Sustainability and innovation.
EVERY PLANT SPECIES HAS SPECIFIC NEEDS: WE UNDERSTAND THEM AND PROVIDE YOU WITH THE RIGHT SOLUTION.

WE PRODUCE LAMPS AND LED MODULES FOR HORTICULTURE: TECHNOLOGICALLY ADVANCED, THEY ARE DESIGNED TO HELP GROWERS INCREASE HARVEST VOLUMES, CREATE VALUE BY IMPROVING THE NUTRACEUTICAL PROPERTIES OF THE PLANT, EXTEND THE SUMMER CROP GROWING SEASON AND ENSURE PRODUCTION EVEN IN WINTER.
What sort of plants do you want to grow?

THE RIGHT LIGHT WHATEVER THE GROWING SETUP

INTENSIVE CROPS
Production of Solanaceae (tomato, aubergine) and Cucurbitaceae (cucumber, melon) uninterrupted and guaranteed for 365 days a year, using customized light spectra according to crops. Produce shelf life is increased and greater plant compactness reduces manpower requirements.

GROWING
• GREENHOUSE
• VERTICAL FARM

SPECTRA
• Hortis spectrum
• Fruits spectrum (intracanopy)
• Extended White spectrum “Come il Sole” (“Like the sun”)

LAMPS
• Interlight lamp
• Toplight Plus lamp

SMALL FRUITS
Raspberries, strawberries, blackberries and blueberries are typically summer crops that require special care and lots of light. Thanks to LED lamps fruit growth can be regulated to obtain higher yields as well as firmer fruits, with brighter coloring which consequently are better sellers.

GROWING
• GREENHOUSE
• VERTICAL FARM

SPECTRA
• Fruits spectrum

LAMPS
• Interlight lamp
• Toplight Plus lamp
• Circular lamp

ALGAE
Growing algae suitable for human consumption such as spirulina and chlorella, marketed as fresh or freeze-dried products, is a business not linked to a specific production season and highly appreciated by the food supplement industry. LED lamps speed up algal growth ensuring earlier harvests and at the same time, products rich in antioxidants.

GROWING
• GREENHOUSE
• VERTICAL FARM

SPECTRA
• Purple EVO spectrum
• Custom spectra

LAMPS
• Penta-Circular lamp
• Toplight Plus lamp

MUSHROOMS
Mushrooms include several very popular varieties, such as pleurotus or champignon (button mushrooms). With BEGHELLI FIORE, it is possible to achieve improved product characteristics, such as better size and shorter waiting time between one harvest and the next.

GROWING
• GREENHOUSE
• VERTICAL FARM

SPECTRA
• Mushroom spectrum

LAMPS
• Slim lamp
• Circular lamp

We started building our lighting know-how over twenty years ago, when we began developing electronic applications with a specific focus on the LED technology that has, for many years now, been changing the way light is designed, opening up new horizons also in the area of cultivation.
ORNAMENTAL PLANTS
Roses, gerberas, chrysanthemums, tulips, peonies and daffodils are just some of the floricultural products that can be very successfully grown thanks to BEGHELLI FIORE technology: longer stems with larger diameter, earlier, more homogeneous flowering, & more compact inflorescence.

GROWING
- GREENHOUSE
- VERTICAL FARM
SPECTRA
- Bloom spectrum
LAMPS
- Toplight Plus lamp
- Circular lamp

LEAFY VEGETABLES
Leafy vegetables include lettuce, chicory, thyme, parsley, basil and other crops that are harvested at the time of maximum leaf growth. BEGHELLI FIORE ensures shorter production cycles, guaranteeing thriving production throughout the year and making it easier to control flowering.

GROWING
- GREENHOUSE
- VERTICAL FARM
SPECTRA
- Hortis spectrum
- Natural Indoor spectrum
LAMPS
- Toplight Plus lamp
- Circular lamp

BABY LEAF
Baby leaf crops include plants of lettuce, rocket, spinach, corn salad, cabbage and many others normally sold once they have grown 3-5 true leaves, about 20-40 days after sowing. Early harvesting, to ensure a higher number of cycles per year, is one of the primary goals that BEGHELLI FIORE research activity aims at.

