Luminaires for AGRICULTURE

TREVOS

ABS

FOR LIVESTOCK FARMING

light fixtures that boast ammonia resistance

Resistance against ammonia in the air is among the essential attributes of light fixtures designated for farms where live animals are grown (e.g. cow barns, pig and poultry farms).
Our INNOVA ABS, FUTURA ABS and Prima LED ABS -range fixtures boast exceptional resistance to chemical compounds used for cleaning and as disinfectants as well as to mechanical damage and high temperatures. The excellent chemical resistance of our INNOVA-range luminaires has recently been recognized by DLG, a leading independent European testing facility. The DLG certificate states neither regular exposure to ammonia in the air nor cleaning the fixtures using a high-pressure machine and hot/cold water result in product deterioration.

Chemical resistance
exceptional chemical resistance of the materials used to chemicals such as ammonia, lye, and alkali compounds.

Mechanical resistance
excellent impact resistance and resistance against mechanical damage based on the materials used.

Thermal resistance
exceptional thermal resistance to ambient temperatures ranging from -25 °C to +50 °C.

INNOVA ABS

PRIMA LED ABS

FUTURA ABS

DLG-CERTIFIED FITTINGS

cow barns, pig farms, poultry farms, stables

The German Agricultural Society (DLG), a leading and highly respected independent European testing organization, has rewarded our INNOVA ABS LED light fixture. **The DLG certificate states INNOVA ABS is resistant to long-term exposure to ammonia and may be washed, from a given distance, using a high -pressure machine and both cold and warm water.** The product is therefore perfectly suitable for farms where live animals are kept, food factories, meat packing plants, and agricultural facilities.

The DLG testing laboratory has confirmed that neither regular exposure to ammonia in the air nor washing the fixture from distances stated in the report result in the product being damaged or its life being shortened. The enclosed fixture, which cannot be dismantled, is an excellent choice for different chemically aggressive environments as well – production halls, warehouses, laboratories, car washes, etc.

INNOVA ABS

INNOVA WB ABS
INNOVA NB ABS

TREVOS

HORTI

CONTROLLED PLANT GROWTH

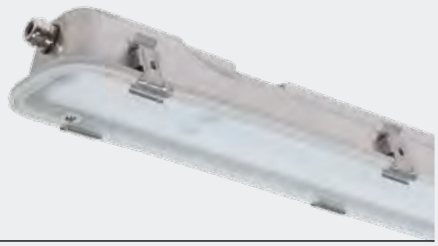
light fixtures for greenhouses

Our HORTI indoor light fixtures are designed for greenhouse gardening. They make it possible for growers to increase crop yields and their quality as well as ensure year-round production independent of the season of the year or weather. The fitting provides greenhouse owners with exceptional benefits whether it is used to substitute regular lights, or as an energy-efficient feature that complements the existing lighting system. The exceptional characteristics of HORTI are appreciated by greenhouse farmers regardless of what crops they grow (tomatoes, cucumbers, leaf vegetables, herbs, strawberries, cut flowers, pot plants, perennials, etc.

KEY BENEFITS OF HORTI

- Stimulates plant growth
- Improves colour, shape, and taste of crops
- Year-round production possible due to a longer growth cycle
- Cuts energy costs
- Allows farmers to control crop production even in poor weather conditions
- Lower maintenance costs compared to gas-discharge lamps
- May also be installed in low greenhouses and foil tunnels
- Decreases water consumption

FUTURA HORTI



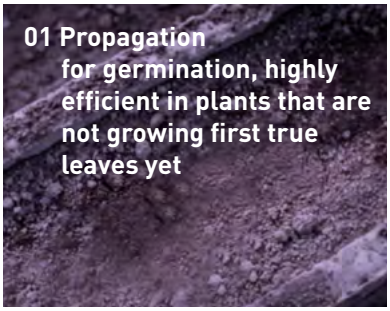
PERUN HORTI

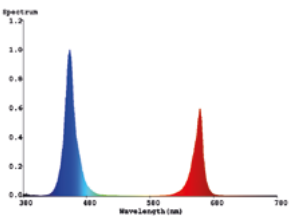
CANOPUS HORTI

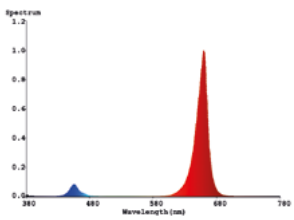
How does it work?

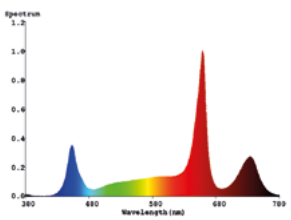
Plants respond to energy ratios in various portions of the colour spectrum. As a result, plant shape, its nutritional value, and taste can be controlled. It also allows growers to stimulate proper growth as well as speed up the flowering process. Appropriate ambient temperature, air humidity, irrigation, and air-carbon dioxide ratio are additional significant factors affecting growth. Moreover, lighting controls various growth phases. The amount of light and the portion of the light spectrum that plants are exposed to affect growth intensity as well as flowering and fruit formation/ripening. Light quality influences plant morphology (plant shape) while various light-air ratios combined with appropriate portions of the light spectrum significantly affect their growing season and production of crops.

