



LED LIGHTING FOR

PLANTS GROWTH

AND BIO ENGINEERING



Developed and manufactured in Spain



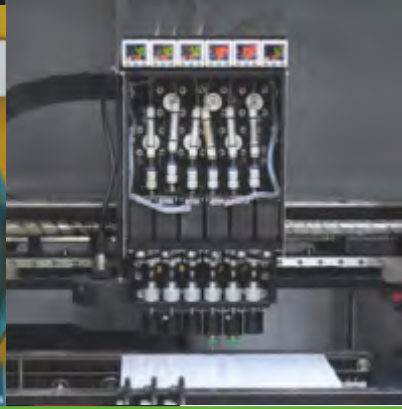
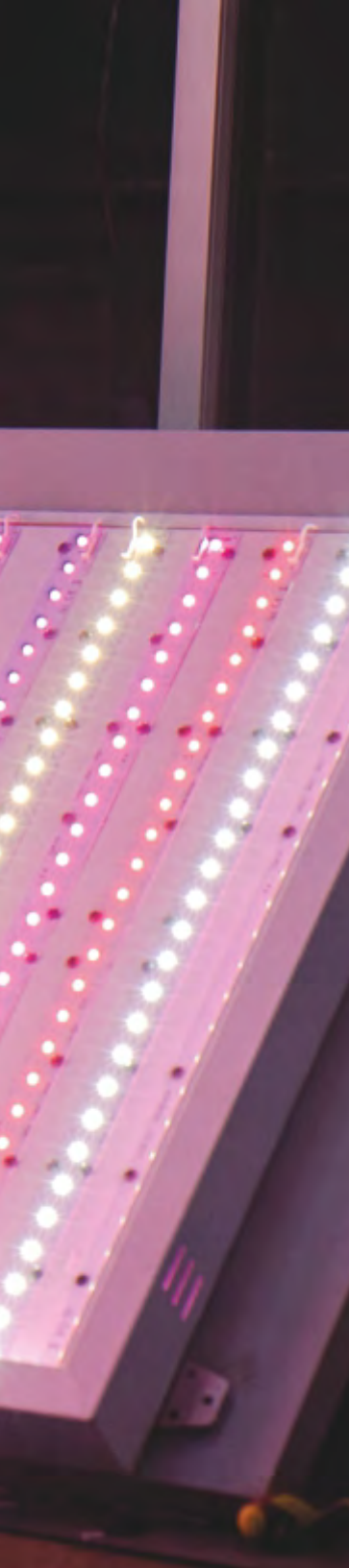
INDUSTRIAL

APPLIANCES

DESIGNED

PLANTS GROWING

TISSUE CULTURE - DESINFECTION - RESEACH



More than 10 years of experience
and 20 professionals working to
develop and manufacture the best
LED appliances



Cooperations with main laboratory
and research centers to study
plants behavior with different light
spectrums



Automatic SMT line and assembling
facilities



Integrated sphere for spectrum and
PPD measurements



Technical support and custom
projects development



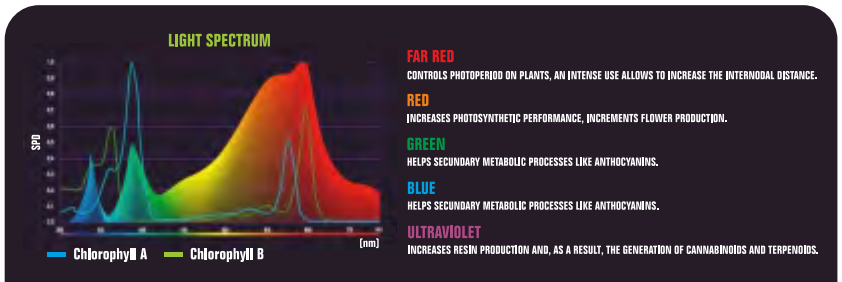
MODULAR VISITABLE GROWTH CHAMBERS

CUSTOM SPECTRUM

We have a wide selection of wavelengths for photo-biological research, for example UV-A 390 nm, 455 nm blues, 530 nm greens, 660 nm reds and 730 nm far-red.

Likewise, we have specific spectrum for use in specific applications, for example a better production of secondary metabolites, including rising and better caretenoids in tomato production or an improvement of the specific metabolites in micro-algae.

- **Common applications: growth conditions of controlled plants:** temperature and humidity with photoperiods.
- **Light intensity in common applications:** 20-1200 $\mu\text{mol m}^{-2}\text{s}^{-1}$.
- **Available spectra:** 360 to 730 nm, depending on the required luminaire.



	S 60	M 90	L 120	XL 150
CONSUMPTION	25 W	40 W	50 W	80 W
DIMENSION (MM) (LENGTH/DIAMETER)	595 / Ø 26	895 / Ø 26	1.198 / Ø 26	1.498 / Ø 26
DIMENSION (INCHES) (LENGTH/DIAMETER)	23.4" / Ø 1.02"	35.2" / Ø 1.02"	47.2" / Ø 1.02"	59.0" / Ø 1.02"
CERTIFICATES	Marked CE			
SPECTRUM	Depending on the necessity: adjustable espectrum and intensity			
PDF INTENSITY	from 5 $\mu\text{mol m}^{-2}\text{s}^{-1}$ to 1200 $\mu\text{mol m}^{-2}\text{s}^{-1}$			
DISTANCE TO THE PLANT	100 to 400 mm			
DECAY OF LIGHT INTENSITY	Max. 10% at 35.000h in standard applications 50.000 h			
LIGHT EFFICIENCY (380-820 NM)	Up to 2,2 $\mu\text{mol/W}$ (depending on the spectrum)			
AMBIENT WORK TEMPERATURE	0/+50°C (32-100° F)			

Available with transparent or diffusive cover, G13 connecting elad, IP20 and IP64 degree of protection with Valoya socket set, according to ROHS, limited 5 years warranty.

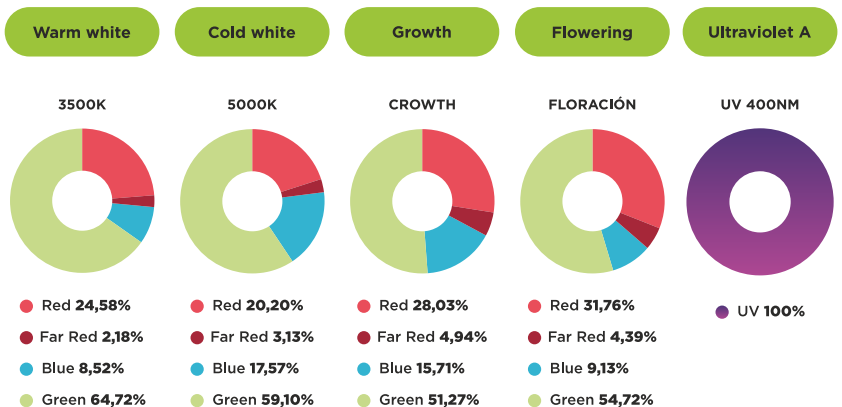
LED LIGHT TUBES ON THE FLUORESCENT TUBE RACKS

Type T6 or T8 tubes allows series of tubes to be installed in the fluorescent tube racks without any modification (magnetic ballast fixing).