GROWING
- GREENHOUSE
- VERTICAL FARM
SPECTRA
- Natural Indoor spectrum
LAMPS
- Slim lamp
- Circular lamp

MICROGREEN
Microgreens can be defined “baby” vegetable varieties as they are harvested as soon as they grow the first two true leaves, i.e. after about 7-20 days. The peculiarity of these crops is the very high levels of vitamins and antioxidants contained in their tissues, which, with BEGHELLI FIORE lamps, can be up to 40 times higher than in traditional vegetables.

GROWING
- GREENHOUSE
- VERTICAL FARM
- GROW UNIT
SPECTRA
- Natural spectrum
LAMPS
- Slim lamp
- Circular lamp

HEMP
Production of Hemp inflorescences for active principle extraction. BEGHELLI FIORE offers solutions to ensure earlier production & shortening of plant internodes: this increases the number of flowers and dry matter of the harvested product resulting in lower drying costs and higher production yields.

GROWING
- GREENHOUSE
- VERTICAL FARM
SPECTRA
- Purple spectrum
- Hortis spectrum
- Extended White spectrum
LAMPS
- Slim lamp
- Circular lamp
- Interlight lamp
- Toplight Plus lamp

MICROPROPAGATION
All the phases preceding field planting of micro propagated fruit plants are carried out in a completely sterile environment: cell multiplication, distension, rooting and finally, acclimatizing, in order to obtain, with BEGHELLI FIORE lamps, certified and virus-free material.

GROWING
- VERTICAL FARM
SPECTRA
- Micro-propagation spectrum
LAMPS
- Slim lamp
EXPERTISE THAT GROWS AND GROWS.

EACH PLANT HAS SPECIFIC LIGHT INTENSITY/TYPE REQUIREMENTS. HOW CAN WE GET THE BEST PERFORMANCE FROM OUR PLANTS?

FIORE studies the correct recipe for each type of plant, at every stage of its growth. FIORE can count on a highly experienced research team: the company provides scientists and researchers at universities and research facilities with constant close support and they, in turn, support FIORE in developing cutting-edge products. Together with you, we can study and choose the right light recipe to optimize yield, also in line with your objectives. The best recipe combines several factors: light spectrum, intensity, schedules, uniformity and positioning.

DIFFERENT COMBINATIONS OF LIGHT LET YOU CONTROL HIGHLY SPECIFIC PLANT CHARACTERISTICS, FROM COMPACTNESS TO COLOUR INTENSITY AND FOLIAGE DEVELOPMENT, THUS BOOSTING RESULTS.

WE INVEST CONTINUOUSLY TO ENSURE THAT OUR LIGHTING PROPOSALS ARE ALWAYS STATE-OF-THE-ART. THROUGH CAREFUL DIFFERENTIATION OF LIGHTING SPECTRA, WE ARE ABLE TO GET THE VERY BEST OUT OF EVERY CROP.

Chlorophylls (the molecules that make up plants) don't capture all wavelengths in the same way. Instead, they have a liking for some spectra rather than others. It is intuitively understandable that leaves reflect green light with ease; that is why they appear green, as they absorb only minimal amounts of this light. Blue and red spectra, instead, are vital to plants. Indeed, it is not by chance that the absorption peaks in chlorophyll types that play the main role in photosynthesis - chlorophyll a and chlorophyll b - are found across the blue and red wavelengths.
THE SPECTRA STUDIED BY BEGHELLI FIORE

RESEARCH ACTIVITY AT BEGHELLI FIORE HAS LED TO IDENTIFYING THE OPTIMAL SPECTRA FOR EACH CROP.

**SUNLIGHT**
The Sunlight spectrum is used in Toplight and Interlight lamp applications for greenhouse production mainly of Cucurbitaceae e.g. melon, watermelon or cucumber.

