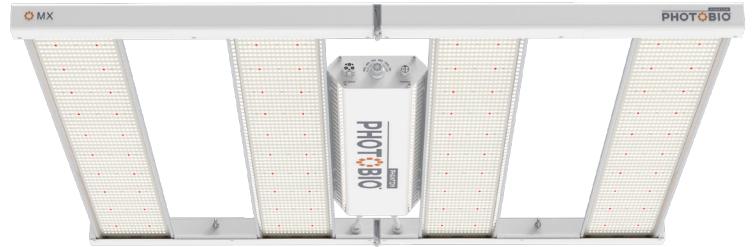


# PTB7680LS4X

## PHOTOBIO•MX LED, 680W, 100–277V

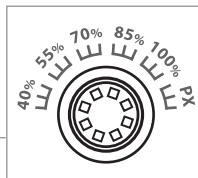
### S4 SPECTRUM

PHOTOBIO•MX high efficiency LED is designed for horticultural professionals looking to increase performance and yields while maximizing ROI. Robust commercial design utilizes ultra-wide bars to deliver high light levels while allowing air circulation. The high efficiency S4 spectrum provides more red, far-red, and blue wavelengths to deliver vigorous growth and optimize flower development. Multilayer usage can be utilized to maximize canopy square footage within existing structure footprint.



### System Overview

Model	PTB7680LS4
Fixture Type	Horticultural LED
Spectrum	S4 Spectrum
Typical Photon Flux Output	1768 $\mu\text{mol/s}$
Input Power	680W
Efficacy	2.6 $\mu\text{mol/joule}$
Input Voltage Range	100–277V
Lifetime	> 50,000hr
Optics	120° Primary Optics
Dimmable	0–10V
Driver	IP67 Driver
Operating Environment	Wet Location
Ingress Protection Rating	IP65
Warranty Period	5 Years
Manual output adjustment	iLOC Integrated Light Output Control



### iLOC Manual Output Adjustment Settings

Voltage		40%	55%	70%	85%	100%
110V	Power (W)	271.6	376.6	472.5	580	685
	Amperage (A)	2.451	3.44	4.316	5.29	6.19
120V	Power (W)	271	375	470	576	681
	Amperage (A)	3.137	3.93	4.82	5.67	2.254
208V	Power (W)	270	371	464	565	665
	Amperage (A)	1.33	1.82	2.25	2.76	3.22
230V	Power (W)	270	371	463	565	665
	Amperage (A)	1.21	1.64	2.04	2.48	2.92
240V	Power (W)	270	371	463	564	664
	Amperage (A)	1.16	1.58	1.96	2.38	2.81
277V	Power (W)	271	371	462	563	662
	Amperage (A)	1.05	1.398	1.718	2.09	2.45

### Driver Electrical Specifications

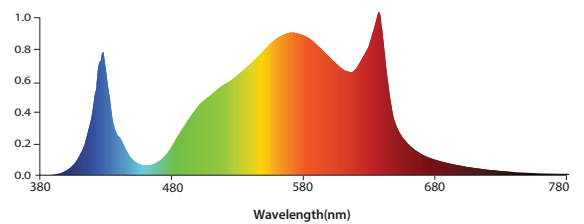
Model	Phantom 680 PSU	Power Factor	0.95
Fixture Power	680W	Frequency	50/60Hz
Input Voltage Range	100–277V	THD	<10%
Max Voltage Range	90–305V	ta	-40
Max Input Power	690W	tc	90

### Driver Input Amperage Reference

Voltage Input	120V	208V	240V	277V
Typical Amperage	5.67	3.3	2.81	2.45
Max Amperage	5.8	3.4	2.9	2.5

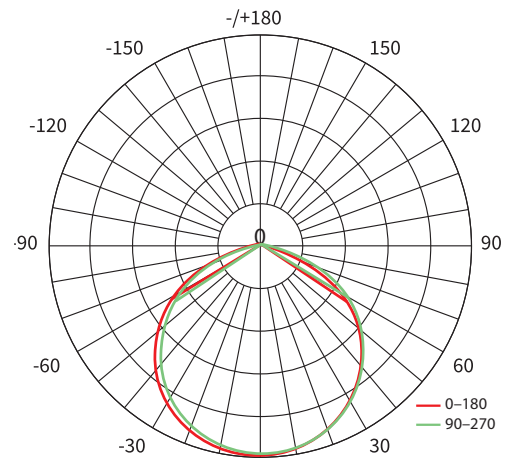
### S4 Spectrum

#### Normalized Photon Output



**S4 Spectrum:** Provides highly efficient full spectrum with a healthy red-to-blue ratio to drive photosynthesis. Light energy between 500–599nm, previously thought wasted, penetrates deeper into the plant canopy promoting photomorphogenic responses. High color rendering “white” light aids to rapidly identify potential threats to your crop and provides superior working conditions and safety for personnel. Ideal for both flowering and vegetative production.