Profitable, very easy to install in terminals with IP64 for particular tests, for example.



GUIDE FOR LED TUBES APPLICATIONS



APPLIANCES BASED ON YOUR CROP

	Darwin Panel Eco	Heisenberg Panel	Curie Protect	Faraday Slim	Planck Profiles
Homegrowing	● ● ●	● ● ●	●	●	● ●
Flower Producers	● ●	● ● ●	●	● ●	●
Clones	● ●	● ●	● ●	● ● ●	●
Mother rooms	● ●	● ● ●	●	● ●	●
Greenhouses	●	●	● ● ●	● ● ●	●
Tissue Culture	●	●	● ●	● ● ●	● ●
Seed Producers	●	● ● ●	● ●	●	●

Light quality

The development of our **crop specific spectrums** is a result of years of research and they have been created with the most demanding. Our team of biologists will track the progress of your yields and advise accordingly to help you **reach these goals**.

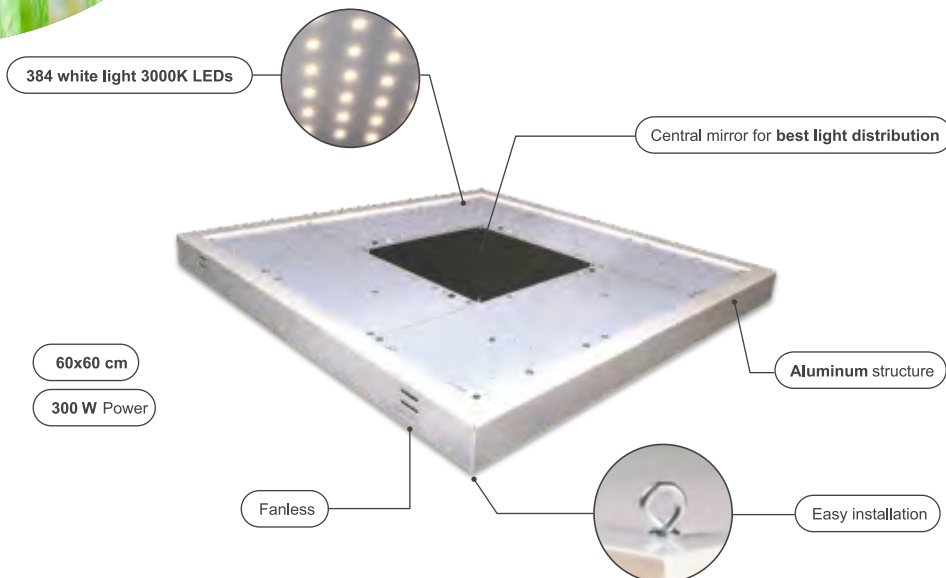
Return of investment

Discharge lamps as HPS or CLF need to be replaced yearly, our lamps don't drop the light performance along their lifespan.



DARWIN | 60CM 300W ECONOMY PANEL

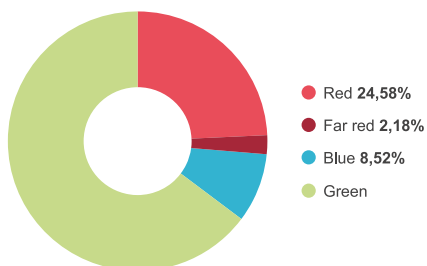
BIO



TECHNICAL SPECIFICATIONS

Power	300 W
Input voltage	220-240 V
Input current	1,3 A
Efficiency	2,1 $\mu\text{mol}/\text{m}^2/\text{s}'$
PPF	629,40 $\mu\text{mol}/\text{s}$
Beam angle	120°
Waterproof	IP44°
Working temperature	20 - 30°C
Cooling	Passive
Weight	7,5 kg
Sizing	600x600x55mm
Plugin	Schuko 1,5M (included)
Certifications	IK03, IP40, CE, RoSH

SPECTRUM RATIOS



ref: BIO/PANEL60/300/H

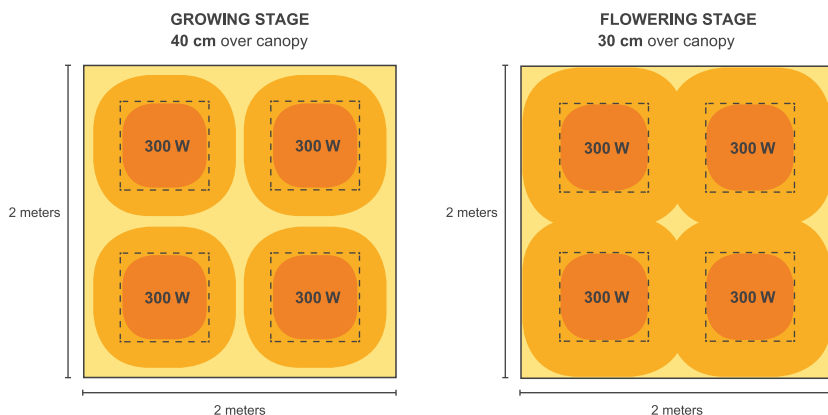


Up to 850 $\mu\text{mol/s}$

Shadowless, better light penetration

- ✓ Homegrowing choice
- ✓ Designed to cover 1 m^2

Light distribution over 2x2 m. with 4 lamps

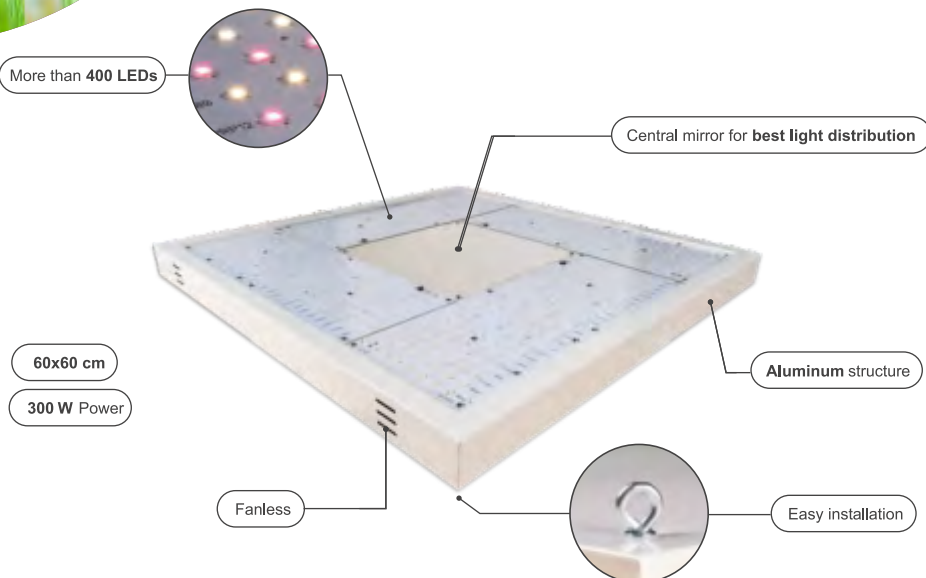


Approximate reference values

● 0 - 294 $\mu\text{mol/s}/\text{m}^2$ ● 294 - 515 $\mu\text{mol/s}/\text{m}^2$ ● 515 - 736 $\mu\text{mol/s}/\text{m}^2$