**BLOOM**
The Bloom spectrum is indicated to mainly induce flowering & is therefore chiefly used for ornamental crops.

**FRUITS**
The Fruits spectrum is particularly suitable for small fruits such as strawberries, blueberries and raspberries in greenhouse production set-ups.

**NATURAL**
The Natural spectrum, specific for delicate plants often found in nurseries. Grafted seedlings or seedlings that must become acclimatized to the open field can benefit from this light; excellent spectrum for microgreen growing.

**HORTIS**
The Hortis spectrum is the main spectrum for many horticultural crops to be grown in greenhouses, mainly edible or herb type leafy crops, but also products suitable for indoor growing. It is used as Toplight for intensive tomato growing.

**PURPLE EVO**
The Purple EVO spectrum is the spectrum commonly used for the production of algae in tanks or in photobioreactors.

**PURPLE**
The Purple spectrum is the most indicated spectrum for the production of medicinal hemp.

**NATURAL INDOOR**
The Natural Indoor spectrum is particularly suitable for the production of leaf and herb varieties, in production environments where the influence of outdoor lighting is reduced, such as in plant factories, in vertical farming or in containers.

**MICRO PROPAGATION**
Highly recommended to support the growth of micro propagated plants, this light is also suitable for small fruits in indoor environments such as in plant factories and vertical farming.

**EXTENDED WHITE**
"Like the sun". From HPS (High Pressure Sodium) to HPL (High Performance LED).

**MUSHROOMS**
Specific spectrum for mushroom growing.
EFFECTIVE LIGHT POSITIONING.

ADVANTAGES OF USING LED LAMPS

- SHORTENED GROWTH CYCLES
- INCREASED PRODUCTION
- IMPROVED PRODUCE SHELF LIFE AND TASTE
- COLOUR AND SHAPE OPTIMISATION

Sustainability and innovation are key concepts in BEGHELLI FIORE’s strategy. We work to ensure that our products are applied in synergy with the environment and protect it. Our state-of-the-art lamps are designed to help growers increase yield, reduce costs and extend the growing season of summer crops, guaranteeing production even in the winter period. Thanks to our lamps, the production yield can be increased while improving the crops nutraceutical* properties (excellent nutritional quality, rich in vitamins and antioxidants).

Whatever the sector, maximizing the functional and aesthetic yield of the plants to optimize production is essential. BEGHELLI FIORE provides the right light needed to grow plants in any season, even in winter, driving specific agronomic responses such as flowering, maturation, leaf pigmentation and fruit ripening.

BEGHELLI FIORE PROVIDES TOPLIGHT AND INTERLIGHT LAMPS FOR GREENHOUSE GROWING AND LIGHTING SYSTEMS FOR INDOOR GROWING (PLANT FACTORY, VERTICAL FARMING, MICROGREENS, MICROPROPAGATION).

*Foodstuffs with high levels of substances beneficial to our health.

Once the correct spectrum has been identified, the quantity of photons the plant needs to be supplied with becomes a vital parameter for ensuring proper growth patterns: it must not be too high as this could cause stress and reduce productivity but not too low because this would mean there is still margin for improvement. We study the amount of light needed by the plant according to its growth rate, morphology and age. We supply just the right amount of light using the most appropriate BEGHELLI FIORE lamps on the basis of the maximum light flow intensity they emit, positioning them at a distance that avoids dispersion (never too far away), and ensuring that the leaves intercept the light at an angle as close as possible to 90°.
GREENHOUSE LIGHTING POSITIONING

INDOOR LIGHTING POSITIONING
Toplight Plus
THE LIGHT FROM ABOVE

LIGHT CUSTOMIZATION
QUALITY TO MEET PRODUCTION NEEDS.

PLUG AND PLAY
EASY INSTALLATION & ADAPTABILITY TO ANY KIND OF GREENHOUSE.

SLIM DESIGN
STUDIED TO FACILITATE THE PASSAGE OF SUNLIGHT.

