

Horticulture LED Grow Light



Indoor Farming Hydroponic





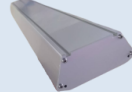


1) Standard Spectrum to choose

Spectrum	Wavelength	WW / SWW	R/B/W	PCR/W	R/B
UV RED BLUE GREEN WHITE FAR RED	200-400nm 400-500nm 500-600nm 600-700nm 700-800nm	Sun-like light recipe (include full spectrum) for all leafy greens, vegetables at all Grow Stages	This full spectrum =spectrum is designed for higher energy consumption and create higher crop yields!	More Red colors for soft fruit/ follower and bloom stage	A highly efficient growth spectrum require fast, but compact growth in the form of shorter internodal distances and thicker stems.

2) Choose Lamp Fixture for your requirement

Quelighting Lamp fixture Portfolio

TYPE	PHOTO	Input	Spectrum	POWER	Product finish
ECOTUBE		100-240VAC	WW, SWW, RBW PCRW, RB	28W	Full Plastic
COMBO		DC48V or (120-277VAC)	WW, RBW PCRW, RB	43W	Aluminum Glass cover
QBoard		24VDC 48VDC	RBW PCRW, RB	50W / 30x45cm 100W / 40x60cm	PCB
STRIP		24VDC	RBW, RB	50W / 200cm	Silicon Sealed PCB
ARES		36VDC	WW, RW RB	60~70W	Aluminum PC Diffuser



LEDs for Horticulture Light

3030 PKG



Mid Power 0.5~1W

Model	Brightness (lm/mW)	μmol/s	μmol/J	Color	Wavelength(nm) /CCT	Drive Current (mA)	Vf typ. (V)
QLSP04UV	150 mW	0.6	1.25	UV	400~410	150mA	3.2
QLSP04UV	180 mW	0.7	1.46	UV	420~430	150mA	3.2
QLSP04NW	80 lm	1.14	2.5	White	4000K	150mA	2.9
QLSP04RB	275 mW	1.04	2.4	Royal Blue	450~460	150mA	2.9
QLSP04DR	135 mW	0.82	2.7	Deep Red	650~670	150mA	2
QLSP04FR	105 mW	0.6	2.0	Far Red	720~740	150mA	2
QLSP04PCR		1.76	1.8	PC Red		300mA	2.9

3535 PKG



High Power 3W

Model	Brightness (lm)	μmol/s	μmol/J	Color	Wavelength(nm) /CCT	Drive Current (mA)	Vf typ. (V)
QLSP07RBU	720 mW	2.7	2.57	Royal Blue	450~460	350mA	3.2
QLSP07NWU	170 lm	2.4	2.3	White	4000K	350mA	3.1
QLSP07DRU	435 mW	2.4	3.3	Deep Red	650~670	350mA	2
QLSP07FRU	300 mW	1.86	2.79	Far Red	720~740	350mA	1.9

FEATURES - Artificial Light Speeds up the Growing stages



- UV (380~490nm) Guides plants to flower, help in sterilization
- Blue Violet (400~410nm) Promotes leaf growth, responsible for green color
- Deep blue (440~460 nm) : Responsible for root growth, leaf growth, prevents role of leggy.
- Green (515~535nm): Less liked by plants, so artificial lights compose less green element.
- Yellow (585~595nm): Enhance taste, Boosts trace elements, and nutrition filled contents.
- Orange (600~610nm) : Improves leaf & root quality, obtains gloss, fruits becomes tasty.
- Red (660nm) : Plants obtain boosting energy for photosynthesis, and photoperiod.
- Far Red (730 nm) : promote plant rhyrome's growth and flowering result for best yields.



Quelighting Corp.

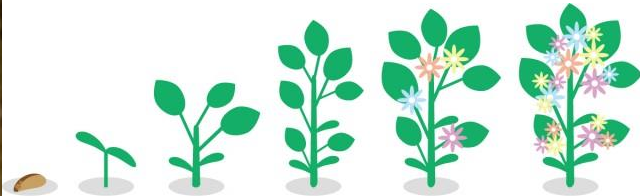
Cares the Earth we all live in together.
 For more information- Write us E-mail

www.quelighting.com
sales@quelighting.com

886-3-4227388
 886-3-4227387

■ For Indoor Farming systems

The right light recipe to accommodate full-cycle stage of your crops.