HEISENBERG | HYBRID 60CM 300W PANEL

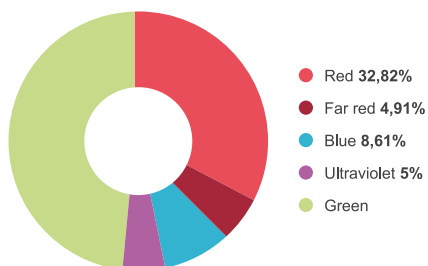
BIO



TECHNICAL SPECIFICATIONS

Power	300 W
Input voltage	220-240 V
Input current	1,3 A
Efficiency	2,1 $\mu\text{mol/J}$
PPF	629,40 $\mu\text{mol/m}^2/\text{s}^1$
Beam angle	120°
Waterproof	IP44°
Working temperature	20 - 30°C
Cooling	Passive
Weight	7,5 kg
Sizing	600x600x55mm
Plugin	Schuko 1,5M (included)
Certifications	IK03, IP40, CE, RoSH

SPECTRUM RATIOS



ref: BIO/PANEL60/300/H

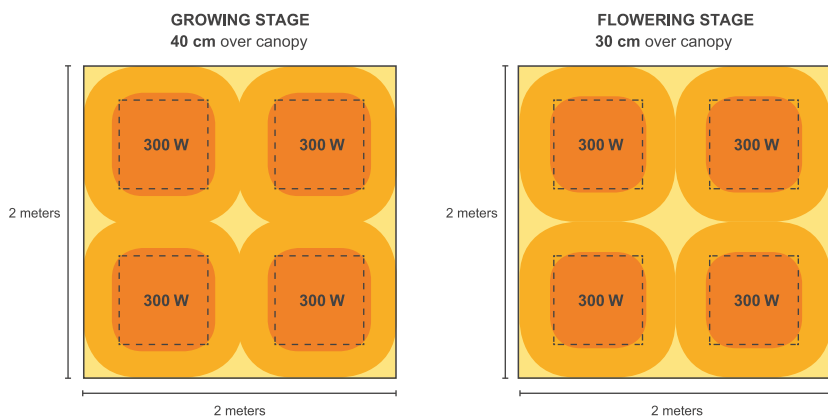


Up to 850 $\mu\text{mol/s}$

Shadowless, better light penetration

- ✓ Homegrowing choice
- ✓ Designed to cover 1 m^2

Light distribution over 2x2 m. with 4 lamps

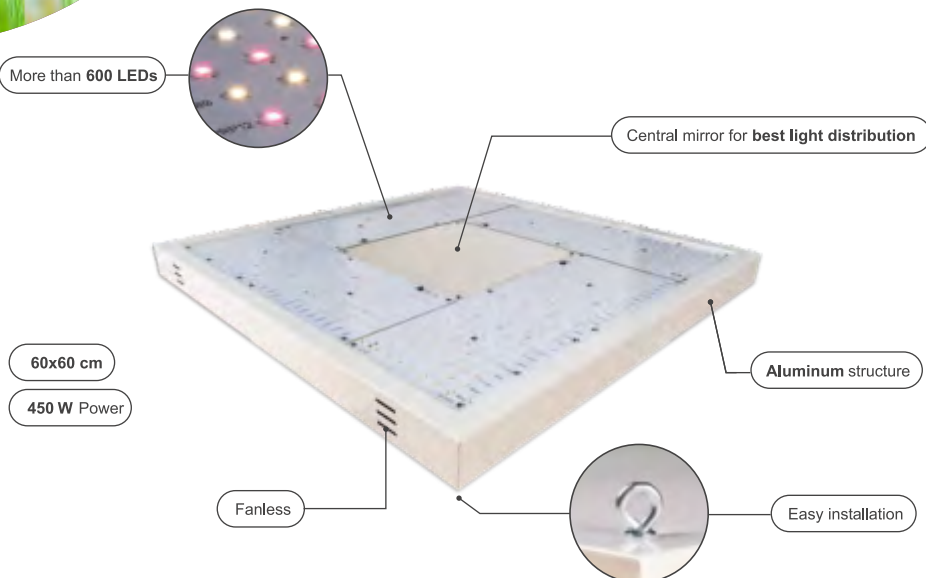


Approximate reference values

● 0 - 315 $\mu\text{mol/s}/\text{m}^2$
● 315 - 595 $\mu\text{mol/s}/\text{m}^2$
● 595 - 850 $\mu\text{mol/s}/\text{m}^2$