LOWER ENERGY CONSUMPTION
COMPOSED TO CONVENTIONAL TOP-LIGHTING LAMPS

LONG-LASTING LAMPS
AND LOW MAINTENANCE COSTS.

BEGHELLI FIORE TOPLIGHT PLUS LAMPS OFFER UNIQUE BENEFITS, REPLACING CONVENTIONAL GREENHOUSE LIGHTING TECHNOLOGIES (HPS) WITH SYSTEMS THAT ARE HIGHLY EFFECTIVE FROM BOTH AN AGRONOMIC AND AN ENERGY VIEWPOINT.

The types of light we propose, in conjunction with advanced technologies, ensure that our product is appreciated by those seeking cutting-edge solutions. Our top-lighting lamps produce less heat than conventional HPS ones (with differences of up to 30°C), allowing for in-greenhouse climate control according to the specific crops being grown: this lets growers position the lamps closer to the plants, thereby maximizing their absorption of light energy. Several TopLight Plus series types have been produced. They all have similar lamp bodies but differ from each other in terms of emitted light spectra in order to meet different growing requirements. Long-lasting lamps (average lifespan in excess of 50,000 hours) and low maintenance requirements, together with outstanding production results, allow us to offer a product which, from the farmer's viewpoint, will pay for itself sooner.

COMPLETE TECHNICAL INFORMATION ON PAGE 19
BEGHELLI FIORE TOPLIGHT COMBO LAMPS OFFER UNIQUE BENEFITS, REPLACING CONVENTIONAL GREENHOUSE LIGHTING TECHNOLOGIES (HPS) WITH SYSTEMS THAT ARE HIGHLY EFFECTIVE FROM BOTH AN AGRONOMIC AND AN ENERGY VIEWPOINT.

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The main benefits offered by Beghelli Fiore’s lamps are:

- Increased production yield
- Greater resistance to diseases, resulting in healthier plants
- Less malformation of leaves and fruit*;
- Increase in flowering, amount of fruit and crop harvest (e.g. tomato);

* the proper amount of blue light reduces leaf and structural malformations in plants.

Light Customization
We customize the quantity and quality of light in relation to the plants and their needs. Quality: the right ratio of emitted colors (blue, green, red, far-red). Quantity: intensity of light that reaches the plants (PPFD Photosynthetic Photon Flux Density)

Light Design
Beghelli Fiore lamps are of an extremely compact size in order to prevent large shady areas, thus favoring correct plant illumination.

Light Homogeneity
Beghelli Fiore lamps are made to distribute light uniformly over the illuminated surface in order to avoid plants growing in a non-homogeneous way (agronomic inhomogeneity: number of flowers, fruits, vertical growth, number of leaves, etc.)

Light Direction
The luminous flux emitted by Beghelli Fiore lamps is designed to ensure that the maximum amount of irradiating light hits the leaves.

Plug and Play
The lamps can easily be installed in series, providing significant installation time and cost savings.

Our Interlight lamps offer the best technology for greenhouse lighting of tomatoes and vertical growing plants in general.

Thanks to our studies, we have demonstrated how light coming from the top (artificial or solar) is only effectively absorbed by the top part of the plant. In fact, the useful amount of light progressively decreases below the top of the plant.

Our Interlight lamps make up for this lighting shortage through a more homogeneous distribution that is based on the plants’ actual physiological needs.
THE NEW CIRCULAR LAMP DEVELOPED BY BEGHELLI FIORE IS COMPOSED OF A SINGLE TRANSPARENT POLYCARBONATE TUBE DESIGNED PRIMARILY TO PROMOTE THE GROWTH OF SMALL FRUITS, LEAFY SPECIES OR FLOWERING HEMP PLANTS.

Thanks to its lightweight design and ease of installation in series, with practical connectors on each end, the Slim lamp can be installed close to the plants for improved photosynthetic efficiency and in the confined spaces typical of intensive vertical farm production facilities.

