

Innovative
plant
lighting
system



Horti CB+ Cannabis

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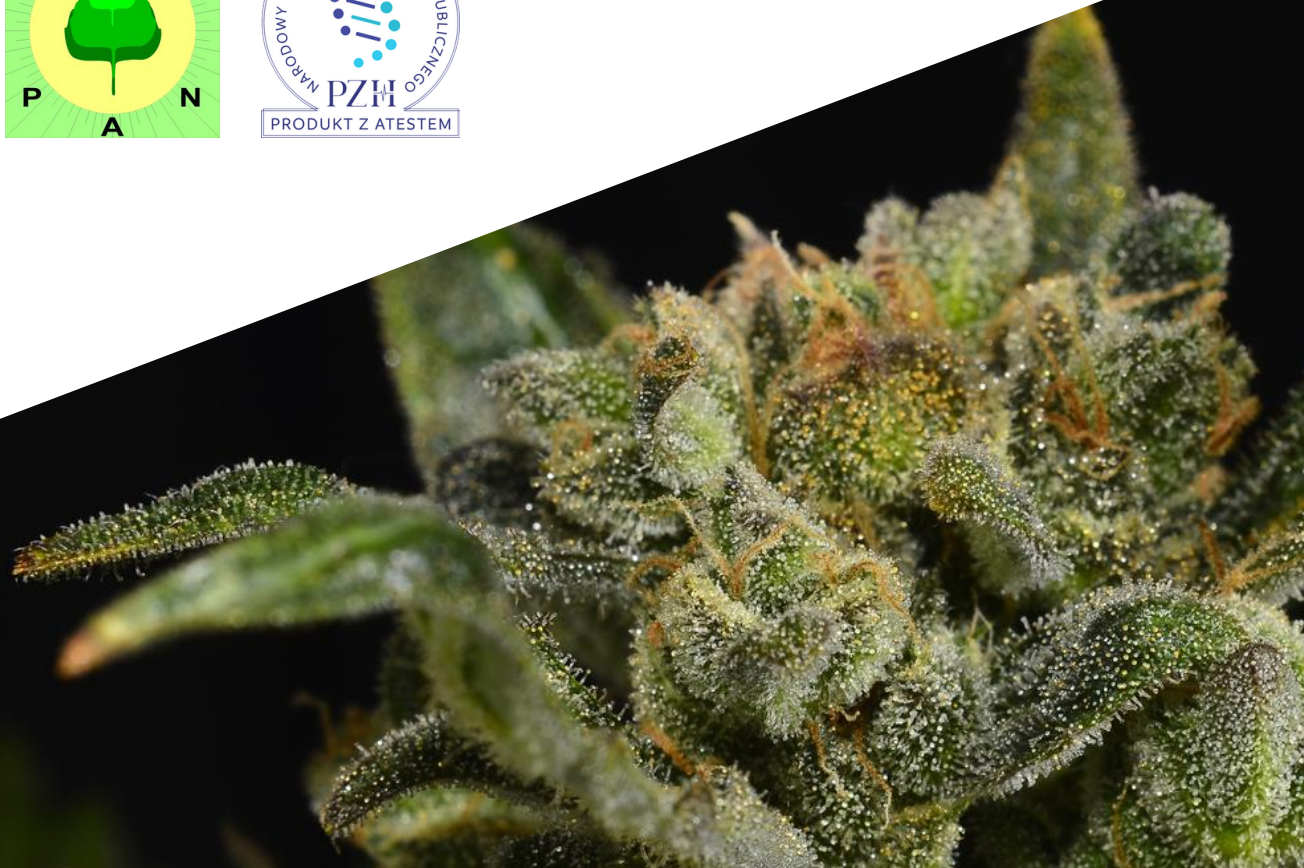
Perfand LED

PerfandLED is a leading manufacturer of LED lighting. Our modern production facility which is located in Trzebnica near Wrocław deals with the design and production of printed circuits with LEDs, power supplies and lighting luminaires.

Our products are made in Poland, which is why we have 100% control at every stage of production. Modern LED technology combined with knowledge in the field of plant physiology allows the production of energy-saving luminaires with a specific range of light spectrum (color), which significantly affects the efficiency and optimization of the photosynthesis process and plant development.

Aure Horti luminaires dedicated to plant cultivation - in Indoor crops, as well as assimilation lighting in crops under cover (greenhouse crops) - support the vegetative (growth) and generative (flowering / cropping) phases.