HEISENBERG | HYBRID 60CM 450W PANEL

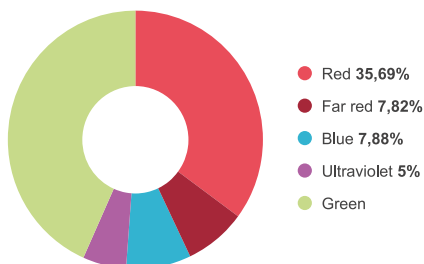
BIO



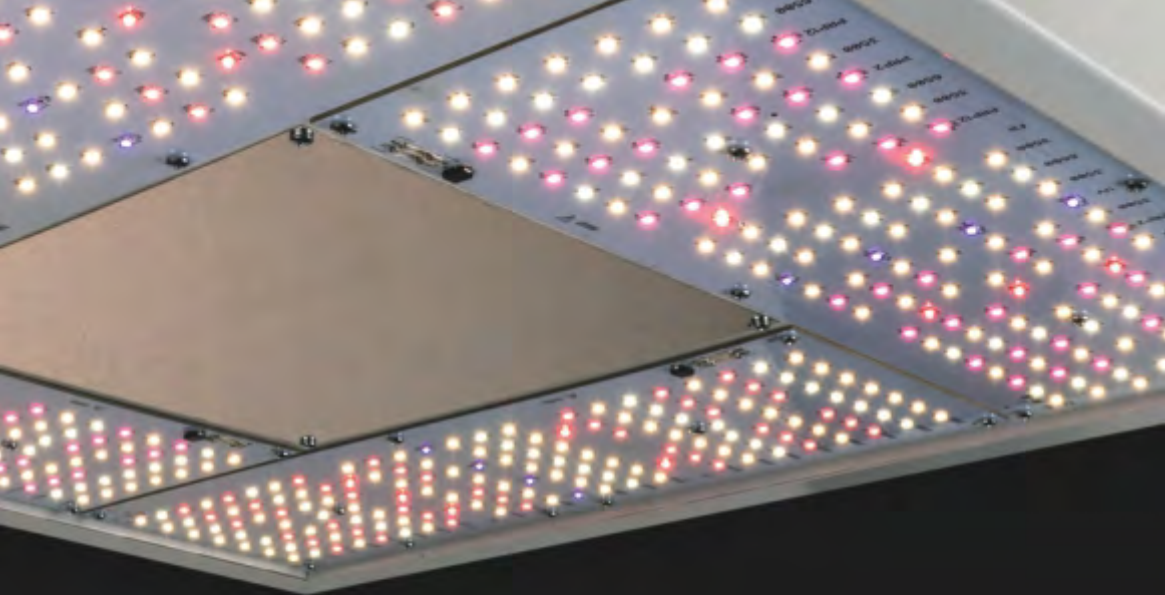
TECHNICAL SPECIFICATIONS

Power **450 W**
 Input voltage **220-240 V**
 Input current **1,95 A**
 Efficiency **2,3 $\mu\text{mol/J}$**
 PPF **905,36 $\mu\text{mol/m}^2/\text{s}^1$**
 Bean angle **120°**
 Waterproof **IP44°**
 Working temperature **20 - 30°C**
 Cooling **Passive**
 Weight **8,1 kg**
 Sizing **600x600x55mm**
 Plugin **Schuko 1,5M (included)**
 Certifications **IK03, IP40, CE, RoSH**

SPECTRUM RATIOS



BIO/PANEL60/450/H

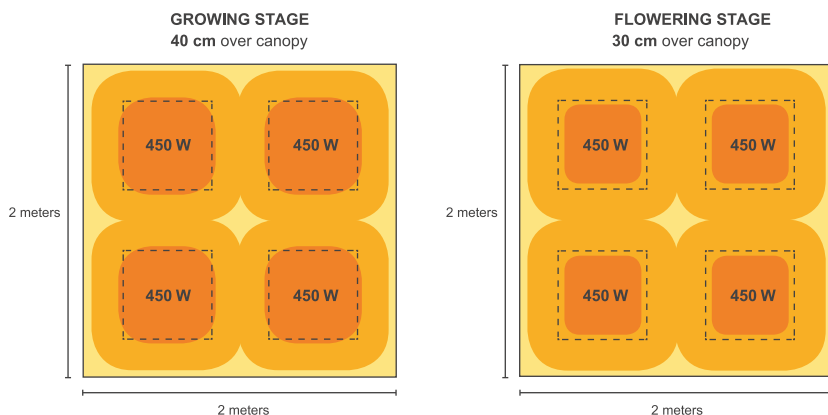


Up to 1450 $\mu\text{mol/s}$

Shadowless, better light penetration

- ✓ Perfect for professional growers
- ✓ Designed to cover 1 m^2

Light distribution over 2x2 m. with 4 lamps

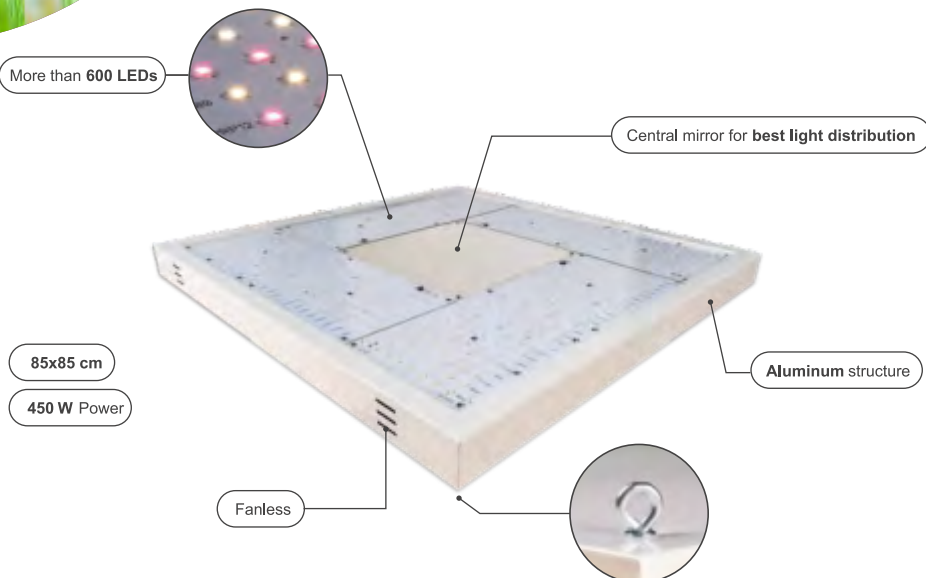


Approximate reference values

- 0 - 400 $\mu\text{mol/s}^1/\text{m}^2$
- 400 - 900 $\mu\text{mol/s}^1/\text{m}^2$
- 900 - 1400 $\mu\text{mol/s}^1/\text{m}^2$

HEISENBERG | HYBRID 85CM 450W PANEL

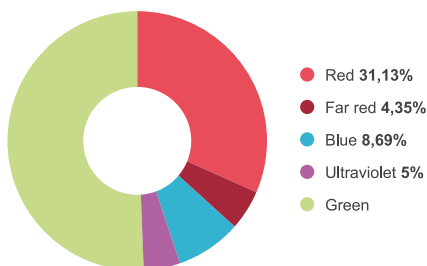
BIO



TECHNICAL SPECIFICATIONS

Power	450 W
Input voltage	220-240 V
Input current	1,95 A
Efficiency	2,1 $\mu\text{mol/J}$
PPF	949,41 $\mu\text{mol/m}^2/\text{s}^1$
Beam angle	120°
Waterproof	IP44°
Working temperature	20 - 30°C
Cooling	Passive
Weight	10,5 kg
Sizing	850x850x55mm
Plugin	Schuko 1,5M (included)
Certifications	IK03, IP40, CE, RoSH