In recent years, important technological innovations in LED lamps have been introduced on the market, in particular, the possibility of emitting the precise amount of light and the specific light spectrum (light color) to stimulate the development of the plants.

WE STUDY THE EFFECT OF LED LIGHT ON THE GROWTH AND DEVELOPMENT OF ALGAE WITHIN ENCLOSED AND SHELTERED SYSTEMS, SUCH AS PHOTOBIOREACTORS. WE HAVE DEVELOPED THIS SPECIFIC LAMP, ALREADY TESTED AND USED AT A NUMBER OF RESEARCH CENTERS.
The use of LED lamps in the microgreens and micropropagation sector is an innovation that offers numerous advantages over conventional neon lamps. Tests conducted by BEGHELLI FIORE in collaboration with university research institutes have enabled us to develop a lamp specifically for micropropagation to offer a high-performance solution for a wide variety of plants. The greater energy savings obtained with Slim lamps allow for efficiency enhancement as well as shorter switch-on & switch-off times. The size and the weight of the lamps, reduced to a minimum, together with their lower heat emission, allows us to keep the Slim lamps at a closer distance in plant factories or other similar seedling growing systems, improving photosynthetic efficiency and reducing consumption.

The spectrum of light emitted by BEGHELLI FIORE lamps has been specially designed to ensure harmonious development & better overall health of the plant.

All these aspects facilitate the optimization of environment management & production yields.
Cooperating and sharing skills.

SOME INDUSTRIAL PARTNERSHIPS
Anubias, located in Villanova di Castenaso (Bologna, Italy), grows a Cannabis variety with low THC content using a hydroponic, soilless growing technique. Thanks to the BEGHELLI FIORE’s C-LED technology, in terms of light distribution, intensity and spectrum, the quantity and quality of the harvest are enhanced.

Biolchim Spa is a company based in the Bologna area and specializing in the production and marketing of high-tech fertilizers, and in particular bio stimulants, designed to maximize crop productivity. Biolchim is particularly interested in LED lamps for horticulture, so much so that it recently installed a phytotron for specific trials on the nutrient requirements of plants under LED lighting, with a view to rewriting the fertigation formula. For trial purposes, Circular lamps have been installed particularly suitable for indoor environments.

Fri-El is a company from the energy sector, which in recent years has expanded its skills to the plant growing field, in particular table tomatoes in high-tech greenhouse growing set-ups. Fri-El, with its Fresh Guru brand, has relied on BEGHELLI FIORE’s C-LED technology for a few years now to produce tomatoes all year, including in winter, in order to improve production yields and the quality of its products. The combination of a double row of Interlights, a top and a bottom one, maintains lighting coverage throughout the architecture of the lamp. The SUNLIGHT spectrum helps to enhance flowering and ensure a balanced, consistent growth of tomato plants all year round.

Micropropagation is the core business of Vitroplant, a farming company specializing in the multiplication of high-value plants such as small fruit shrubs or fruit trees, and in open field acclimatizing. Lighting management, the most critical and important process factor, is achieved with our technology. With BEGHELLI FIORE’s C-LED technology, we have designed Slim lamps, suitable for confined spaces without natural lighting, & the PROPAGATION spectrum, specifically created to positively influence plants. The acclimatization phase is carried out in nurseries and to support the growth of already grown plants, Circular lamps have been installed, with the special NATURAL spectrum, particularly suitable for plants that have undergone stress, such as those that must adapt to open field conditions or have just been grafted.

Agroservice Spa is a company based in the Marche region, in Italy, specializing in seed multiplication and research activities in the field of new cultivar breeding for herbaceous, forage and leguminous crops. In conjunction with BEGHELLI FIORE’s C-LED technology, Agroservice has decided to invest in a new research project, in which the growth of hybrid wheat seedlings (the basic genetic material) occurs in a phytotron and lighting is guaranteed by BEGHELLI FIORE’s C-LED technology. To help growers obtain seedlings with a stronger stem, a more intense shade of green and a higher number of spikes, we have installed Toplight Plus units and designed a completely new light spectrum specifically for wheat in a wholly innovative set-up.