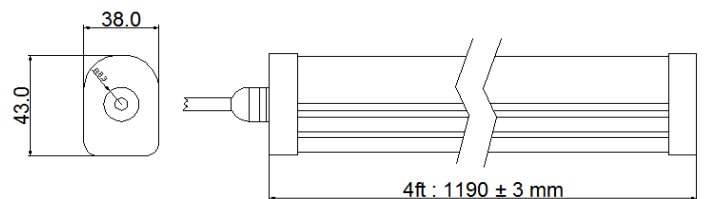
◆ Features:

- Economical solution and ideal for indoor vertical crop cultivation.
- Easily replace traditional fluorescent T8 tube while increase light efficiency.
- With standard Spectrum (RBW / RB / PCRW / WW) for options.
- Ultra light weight by full plastic tube fixture.
- Alternative specifications and spectrum is available under customized request.
- Suggest 8pcs (15cm lamp space) in 120cm² growing area.
PPFD >260 umol/m²s at 20cm distance from crops
PPFD >220 umol/m²s at 30cm distance from crops.
- 1 years warranty for great reliability.

◆ Specifications:

◆ Mechanical Dimension:

ECOTUBE



ECOTUBE Economical Grow LED Light Tube



for indoor farming systems : 28W

Features:

- Ultra light weight to save your shipping cost
- Equip with water resistant connector for High reliability
- Multiple spectrum average PPFD~100 $\mu\text{mol}/(\text{m}^2\text{s})$ for different crop cultivation and suit for all growing stages
- Transparent and oval diffuser create uniformity and better light distribution
- Select high efficiency LEDs chips for high enger saving



Specifications:

Type	ECOTUBE Series				
Model No.	ECOT8-WW-28	ECOT8-SWW-28	ECOT8-RBW-28	ECOT8-PCRW-28	ECOT8-RB-25
Photo					
AC Input Voltage	AC 100~240V	AC 100~240V	AC 100~240V	AC 100~240V	AC 100~240V
Rated Power	28W \pm 7%	28W \pm 7%	27W \pm 7%	28W \pm 7%	23W \pm 7%
Spectrum	Neutral White	Solar White	Red/Blue/White	PCRed/ White	Red/Blue
	4000K	4000K	660nm/450nm/5000K	660nm/5000K	660nm/450nm
PPFD $\mu\text{mol}/\text{s}/\text{m}^2$	136.6 $\mu\text{mol}/(\text{m}^2\text{s})$	126.6 $\mu\text{mol}/(\text{m}^2\text{s})$	129.9 $\mu\text{mol}/(\text{m}^2\text{s})$	96.85 $\mu\text{mol}/(\text{m}^2\text{s})$	103.9 $\mu\text{mol}/(\text{m}^2\text{s})$
LED Q'ty	192pcs	192pcs	192pcs	192pcs	192pcs
PPF $\mu\text{mol}/\text{s}$	68 $\mu\text{mol}/\text{s}$	63 $\mu\text{mol}/\text{s}$	59.75 $\mu\text{mol}/\text{s}$	58.5 $\mu\text{mol}/\text{s}$	64.35 $\mu\text{mol}/\text{s}$
Efficiency ($\mu\text{mol}/\text{j}$)	2.7 $\mu\text{mol}/\text{j}$	2.5 $\mu\text{mol}/\text{j}$	2.5 $\mu\text{mol}/\text{j}$	2.1 $\mu\text{mol}/\text{j}$	2.3 $\mu\text{mol}/\text{j}$
LED lifespan	>30,000 hrs	>30,000 hrs	>30,000 hrs	>30,000 hrs	>30,000 hrs
Beam Width	120°	120°	120°	120°	120°
Approval	CE Declaration , RoHS Compliance				
Waterproof Grade	IP 65				
Connector	20cm				
Dimension	W38 x H45 x L 1190mm				
Product finish	all-in-one integrated				
All parameters tested under 25°C ambient temperature					