SPECTRUM RATIOS



ref: BIO/PANEL85/450/H

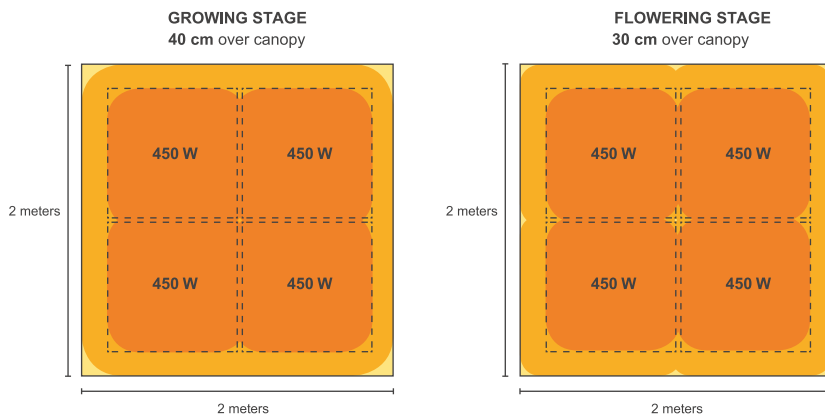


Up to 1050 $\mu\text{mol/s}$

Shadowless, better light penetration

- ✓ Increase your crops over 1000W HPS
- ✓ Designed to cover 1 m^2

Light distribution over 2x2 m. with 4 lamps

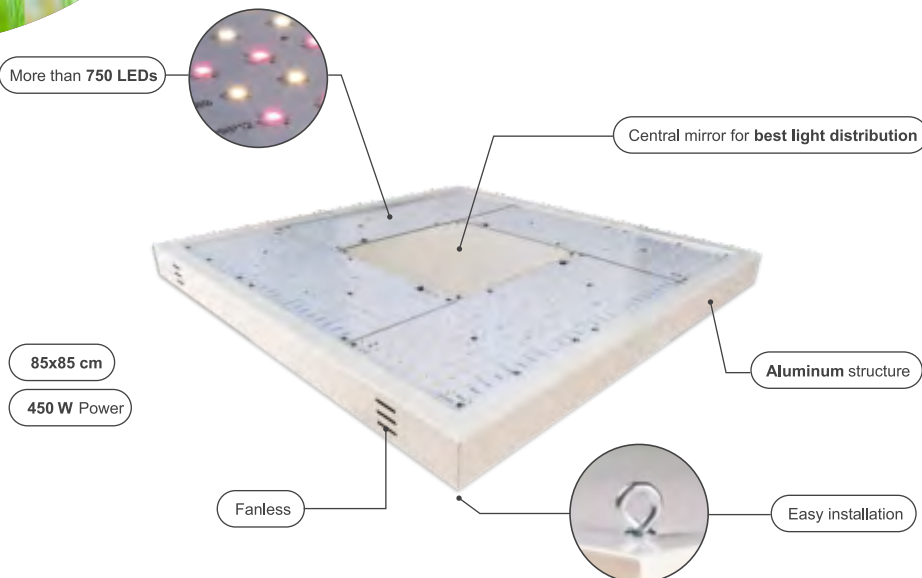


Approximate reference values

● 0 - 400 $\mu\text{mol/s}/\text{m}^2$ ● 400 - 800 $\mu\text{mol/s}/\text{m}^2$ ● 800 - 1020 $\mu\text{mol/s}/\text{m}^2$

HEISENBERG | HYBRID 85CM 600W PANEL

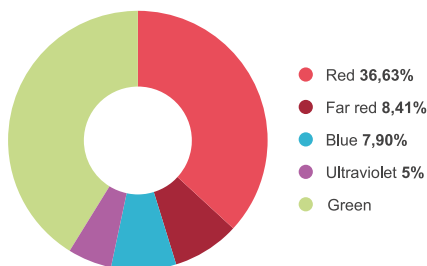
BIO



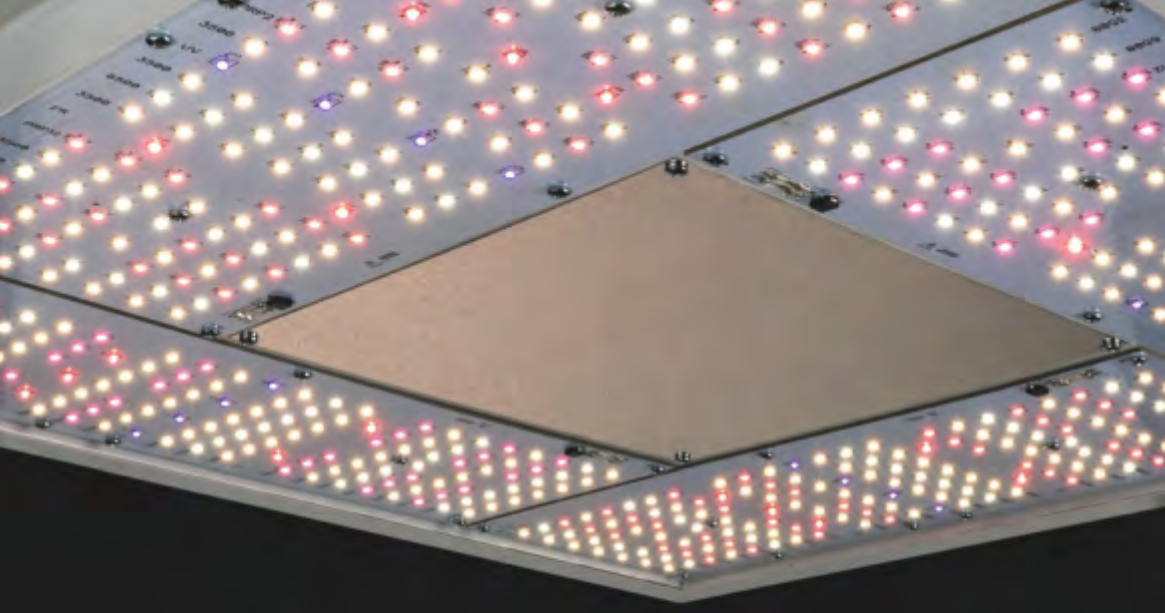
TECHNICAL SPECIFICATIONS

Power	600 W
Input voltage	220-240 V
Input current	2,6 A
Efficiency	2,3 $\mu\text{mol/J}$
PPF	1251,07 $\mu\text{mol/m}^2/\text{s}^1$
Beam angle	120°
Waterproof	IP44°
Working temperature	20 - 30°C
Cooling	Passive
Weight	10,5 kg
Sizing	850x850x55mm
Plugin	Schuko 1,5M (included)
Certifications	IK03, IP40, CE, RoSH

SPECTRUM RATIOS



ref: BIO/PANEL85/600/H

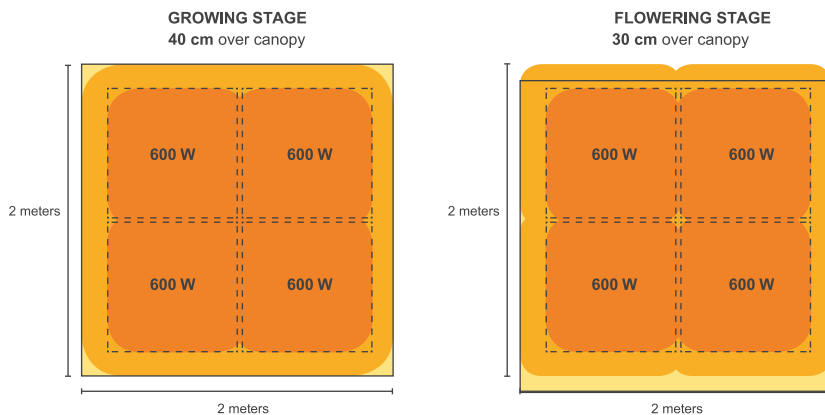


Up to 1388 $\mu\text{mol/s}$

Shadowless, better light penetration

- ✓ Highest yields over m^2
- ✓ Designed to cover 1 m^2

Light distribution over $2 \times 2 \text{ m}$. with 4 lamps



Approximate reference values

● 0 - 550 $\mu\text{mol/s/m}^2$ ● 550 - 1000 $\mu\text{mol/s/m}^2$ ● 1000 - 1400 $\mu\text{mol/s/m}^2$