The basis in all Aure Horti luminaires is the white color - which includes all colors of the visible spectrum, enriched with specially selected Horti LEDs (both from the visible spectrum and UV / IR). Cooperation with scientific units and practice in cultivation has enabled the creation of solutions dedicated to specific plant species.





Pulse flux technology

The use of **pulse flux technology patented by Perfand LED** is an innovation on a global scale and a sensation on the AGRO luminaire market. It provides periodic reduction of light intensity, which allows the regeneration of the photosynthetic apparatus making it even better prepared to receive and effectively use light at a higher intensity. In this way, the 'energy management' of the plant becomes more efficient, closer to natural phenomena, and the operating cost is significantly lower than when using other brands LED luminaires, not to mention traditional light sources (HPS).

The dedicated Aure Horti CB + luminaire is characterized by:

- preparation for crop requirements in GMP standards
- use of patented pulse flux technology
- spectra developed by cannabis expert-practitioners
- safety for the human eyesight
- low operating temperature of the luminaire (passive cooling)
- innovative luminaire design for easy cleaning / disinfection and maintenance
- housing made of anodized aluminum and tempered glass: non-toxic, non-reactive and resistant to corrosion
- high quality of workmanship ensuring uniformity and stability of the light beam
- protection against dust ingress and against strong water streams (IP66)
- IK10 guarantees high protection against mechanical damage
- the technology has received positive reviews at the Institute of Plant Physiology of the Polish Academy of Sciences
- PZH certificate