Applications:



Indoor Farming



Container Farm



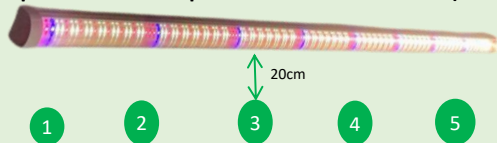
Multilayer Shelf

Spectrum Available:

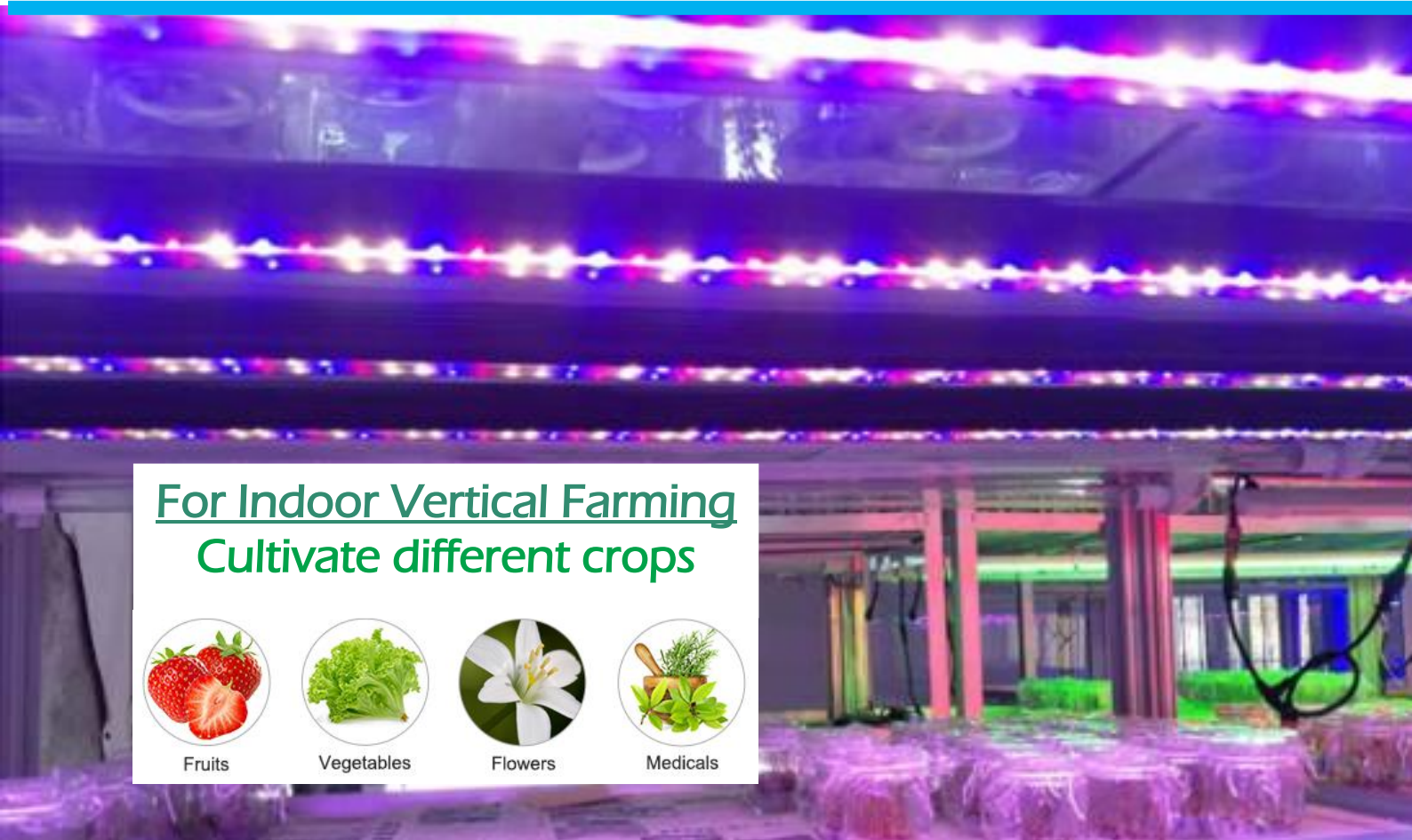
- WW = Neutral White
- RBW = Deep Red , Blue , White
- PCRW = PCRed, White
- RB = Deep Red, Blue
- SWW = Solar White