HEISENBERG | HYBRID 60CM 150W PANEL

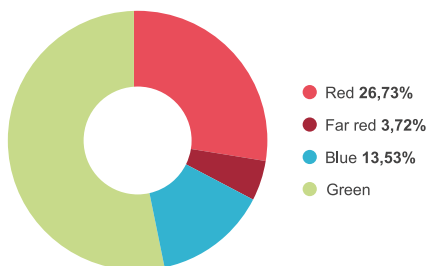
BIO



TECHNICAL SPECIFICATIONS

Power	150 W
Input voltage	220-240 V
Input current	0,65 A
Efficiency	1,96 $\mu\text{mol/J}$
PPF	304,25 $\mu\text{mol/m}^2/\text{s}^1$
Beam angle	120°
Waterproof	IP44°
Working temperature	20 - 30°C
Cooling	Passive
Weight	8,5 kg
Sizing	600x400x65mm
Plugin	Schuko 1,5M (included)
Certifications	IK03, IP40, CE, RoSH

SPECTRUM RATIOS



ref: BIO/PANEL64/150/M



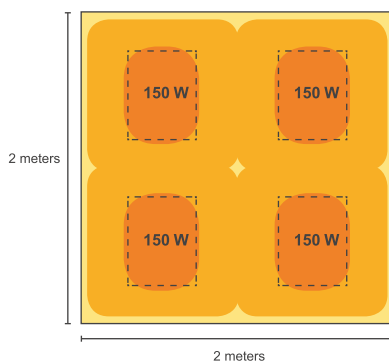
Up to 400 $\mu\text{mol/s}$

Polycarbonate cover

- ✓ Best appliance for mother rooms
- ✓ Designed to cover 1 m^2

Light distribution over 2x2 m. with 4 lamps

GROWING STAGE
40 cm over canopy



Approximate reference values

- 0 - 160 $\mu\text{mol/s}^1/\text{m}^2$
- 160 - 300 $\mu\text{mol/s}^1/\text{m}^2$
- 300 - 410 $\mu\text{mol/s}^1/\text{m}^2$

CURIE | 120CM PROTECT

BIO

Waterproof connector

Hit rate protection

Sealing band for water protection

120 cm

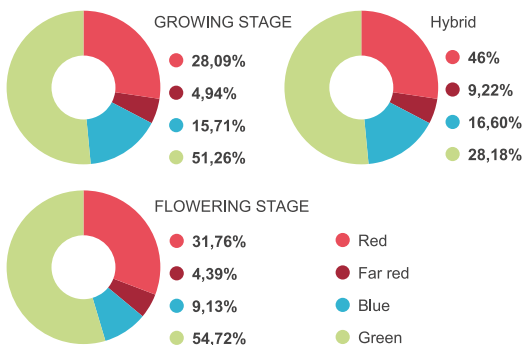
100 W Power

Fanless

TECHNICAL SPECIFICATIONS

Power	100 W
Input voltage	220-240 V
Input current	0,43 A
Efficiency	181 $\mu\text{mol/J}$
PPF	215 $\mu\text{mol/m}^2/\text{s}^1$
Beam angle	120°
Waterproof	IP67°
Working temperature	20 - 30°C
Cooling	Passive
Weight	2,3 kg
Sizing	1200x35x32mm
Plugin	Stucchi IP67 (included)
Certifications	Ik03, IP40, CE, RoSH

SPECTRUM RATIOS



ref: BIO/PROTECT120/100/VEG
BIO/PROTECT120/100/FLO
BIO/PROTECT120/100/HYB

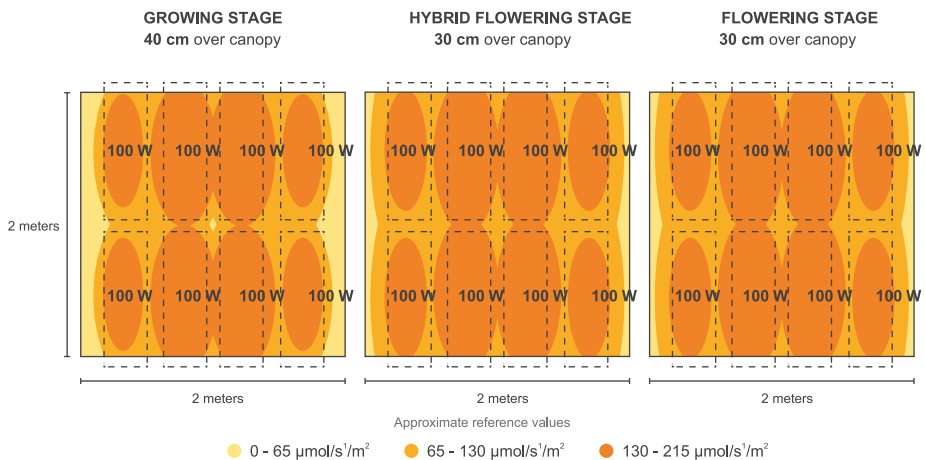


Up to 215 $\mu\text{mol/s}$

Polycarbonate cover

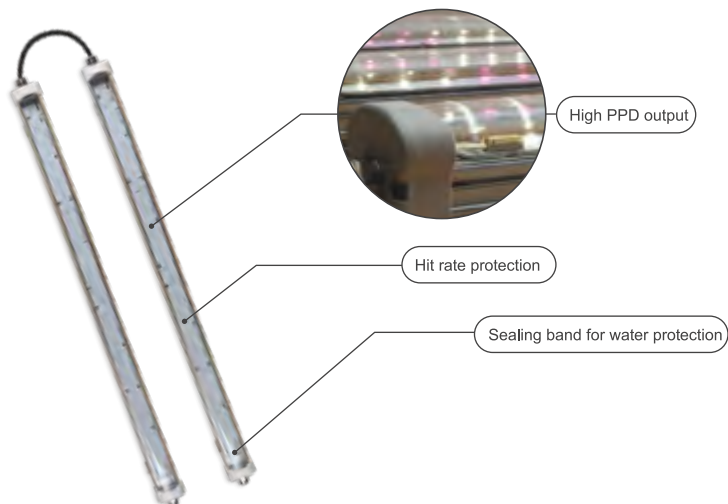
✓ Best choice for tissue culture or cloning

Light distribution over 2x2 m. with 8 lamps



FARADAY | 60CM SLIM PROTECT

BIO



60 cm

Waterproof **IP54**

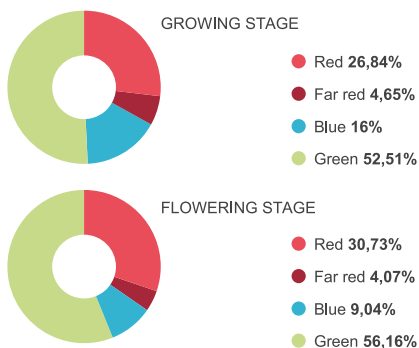
Fanless

DIY Assembling

TECHNICAL SPECIFICATIONS

Power	50 W
Input voltage	220-240 V
Input current	0,2 A
Efficiency	2,0 $\mu\text{mol/J}$
PPF	55,80 $\mu\text{mol/m}^2/\text{s}^1$
Beam angle	120°
Waterproof	IP54°
Working temperature	20 - 30°C
Cooling	Passive
Weight	0,3 kg
Sizing	600x350x32mm
Plugin	Schuko 1,5M (included)
Certifications	Ik03, IP40, CE, RoSH