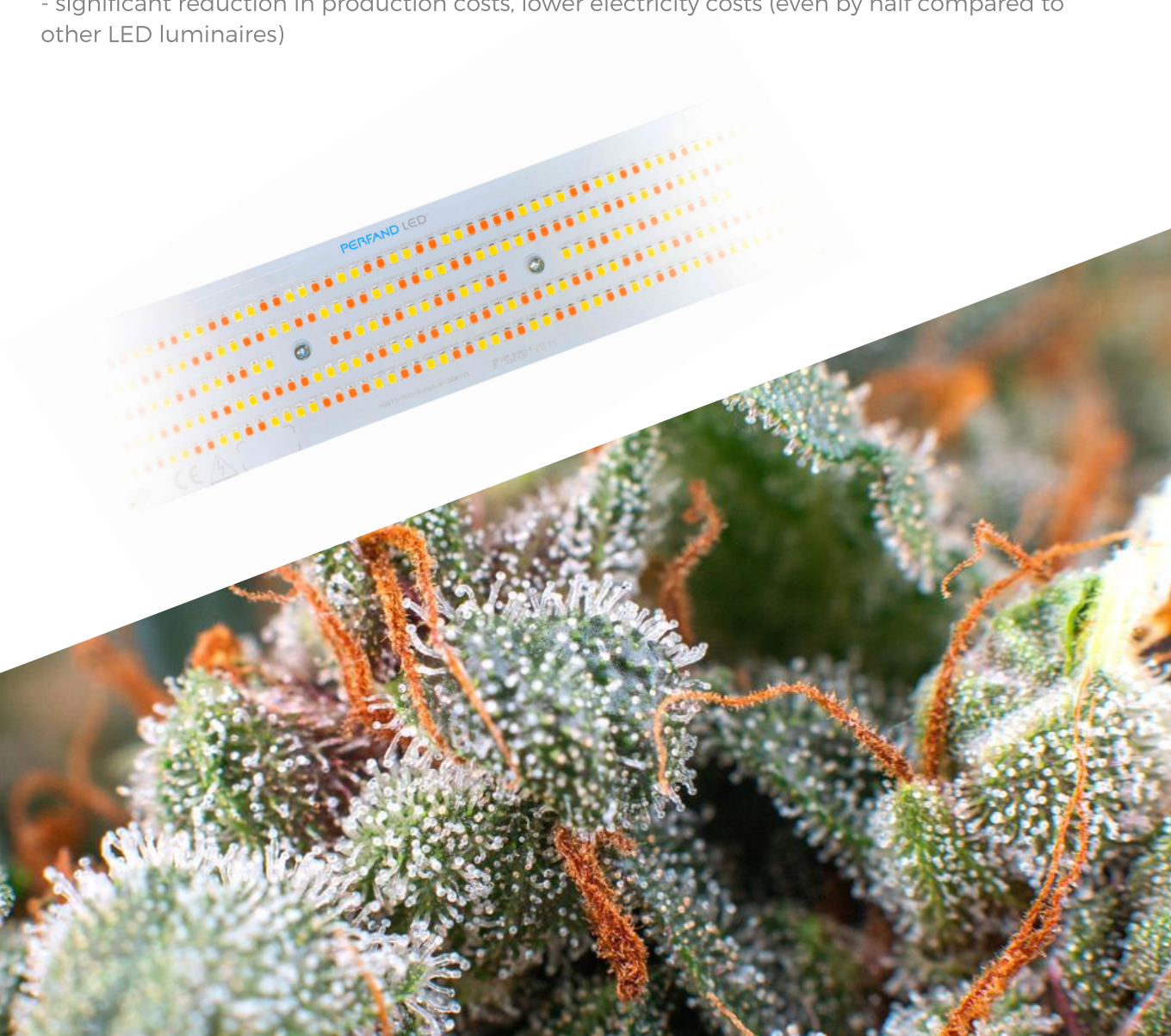


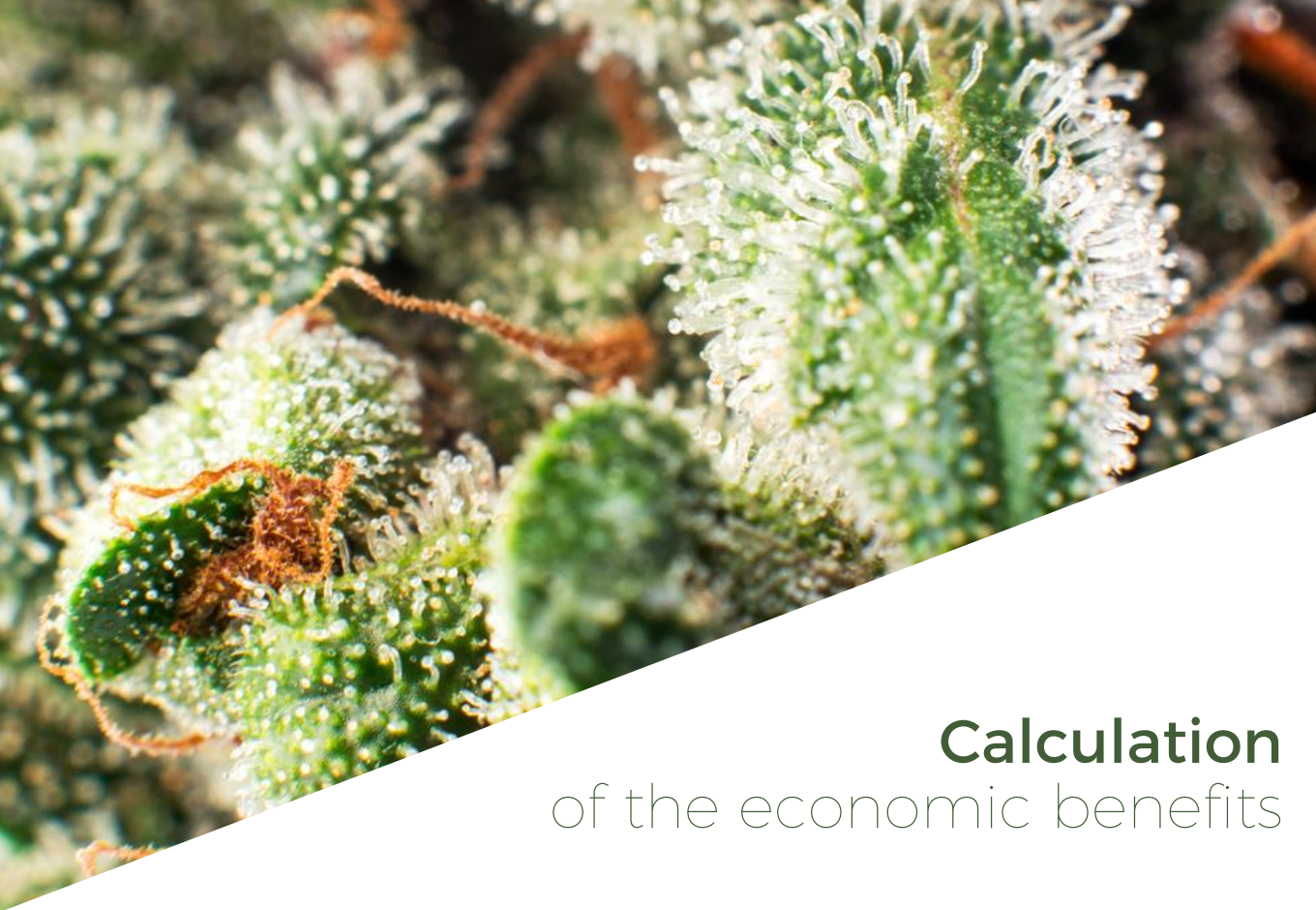
PERFAND LED®

Advantages of Horti CB+ luminaires

AURE HORTI CB+ in side-by-side comparative tests with HPS (dual), CFL and LED fixtures from other manufacturers showed:

- higher flower density and volume, high harvest level reaching 1.8-2.1 g/W
- growth acceleration
- no deficits in the plant (in the entire growth phase)
- reduction of internode distance
- increased terpenes and trichomes production
- higher content of cannabinoids confirmed by chromatography
- eliminating the risk of overheating the surface of leaves and flowers, which is a frequent cause of inhibition / abnormal development during the growth and flowering phase
- significant reduction in production costs, lower electricity costs (even by half compared to other LED luminaires)





Calculation of the economic benefits

Luminaire type	Horti CB+	LED 500W	HPS 1000W
The cost of electricity	0,42 € /m² daily	0,82 € /m ² daily	1,61 € /m ² daily

Luminaire type	PERFAND LED	Savings
HPS 1000W	Horti CB+ 270W/20W	74%
LED 500W (constant light)	Horti CB+ 270W/20W	49%

Calculations made with the assumptions of:
13 euro cents / kWh; lighting time 5800 h



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Horti CB+

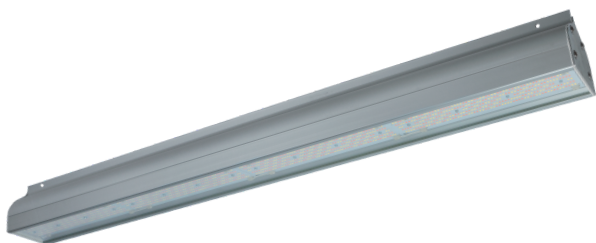
Cannabis

The **AURE HORTI CB + spectrum** for cannabis is the result of international cooperation between PerfundLED and professionals involved in the cultivation of medical and industrial cannabis. The composition of the CB+ spectrum has been carefully selected and improved basing on many years of experience and practical tests which had a common goal - **obtaining abundant crops of the highest quality with minimal production costs.**

Name	Power	Average power	PPF
Horti CB+ 1200	270W/20W	127W	570 $\mu\text{mol/s}$
Horti CB+ 900	200W/20W	97W	422 $\mu\text{mol/s}$
Horti CB+ 600	130W/20W	67W	275 $\mu\text{mol/s}$

IK
10

IP
65



Maximum beam angle: 60°

Installation: suspended

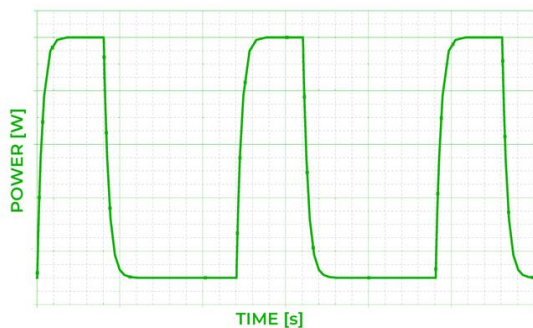
Supply voltage: 230 AC / 50-60 Hz

Ambient temperature range: -20°C... +40°C

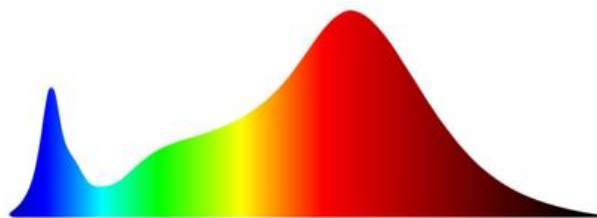
Lifetime L90B10: 70 000h

Power factor: 0,97

Housing: aluminium, tempered glass



Time course



Light spectrum

Aure Horti

Realisations and tests