PPFD result @ 18cm Distance

1pc ECOTUBE of 5 points PPFD measurement($\mu\text{mol}/\text{s}/\text{m}^2$)



5 Points of PPFD test by Spectrometer PG200N						
Spectrum	Power	1	2	3	4	5
WW	28W	113.9	126.6	136.6	122.9	99.27
RBW	25W	100.5	128.2	129.9	124.7	103.2
PCRW	28W	71.63	77.94	96.85	81.97	73.08
RB	23W	74.4	95.1	103.9	97.4	73.99
SWW	28W	96.5	114.2	126.6	112.4	94.5



For Indoor Vertical Farming
Cultivate different crops



Fruits



Vegetables



Flowers



Medicals

◆ Features:

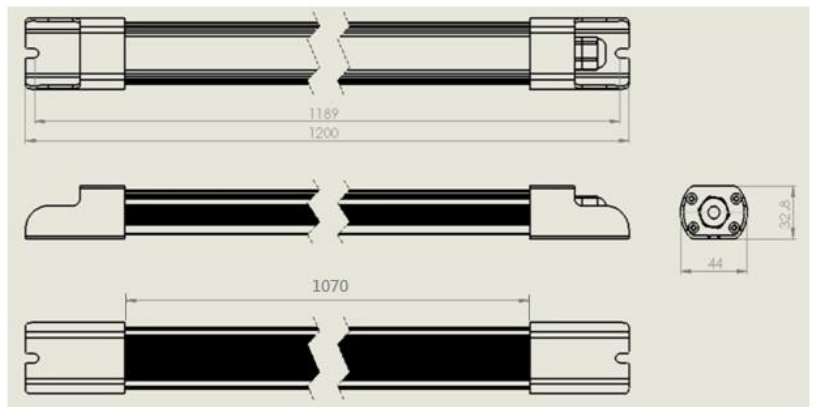
- Aluminum product fixture for passive air cooling.
- 0-10V Dimmable optional under request.
- Standard specifications for full-cycle growing stages to accommodate your plants.
- With standard Spectrum (WW / RBW / RB / PCRW) for options.
- Select high efficiency LEDs to increase the harvest volume by saving up to 50% energy
- suggest install 4pcs(25cm lamp space) , distance 25~30cm from plants in 100cm² growing bed

◆ Specification:



COMBO

◆ Mechanical Dimension:



for indoor farming systems : 40W

Features:

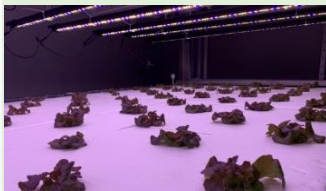
- Aluminum fixture for better heat dissipation (passive air cooling)
- Equip with water resistant connector for High reliability
- Multiple spectrum average PPF150~200 $\mu\text{mol}/(\text{m}^2\text{s})$ for different crop cultivation and suit for all growing stages
- Built in driver or exclusive LED driver optional according to your vertical farm construction
- Select high efficiency LEDs chips for better light distribution



Specifications:

Type	COMBO Series			
Model No.	COMBO-WW-40	COMBO-RBW-43	COMBO-PCRW-40	COMBO-RB-43
Photo				
AC Input Voltage	AC 100~240V	AC 100~240V	AC 100~240V	AC 100~240V
Rated Power	40W \pm 7%	43W \pm 7%	40W \pm 7%	43W \pm 7%
Spectrum	Neutral White	Red/Blue/White	PCRed/ White	Red/Blue
	4000K	660nm/450nm/5000K	660nm/5000K	660nm/450nm
PPFD $\mu\text{mol}/(\text{m}^2\text{s})$	204.1 $\mu\text{mol}/(\text{m}^2\text{s})$	205.4 $\mu\text{mol}/(\text{m}^2\text{s})$	168.8 $\mu\text{mol}/(\text{m}^2\text{s})$	182.4 $\mu\text{mol}/(\text{m}^2\text{s})$
LED Q'ty	256pcs	224pcs	192pcs	256pcs
PPF $\mu\text{mol}/\text{s}$	87.13 $\mu\text{mol}/\text{s}$	90.9 $\mu\text{mol}/\text{s}$	69.87 $\mu\text{mol}/\text{s}$	81.32 $\mu\text{mol}/\text{s}$
Efficiency ($\mu\text{mol}/\text{j}$)	2.1 $\mu\text{mol}/\text{j}$	2.1 $\mu\text{mol}/\text{j}$	1.7 $\mu\text{mol}/\text{j}$	1.8 $\mu\text{mol}/\text{j}$
LED lifespan	>30,000 hrs	>30,000 hrs	>30,000 hrs	>30,000 hrs
Beam Width	120°	120°	120°	120°
Approval	CE Declaration , RoHS Compliant			
Waterproof Grade	IP 54			
Distance from Plants	20cm~30cm			
Dimension	W44 x H32.8 x L 120 cm			
Warranty	2 years <small>2 Years (transformer built outside.)</small>			
All parameters tested under 25°C ambient temperature				

Applications:



Indoor Farming

Multilayer Shelf

Spectrum Available:

- WW = Natural White
- RBW = Deep Red , Blue , White
- PCRW = PCRed, White
- RB = Deep Red, Blue

PPFD result @ 20cm Height

Use spectrometer test 5 points of PPFD ($\mu\text{mol}/\text{m}^2\text{s}$)

COMBO LAMP -100cm length		5 Points of PPFD test by Spectrometer PG200N					
Spectrum	Power	1	2	3	4	5	
WW	40W	146	201.8	204.1	204.6	155.6	
RBW	43W	153.7	202.4	205.4	204.4	155.8	
PCRW	40W	113.6	155.4	168.8	154.5	115.1	
RB	43W	138	185.1	182.4	180	144.8	





■ For Indoor Farming systems

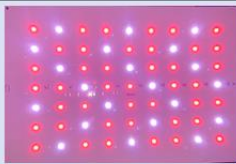
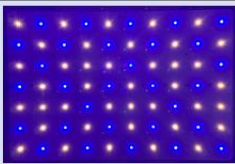
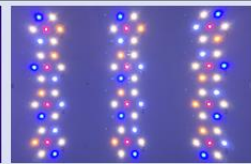
The right light recipe to accommodate each growing stage of your crops.



◆ **Features:**

- Economical solution and ideal for indoor vertical crop cultivation.
- Easy and flexible installations by screw holes on the LED boards.
- Standard specifications for full-cycle growing stages to accommodate your plants.
- Customized specifications and spectrum is available under requirement.
- High energy efficiency, long life time to improve climate control.
- Dimmable by 0-10V under additional request.

◆ **Specifications:**

QPLATE Series			
Dimension	29x49cm	30x45cm	40x60cm
Spectrum	RBW / RW / RB or customize		
PCB layout			

Qboard



for indoor farming systems: 50~100W

Features:

- Aluminum fixture for better heat dissipation (passive air cooling)
- Equip with water resistant connector for High reliability
- Multiple spectrum average PPFD150~200 $\mu\text{mol}/(\text{m}^2\text{s})$ for different crop cultivation and suit for all growing stages
- Built in driver or exclusive LED driver optional according to your vertical farm construction
- Select high efficiency LEDs chips for better light distribution

Specifications:

Type	Qboard Series			
Model No.	Qboard-3045-RBW-50	Qboard-3045-PCRW-50	Qboard-4060-RBW-110	Qboard-4060-RBW-350
Photo				
Input Voltage	24VDC or 48VDC	24VDC or 48VDC	24VDC or 48VDC	24VDC or 48VDC
Rated Power	50W \pm 7%	50W \pm 7%	110W \pm 7%	110W \pm 7%
Spectrum	Red/Blue/White	PCRed / White	Red/Blue/White	Red/Blue/White
	660nm/450nm/5000K	660nm/5000K	660nm/450nm/5000K	660nm/450nm/5000K
PPFD $\mu\text{mol}/\text{s}/\text{m}^2$	288.3 @30cm	339.7 @30cm	413.9 @30cm	>1000 @50cm
LED Q'ty	70pcs	70pcs	144pcs	520pcs
LED lifespan	>30,000 hrs	>30,000 hrs	>30,000 hrs	>30,000 hrs
Beam Width	140°	140°	140°	140°
Approval	CE Declaration , RoHS Compliant			
Waterproof Grade	IP 54			
Distance from Plants	20cm~30cm~50cm			
Dimension	30x45cm or 40-60cm Plate			
Product finish	Aluminum Board with silicon sealed LEDs			
All parameters tested under 25°C ambient temperature				

Ordering Note

Specifications can be amended by request.

- 1) Choose LED Board Size first
- 2) Select preferred Spectrum / or customize
- 3) Check the output Power consumption for each LED board
- 4) confirm LEDs Layout
- 5) additional function (Dimmable or Hot Plugging or so)

Spectrum Available:

- WW = Natural White 5000K & 4000K
- RBW = Deep Red, Blue , White
- PCRW = PCRed, White
- RB = Deep Red, Blue

Applications:



Indoor Farming



Multilayer Shelf



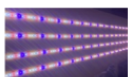
For Container Farming



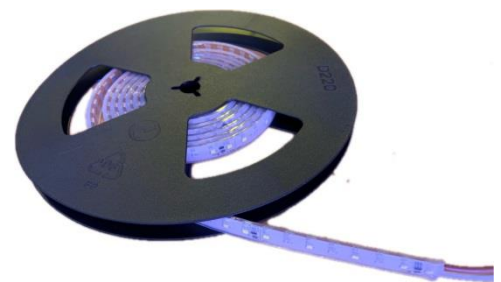
◆ Features:

- Silicone sealed, transparent rope type for flexible installation.
- Can be supplemental light in Greenhouse/Canopy while sunlight is insufficient
- Standard specifications for full-cycle growing stages to accommodate your plants.
- With standard Spectrum (RBW / RB) for options.
- Select high efficiency LEDs to increase the harvest volume by saving up to 50% energy
- suggest 5~10cm lamp space like light curtain, distance 20cm from plants for container farm.

◆ Specification:

STRIP Series		
Model Number	STRIP-RBW-50	Spectrum
DC Input Voltage	DC 24V	RBW the best recipe to increase crop yields
Power Consumption	14.4/M	
PPFD ($\mu\text{mol}/\text{m}^2/\text{s}$) @H25cm 4 ropes (spacing 5cm)	 232.3 μmol	
Efficiency ($\mu\text{mol}/\text{j}$)	1.2	
LED Lifespan	> 30,000 hrs	RB increase growing speeds
Beam width emission	120°	
IP Grade	IP54	
Dimension	W1.8 x L 200CM	
Weight	0.9 kgs	
Approval	CE, RoHS	
Warranty	1 years	

All parameters tested under 25°C ambient temperature



STRIP



for Supplemental light

Features:

- Silicone sealed, transparent rope type for flexible installation.
- 60W/200cm as standard length best for container height and narrow space of growing plants
- Multiple spectrum average PPFD 50~100 $\mu\text{mol}/(\text{m}^2\text{s})$ for different crop cultivation and suit for all growing stages
- SMD3030 LED chips with high efficiency
- Select high efficiency LEDs chips for better light distribution

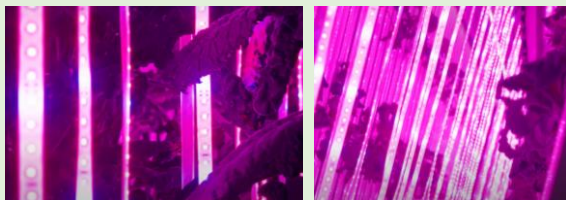
Specifications:

Type	STRIP Series			
Model No.	STRIP-RBW-35	STRIP-RBW-60	STRIP-RB-35	STRIP-RB-60
Photo				
Input Voltage	24VDC	24VDC	24VDC	24VDC
Rated Power	35W \pm 7%	60W \pm 7%	35W \pm 7%	60W \pm 7%
Spectrum	Red/Blue/White	Red/Blue/White	RED / Blue	RED / Blue
PPFD $\mu\text{mol}/\text{s}/\text{m}^2$	80.03 $\mu\text{mol}@20\text{cm}$	80.03 $\mu\text{mol}@20\text{cm}$	73.8 @20cm	73.8 @20cm
LED lifespan	>30,000 hrs	>30,000 hrs	>30,000 hrs	>30,000 hrs
Beam Width	120°	120°	120°	120°
Approval	CE Declaration , RoHS Compliant			
Waterproof Grade	IP 65			
Distance from Plants	20~25cm			
Dimension	W1.6cm x L120 cm	W1.6cm x L200 cm	W1.6cm x L120 cm	W1.6cm x L200 cm
Product finish	silicone sealed, cable end			
All parameters tested under 25°C ambient temperature				

Applications:



Indoor Farming



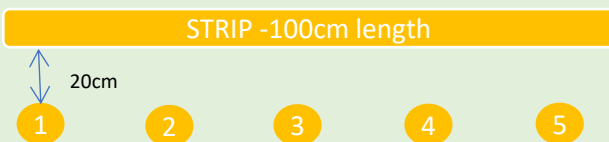
Container Farming

Spectrum Available:

- **RBW** = Deep Red , Blue , White
- **RB** = Deep Red, Blue (4R:1B)

PPFD result @ 20cm Height

Use spectrometer test 5 points of PPFD ($\mu\text{mol}/\text{m}^2\text{s}$)

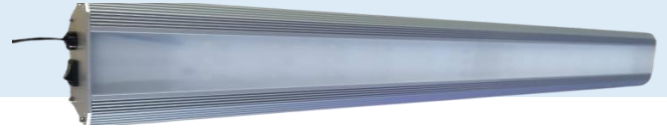


5 Points of PPFD @ 20cm Height / Test by Spectrometer PG200N						
Spectrum	Power	1	2	3	4	5
RBW	35W	60.15	76.78	80.03	71.39	56.63
RB	35W	55.4	72.9	73.8	71.3	58.8

ideal for High Power >100W

Features:

- Built-in driver to extend the fixture length by custom request
- 3 colors dimmable separately for LAB experiment or Standard Full Spectrum for GreenHouse
- Red/ Blue/ White spectrum for all growing stages
- High PPFD for better light efficiency
- Select high efficiency LEDs chips for better light distribution



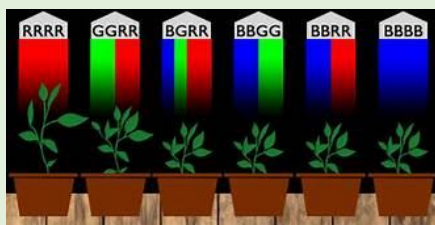
Specifications:

Model Name	ARES series - 3 colors Dimmable	Standard Full Spectrum
Model No.	ARES-RBW-150D	ARES-RBW-100
Input Voltage	120-240VAC	
Rated Power	Max. 150W ± 7% Red: 50W , White: 50W, Blue: 50W	Max. 100W
Spectrum	Red/Blue/White	Red/Blue/White
LED Q'ty (pcs)	RED:336pcs / White:300pcs / Blue: 300pcs	
LED lifespan	>30,000 hrs	
Beam Width	120°	
Approval	CE Declaration , RoHS Compliant	
Waterproof Grade	IP 54	
Distance from Plants	Best PPFD @100~150cm	
Dimension	L150 x W10 x H4.35 cm	L120 x W10 x H4.35 cm
Weight(g)	2.2kg/pc	1.8kg/pc
Product finish	Aluminum fixture , PC diffuser	
All parameters tested under 25°C ambient temperature		

Applications:



Indoor Farming



Growing Experiment

Spectrum Available:

- RBW = Deep Red , Blue , White



Installation: (Hang on Top)

Hang kit



Push bottom to adjust hang distance
(Max. distance adjustable : 35cm)