SPECTRUM RATIOS



ref: BIO/PROTEC2X60/50/VEG
BIO/PROTEC2X60/50/BLO

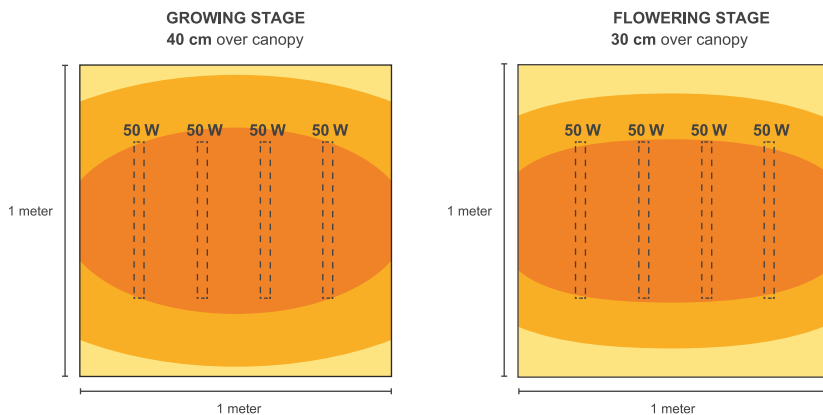


Up to 195 $\mu\text{mol/s}$

Polycarbonate cover

✓ Best choice for cloning and lateral light

Light distribution over 1x1 m. with 4 lamps



Approximate reference values

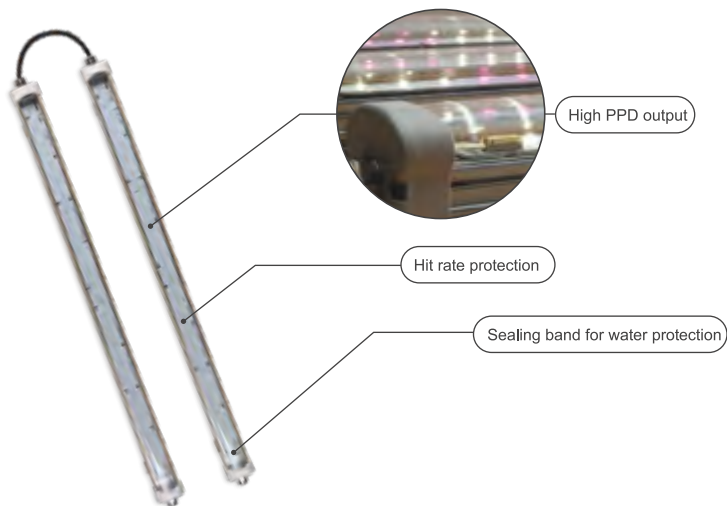
● 0 - 65 $\mu\text{mol/s}^1/\text{m}^2$

● 65 - 130 $\mu\text{mol/s}^1/\text{m}^2$

● 130 - 195 $\mu\text{mol/s}^1/\text{m}^2$

FARADAY | 120CM SLIM PROTECT

BIO



120 cm

Waterproof IP65

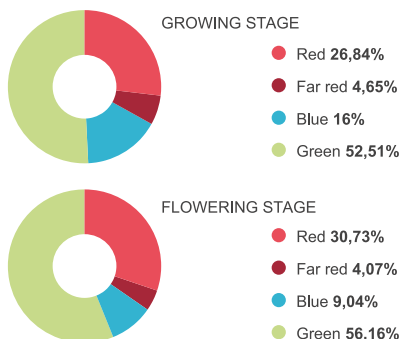
Fanless

DIY Assembling

TECHNICAL SPECIFICATIONS

Power	100 W
Input voltage	220-240 V
Input current	0,20 A
Efficiency	2,0 $\mu\text{mol/J}$
PPF	55,80 $\mu\text{mol/m}^2/\text{s}^1$
Beam angle	120°
Waterproof	IP54°
Working temperature	20 - 30°C
Cooling	Passive
Weight	0,5 kg
Sizing	1200x350x32mm
Plugin	Schuko 1,5M (included)
Certifications	Ik03, IP40, CE, RoSH

SPECTRUM RATIOS



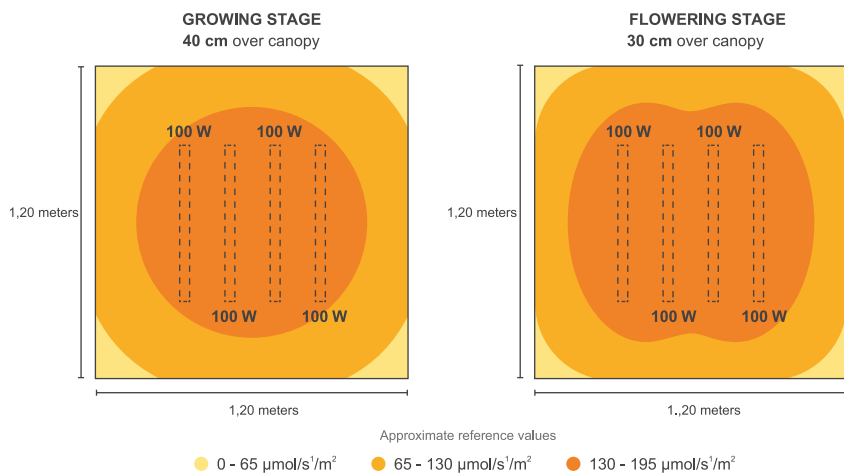
ref: BIO/PROTECT120/50/VEG
BIO/PROTECT120/50/BLO

Up to 235 $\mu\text{mol/s}$

Polycarbonate cover

✓ Best choice for tissue culture, cloning and mothers

Light distribution over 1,20x1,20 m. with 4 lamps



PLANCK | CUSTOMIZABLE PROFILES

BIO



60 cm

25 W

DIY Assembling

60 cm 25W String
Warm white

BIO/MOD60/25/
WARMWHITE

3500K



● Red 24,58%
● Far red 2,18%
● Blue 8,52%
● Green 64,72%

60 cm 25W String
Cold white

BIO/MOD60/25/
COLDWHITE

5000K



● Red 20,20%
● Far red 3,13%
● Blue 17,57%
● Green 59,10%

60 cm 25W String
Growing

BIO/MOD60/20/VEG

Growing



● Red 28,03%
● Far red 4,94%
● Blue 15,71%
● Green 51,27%

60 cm 25W String
Flowering

BIO/MOD60/25/FLO

Flowering



● Red 31,76%
● Far red 4,39%
● Blue 9,13%
● Green 54,72%

60 cm 25W String
Ultraviolet A

BIO/MOD60/20/UVA

UV 400nm



● UV 100%

ref: BIO/MOD60/25/WARMWHITE
BIO/MOD60/25/COLDWHITE
BIO/MOD60/25/VEG
BIO/MOD60/25/BLO
BIO/MOD60/25/UVA

60 cm 25W String
Warm white

- Support flowering in deeper canopies
- Also as lateral light
- Best for mothers