The "Photosynthetic & Microbiological" University of Florence spin-off initiative, founded by Professor Mario Tredici in 2004, which specializes in research, consultancy and sales of technological solutions for the cultivation of photosynthetic microorganisms (microalgae and cyanobacteria) for industrial applications, has chosen BEGHELLI FIORE’s C-LED technology to assist in the study of the effects of LED lights on algae, in order to evaluate the effects of LED light on the physiology and biochemistry of photosynthetic microorganisms.

Nozza Luciano is a farm in the province of Bergamo that has been producing and marketing flowers since 1984. In order to improve production, mainly in autumn and spring, Nozza involved BEGHELLI FIORE’s C-LED technology in a new trial, along with the University of Bologna, on the use of LED lights for different ornamental varieties, with excellent results in terms of flowering time, compactness, flower color and plant habit.
Supporting each other and growing together

OUR RESEARCH PARTNERSHIPS

PEOPLE HAVE ALWAYS GIVEN BEGHELLI FIORE’S C-LED INNOVATION ITS COMPETITIVE ADVANTAGE.

THE RELATIONSHIP WITH UNIVERSITIES WAS STARTED TO TRIGGER AND DEVELOP THE VIRTUOUS CIRCLE THAT RESULTS IN MOTIVATED PEOPLE AND INNOVATIVE AND SUSTAINABLE PROJECTS.

RESEARCH ON ORNAMENTAL AND HORTICULTURAL PLANTS

- Studies and tests on the effects of Inter-Light lamps on vertical growing plants such as tomatoes and raspberries.
- Tests on strawberry plants in plant factories and in greenhouse gutter systems.
- Imola headquarters, ornamental plants: studies on effects of light spectra compared to natural light on ornamental plants illuminated with Toplighting Plus.

RESEARCH ON MICROPROPAGATION

Founded in 1923, CNR is Italy’s largest public research organization. In the agro-environmental science field, its studies mainly focus on the conservation of genetic resources, sustainable agriculture & traceability of production. The performed tests concern micropropagation, that is, the growth of arboreal plant shoots (mainly peach) inside special containers with a substrate containing glucose and other elements to obtain virus-free plants with optimal production standards.
RESEARCH ON MICRO-ALGAE

The University of Florence studies a wide range of topics spanning from arboreal sciences to genetics and land management. Our experimentation largely focuses on the cultivation of spirulina and chlorella in waterfilled photobioreactors: light for photosynthesis is provided by special waterproof BEGHELLI FIORE’s C-LED lamps with a 360° light flow.

BASIC PHYSIOLOGICAL RESEARCH

Studies on the nutraceutical aspects of leafy plant varieties under differentiated LED light spectra. In addition to the quantity of light administered to the plants, the light spectrum plays an essential role in determining the build-up of antioxidant substances and vitamins.

• Controlled-environment experimentation on the correlation of exposure to UV-A and UV-B radiation with the synthesis of antioxidant molecules inside leaf tissues (in completely safe working conditions);
• Study on the nutraceutical properties of leafy products following exposure to spectra with different ratios of red light and blue light.

RESEARCH ON TOMATO AND MICROGREENS

Several experimental projects focusing on testing the best production set-ups attainable with BEGHELLI FIORE’s C-LED lamps in tomato and microgreen growing.
### TOPLIGHT PLUS LAMP
#### STANDARD OUTPUT/HIGH OUTPUT
**UP TO 3 µ mole/J**