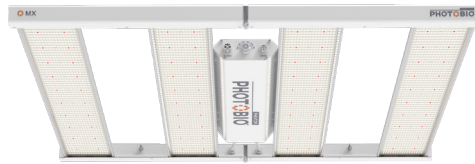
### Photosynthetic Photon Intensity Distribution



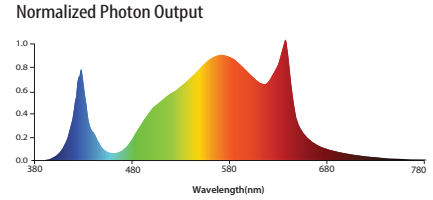
# PTB7680LS4X

PHOTOBIO-MX LED, 680W, 100–277V

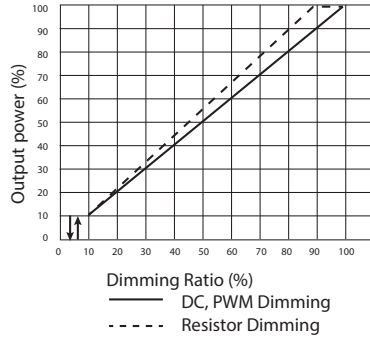
## S4 SPECTRUM



## S4 Spectrum



### Dimming Ratio



### Power Harness Options

Specific cable harnesses based on facility requirements.

- CHE1063000W 10' F 16AWG WT w/leads, Harness
- CHE1063010W 10' F 16AWG WT 110–120V Plug, 5-15P, Harness
- CHE1063015W 10' F 16AWG WT 208–240V Plug, 5-15P, Harness
- CHE1083020W 10' F 18AWG WT 277V, L7-15P, Harness

### PHOTOBIO AC Power Distribution Tree Cabling Options

Plug and play power cables that allow interconnectivity of multiple fixtures on a single circuit.

- PTBAC40APM PHOTOBIO AC Female Panel Mount, 40A M25, Pigtail 6" 10AWG
- PTBAC40AJ10 PHOTOBIO AC Power Link Cable, 40A M25 Connector, 10'
- PTBAC40A1T4 PHOTOBIO AC Power T Cable, 40A M25 to EN100, 1-T, Ferrite, 4.5'
- PTBAC40A1T6 PHOTOBIO AC Power T Cable, 40A M25 to EN100, 1-T, Ferrite, 6.0'

### PHOTOBIO Communication Tree Cabling System & Accessories

Plug and play communications cables that allow interconnectivity from a centralized controller.

#### TREE CABLING SYSTEM

- PTBCC8850W PHOTO LOC 0–10V Control Cable 8' Trunk + 5' Branch
- PTBCCJ16W PHOTO LOC 0–10V Control Cable 16' Jumper
- PTBCC8300 PHOTO LOC 0–10V Control Cable, 300' 3P-2P
- PTB4RJ112P20 PHOTO LOC 0–10V TM Adapter Cable, RJ11-2P 20'
- PTBXRC PHOTO LOC 0–10V Signal Repeater

#### ACCESSORY

- PTBRDMX16W PHOTOBIO MX 16' Remote Driver Mounting Kit

### Operating Conditions

Rated Operating Temperature	77°F/25°C
Minimum Operating Temperature	4°F/-20°C
Maximum Operating Temperature	104°F/40°C
Operating Environment	Wet Location
Ingress Protection Rating	IP65
Material	N/A

### Optical Specifications

Optics	120 degrees
Total Diode Quantity	4160
Diode Brand	Lumiled
Spectrum	S4
Lifetime	> 50,000hr

### Driver Specifications

Microprocessor Control	Yes
Open Circuit Protection	Yes
Short Circuit Protection	Yes
Overtemperature Protection	Yes
Over/Undervoltage Protection	Yes
Over/Undervoltage Indicator	Yes
Output Compensation	Yes
IP Rated 0–10V	Yes
Internal EMI Suppression	Yes
AC Input	Yes

### Safety Certifications

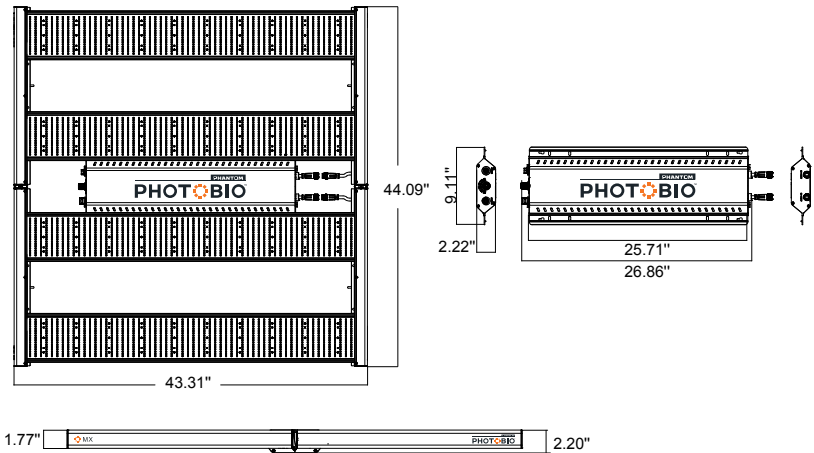
UL	N/A
ETL	Yes
CE	Yes
FCC Commercial	Yes
FCC Residential	Yes



### Mechanical Specification

Dimensions (L x W x H)	1120 x 1100 x 56 mm / 44.09" x 43.31" x 2.2"
Net Weight	21.54 kg / 47.5 Lb
Thermal Management	Passive
Material	Aluminum, Stainless Steel

### Dimensional Drawing



**WARNING – POSSIBLE RISK OF INJURY TO EYES AND SKIN**

Hazardous optical UV, HEV, and IR radiation may be emitted from the light source. Always wear personal protective equipment ensuring complete shielding of skin and eyes. Avoid prolonged exposure and looking directly at light source.