60 cm 25W String
Cold white

- Best choice for clones sleeves
- Also as lateral light
- Best for mothers

60 cm 25W String
Growing

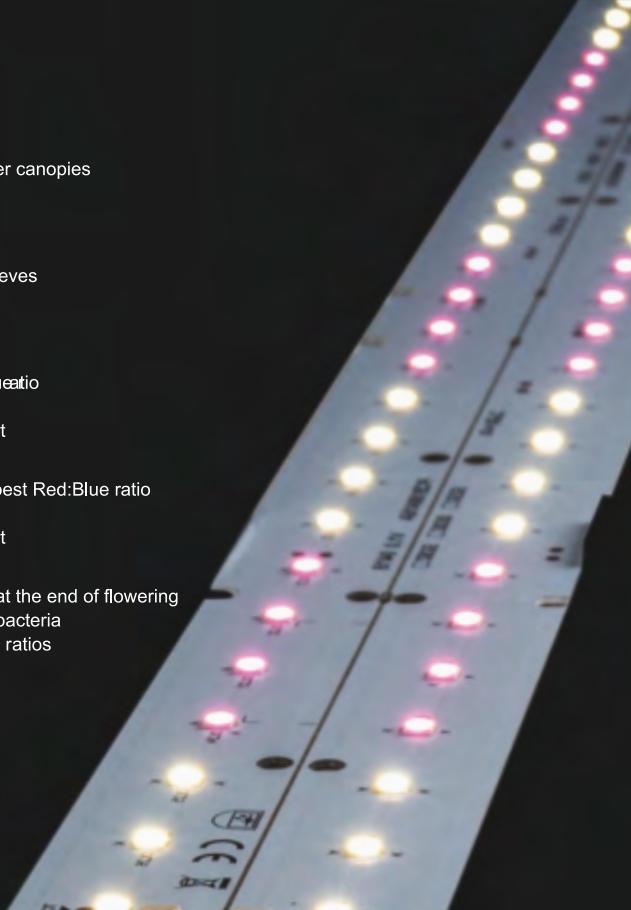
- Balanced growing Red:Blue ratio
- Support for HPS lamps
- High density yields support

60 cm 25W String
Flowering

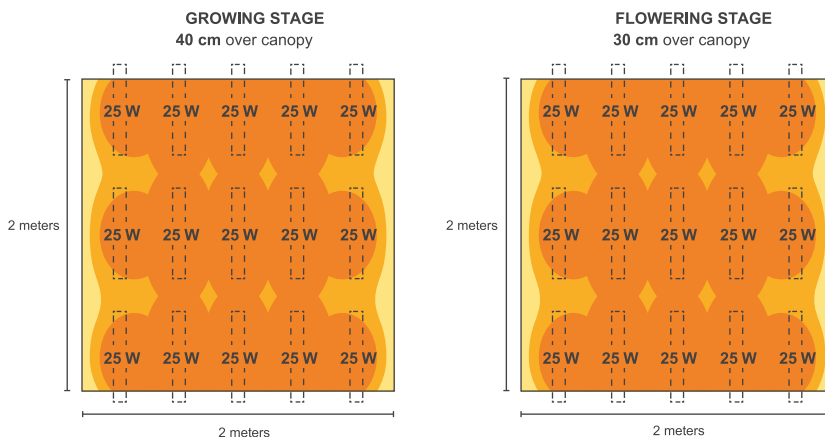
- Boost your buds with the best Red:Blue ratio
- Support for HPS lamps
- High density yields support

60 cm 25W String
Ultraviolet A

- Rise the resin generation at the end of flowering
- Decrease mold, pest and bacteria
- Increase the cannabinoids ratios



Light distribution over 2x2 m. with 15 profiles



Approximate reference values

- 0 - 45 $\mu\text{mol/s/m}^2$
- 45 - 100 $\mu\text{mol/s/m}^2$
- 100 - 150 $\mu\text{mol/s/m}^2$

USAGE & WARRANTY



At Equitec - BioLed we are aware of the care of the environment and we thank our customers for the same degree of commitment. Do not forget to deposit all the packaging in the corresponding containers for proper recycling. If you have to get rid of old or unusable equipment you can take them to any recycling center or clean point.

● USAGE RECOMMENDATIONS

● CAUTION

DO NOT PLUG IN THE POWER CORD BEFORE CONNECTING IT TO THE EQUIPMENT. Any modification in the product cancels the warranty.

● MAINTENANCE

All maintenance work must be carried out by a technical service authorized by Sysled Bio. Use the original packaging to store the equipment when not in use. Unplug before handling.

Installation instructions

- The installation must be carried out by qualified personnel and in accordance with the Electro-technical Regulation for Low Voltage (Spain) or its local equivalent.
- Respect the maximum section height in your installation.
- Use differential and magnetothermal safety devices.
- We recommend the installation of surge protection devices.
- The use of superimmunized differentials is mandatory.
- Do not exceed the maximum number of luminaires per magnetothermic. Consult the technical sheet of each product to know this value.
- Do not splash. Our products are made up of multiple electronic components and you have to take special care when handling liquids nearby to avoid splashing.
- Do not immerse the connection cable in water or in any other liquid. Avoid watering with the equipment on.

● DURATION

The warranty applicable to Equitec / BioLED equipment lasts **2 years** from the date of original purchase. **Remember to save the purchase receipt** for any warranty claim.

● COVERAGE

This warranty covers all **manufacturing defects**, except in the cases indicated below.

● EXEMPTION

- La garantía no se aplicará a los problemas provocados por:
- Normal wear
 - Failure to comply with the attached instructions for use
 - Numbered series products if the serial number has been deleted or deleted
 - Products subject to negligence, accident, misuse in their maintenance or storage
 - Products damaged by circumstances beyond the control of Equitec / BioLED.
 - Loss or damage to detachable parts
 - Modified products (including, but not limited to, modifications made through the use of unauthorized parts or accessories) or repaired by third parties other than Equitec / BioLED or its collaborators
 - This warranty excludes all accidental or consequential damages.

● COMPROMISE

Equitec / BioLED will repair any defect in materials or workmanship, or will replace these products with others of similar characteristics and price. Sysled's sole obligation on the warranty will be limited to such repair or replacement.

● RETURN

If you have any questions about your product, please contact at equitec@equi-tec.eu. Please do not return any product without first obtaining a return authorization from Equitec / BioLED. Unauthorized refunds as well as cash on delivery shipments will be rejected. For more information regarding returns, check the website at www.sysled.es



www.bioledlighting.com



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