<table>
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<tr>
<th><strong>ELECTRICAL CHARACTERISTICS</strong></th>
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<tbody>
<tr>
<td>Power supply</td>
<td>220-240V~ / f=50-60Hz</td>
<td>220-240V~ / f=50-60Hz</td>
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<td>Power absorbed</td>
<td>100W</td>
<td>150W</td>
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<tr>
<th><strong>LIGHTING TECHNOLOGY CHARACTERISTICS</strong></th>
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<tr>
<td>PPF</td>
<td>PPF = up to 300 µmole/sec</td>
<td>PPF = up to 450 µmole/sec</td>
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<th><strong>MECHANICAL CHARACTERISTICS</strong></th>
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<td>1260 * 108 * 66 mm</td>
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<tr>
<td>Protection degree</td>
<td>IP66</td>
<td>IP66</td>
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<tr>
<td>Average lamp lifetime</td>
<td>L70 &gt; 50,000 hours</td>
<td>L70 &gt; 50,000 hours</td>
</tr>
<tr>
<td>Operating room temperature</td>
<td>-10°C / +40°C</td>
<td>-10°C / +40°C</td>
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### TOPLIGHT COMBO LAMP
#### GREENHOUSE SERIES
**UP TO 3 µ mole/J**

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<tr>
<td>Power supply</td>
<td>90-30V~ / f=50-60Hz</td>
<td>249-528V~ / f=50-60Hz</td>
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<tr>
<td>Power absorbed</td>
<td>300W</td>
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<th><strong>LIGHTING TECHNOLOGY CHARACTERISTICS</strong></th>
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<tbody>
<tr>
<td>PPF</td>
<td>PPF = up to 840 µmole/sec</td>
<td>PPF = up to 840 µmole/sec</td>
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<tr>
<th><strong>MECHANICAL CHARACTERISTICS</strong></th>
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<tr>
<td>Mechanical dimensions</td>
<td>684 mm* 178 mm*103 mm</td>
<td>685 mm* 182 mm*220 mm</td>
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<tr>
<td>Protection degree</td>
<td>IP66</td>
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<tr>
<td>Average lamp lifetime</td>
<td>L70 &gt; 50,000 hours</td>
<td>L70 &gt; 50,000 hours</td>
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<tr>
<td>Operating room temperature</td>
<td>-10°C / +40°C</td>
<td>-10°C / +40°C</td>
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### INTERLIGHT LAMP
**UP TO 3 µ mole/J**

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<tbody>
<tr>
<td>Power supply</td>
<td>400Vac / 230Vac</td>
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<td>Power absorbed</td>
<td>150W</td>
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<th><strong>LIGHTING TECHNOLOGY CHARACTERISTICS</strong></th>
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<tbody>
<tr>
<td>PPF</td>
<td>PPF = up to 400 µmole/sec</td>
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<th><strong>MECHANICAL CHARACTERISTICS</strong></th>
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<tbody>
<tr>
<td>Protection degree</td>
<td>IP66</td>
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<tr>
<td>Dimensions (L x W x H)</td>
<td>2/495 x 110 x 57 mm (Body 68x50) mm²</td>
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<tr>
<td>Average LED lamp lifetime</td>
<td>L70 &gt; 50,000 hours</td>
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<tr>
<td>Operating room temperature</td>
<td>-10°C / +40°C</td>
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CIRCULAR LAMP

**ELECTRICAL CHARACTERISTICS**
- Power supply: 230-240 V - 50 / 60 Hz
- Absorbed power: 22 W

**LIGHTING TECHNOLOGY CHARACTERISTICS**
- PPF: up to 53 μmole/sec

**MECHANICAL CHARACTERISTICS**
- Protection class: IP67
- Dimensions (L x W x H): 1290 x 28 x 28 mm
- Average LED lamp lifetime: L70 > 50,000 hours
- Work environment temperature: -10°C / +35°C

SLIM LAMP

**ELECTRICAL CHARACTERISTICS**
- Power supply: 24 V DC
- Absorbed power: Up to 17 W/m

**LIGHTING TECHNOLOGY CHARACTERISTICS**
- PPF: up to 35 μmole/sec/m

**MECHANICAL CHARACTERISTICS**
- Protection class: IP65
- Dimensions (L x W x H): from 380 to 1630 x 12 x 16.3 mm
- Average LED lamp lifetime: L70 > 50,000 hours
- Work environment temperature: -10°C / +35°C