED driver power or optional centralized Class II digital electricity (VoltServer) to minimize installation costs and increase system efficiency
- Universal rack system mounting features an easy tool-free installation – ideal for 3' or 4' deep shelves and racking systems
- Tempered glass optics for spot-free cleaning and optimal light transmission in commercial crop production environments
- Suitable spectrum for all phases of plant growth; scientifically engineered to maximize photosynthesis
- 3x more blue radiation than HPS to promote improved plant morphology and quality
- 40% less energy required than 1000W HPS to produce an equivalent amount of delivered PAR
- Greater than 50% overall system efficiency as compared to 1000W HID
- Up to 70% greater PAR photon efficacy than 1000W HPS
- Passive cooling design eliminates inferior features such as fans, moving parts, and noise
- Sustainable and environmentally-friendly mercury-free lighting source compared to HID and fluorescent lighting systems which require hazardous waste disposal
- Specifically designed for indoor crop production, vertical farming systems, growth chambers, retro-fits of existing HID/fluorescent, or new construction grow facilities
- Eligible for energy incentive rebates (where available)

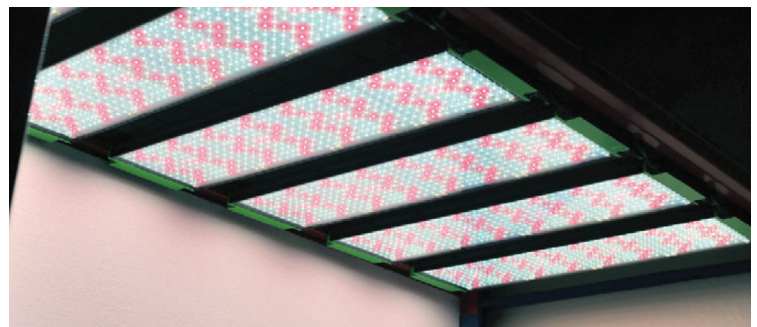
### Bios Icarus Vi Led Grow Light

The BIOS Icarus™ Vi LED Grow Light is the agricultural industry's only LED grow light fixture specifically designed for vertical farming applications. With the highest Photosynthetically Active Radiation (PAR) output and PAR photon efficacy in an industrial grade fixture, it is designed specifically for commercial crop production applications.

With a height of only 1.5" and available in both high output (HO) and low output (LO) versions, The BIOS Icarus™ Vi fixture returns the grower's precious cropping space and increases the indoor farm's volume efficiency.

Compared to the individual LED bars other manufacturers offer, The BIOS Icarus™ Vi significantly reduces the installation time and cost for HID equivalent PAR levels across the crop canopy while providing unsurpassed light uniformity.

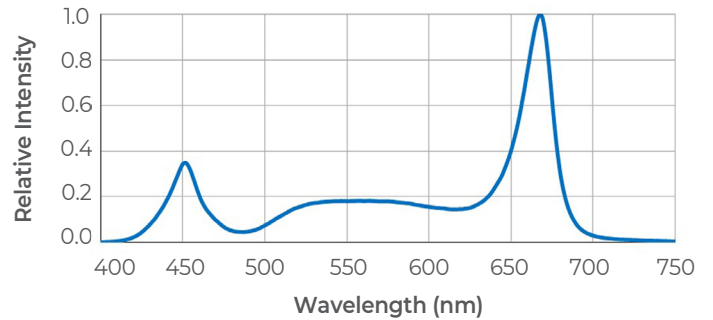
The optimized spectrum maximizes photosynthesis, plant growth and quality, while also providing a broad, visually acceptable spectrum enabling an accurate assessment of crop status. Engineered for science, this unique industrial grade fixture fills the need for a low profile, high output, energy efficient, and cost competitive option that is lacking in the LED grow light market today.



Icarus Vi Preliminary Specifications

<b>Applications:</b>	36" and 48" Deep Shelves and Racking Systems
<b>Voltage:</b>	120-277 VAC; 347VAC (optional)
<b>Optimal Mounting Height:</b>	6-12" Above Plant Canopy
<b>Spectrum:</b>	Broad (not purple)
<b>% Blue (400-500 nm):</b>	16%
<b>Housing and Finish:</b>	Black Anodized Aluminum
<b>Mounting:</b>	Adjustable Bracket
<b>Dimmability:</b>	0-10 V
<b>Rated Power Factor:</b>	>90%
<b>Warranty:</b>	5 Year Limited
<b>Ingress Protection:</b>	Wet Location Rated
<b>Certifications:</b>	UL1598, UL 8750, RoHS, FCC

Icarus Vi Spectral Graph



High Output

Performance Metric	4' HO Module	3' HO Module
Wattage	218	163
Photosynthetic Photon Flux ( $\mu\text{mol PAR/s}$ )	436	326
PAR Photon Efficacy ( $\mu\text{mol PAR/j}$ )	2.0	2.0
Average PPFD ( $\mu\text{mol m}^{-2}\text{s}^{-1}$ )	>800	>800
Module Weight (lbs)	21	16

Performance specifications subject to change, tolerance  $\pm 10\%$

Low Output

Performance Metric	4' LO Module	3' LO Module
Wattage	104	78
Photosynthetic Photon Flux ( $\mu\text{mol PAR/s}$ )	218	164
PAR Photon Efficacy ( $\mu\text{mol PAR/j}$ )	2.1	2.1
Average PPFD ( $\mu\text{mol m}^{-2}\text{s}^{-1}$ )	>400	>400
Module Weight (lbs)	21	16

Performance specifications subject to change, tolerance  $\pm 10\%$