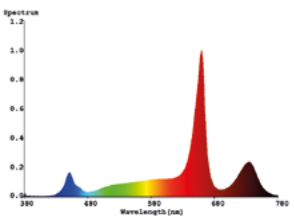
The module's colour spectrum has been set to **stimulate the 4 phases of plant growth: Germination, growth, flowering, and fruit formation/ripening.**
The **green portion of the light spectrum** is virtually useless for plants. Therefore, their green leaves cause most of the energy contained in the green light bounce back off.
Red light is used by plants for photosynthesis as well as to accelerate stem growth (elongated and stretchy stems occur when plants lack light).
Evidence exists that higher amounts of red light result in increased tomato production.
Blue light is used by plants for phototropism – plants redistribute growth hormones and adapt their shapes based on light intensity and direction; the aim is to make sure light is used as efficiently as possible.











Our HORTI light fixture contains 4 chips in 3 sections to ensure the most effective and energy-efficient lighting for your plants.

Spectrum	Maximum output in the spectra used	Phase
DEEP BLUE – 450 nm	820 mW/ft	plant germination
DEEP RED – 660 nm	1080 mW/ft	plant growth stimulation
FAR RED – 730 nm + (WHITE)	195 mW/ft + 475 lm/ft	fruit formation and ripening

RED

LIGHT FIXTURES FOR COW BARNS

to ensure efficient production

This is a red light producing LED module that may be integrated into our INNOVA, PRIMA LED, and FUTURA-range fixtures. The product may be used as a service light, making it possible for workers to access and move around cow barns comfortably and easily (light intensity is sufficient) as well as to do all the usual tasks including milking without disturbing or interrupting the sleep cycles of the animals. Appropriate lighting and optimum distribution of fixtures **increases milk production by 6-10%.**

Customers can choose between installing a new lighting system and fitting the existing fixtures with the red light producing module. The result is select light fittings feature a white light producing LED module to be used during the day and a red light producing LED module to be used at night.

INNOVA ABS RED
red light

INNOVA ABS RED
white light

RED

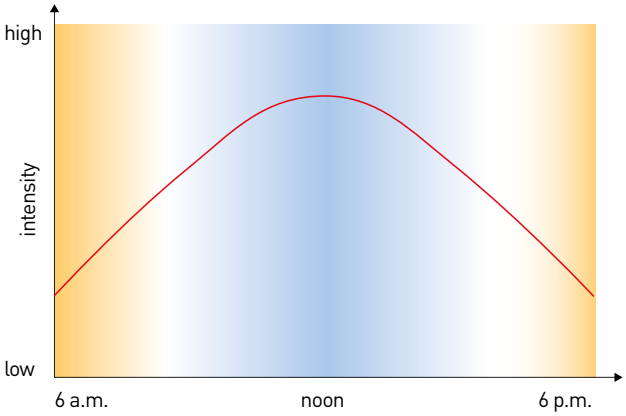
625 nm	narrow spectrum
550 lm	from the fixture
12 W	Wattage

ANIMAL-CENTRIC LIGHTING

for livestock farms

A module that boosts circadian rhythms.
These rhythms ensure proper timing of all the processes in the body as well as coordinate various activities of the organs.
It is these that make body temperature, blood pressure, alertness, attention, energy consumption, and digestive and immune system activity to fluctuate. The light fixture is a perfect choice for livestock farms. The module makes it possible to adjust correlated colour temperature (CCT) from cool to warm white (2,700 K – 6,500 K) as well as lighting intensity (dimming) using a Digital Addressable Lighting Interface (DALI). The dimming function may be incorporated in an automated system or user-controlled on an as-needed basis.

Most TREVOS luminaires may be fitted with this module.



A day starts at 2700 K. The blue sky at noon has a colour temperature of 5000 K, which gradually decreases back to 2700 K.

2700 K
warm white

6500 K
cool white

Correlated colour temperature (CCT) may be adjusted within the following range

5000 K	Focused
4000 K	Alert
3500 K	Comfortable
2700 K	Relaxed

TREVOS

TREVOS

History

Established in 1990, TREVOS is a market-leading Czech producer of commercial light fittings. The company takes pride in the high standards of production and the extensive range of products for a variety of businesses. Its Research and Development team are committed to applying expertise, protected know-how, and innovative and sustainable approaches to give you the green light whatever business you have or are starting.

Global position

In addition to occupying a strong position on the domestic market, TREVOS exports a significant portion of its products to over 60 countries in both the developed and the developing world.

The company has acquired its significant illumination technology market share by implementing innovative solutions that are the results of its own research and development as well as by investing, on a regular basis, in high-quality thermoplastic materials and electronic components. Also, TREVOS has traditionally been committed to manufacturing light fittings that boast innovative design in line with the recent trends in illumination technology as well as to keeping their prices reasonable compared to the world's top producers.

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