



# There's more to light

In recent years light has become an increasingly important production tool in horticulture. A lot of crops, such as tomatoes and cucumber, require a lot of light. Light increases yield and improves quality, particularly in periods when there is not enough natural light available. Another advantage is that plants can be made to start producing earlier in the season or in some cases even all year round.

Philips has extensive expertise and experience of using both conventional lighting and state-of-the-art LED lighting technology for horticultural purposes. Together with growers, breeders and partners we can provide optimum light recipes to save energy and make production more profitable.

The light recipe depends on a great many factors, such as the specific strain of plant, the geographical location, the type of greenhouse, the overall energy and heat balance,

distribution channels, etc. All of these factors have to be taken into account when determining the right light recipe and will also influence the type of lighting installation required.

Light recipes will continue to develop in the years ahead and need to be tailored to suit the type of business and the setup in which the plants are grown. Our account managers and specialists will therefore be pleased to come and advise you on what will work best in your specific circumstances.

**PHILIPS**  
sense and simplicity

# Greenhouse



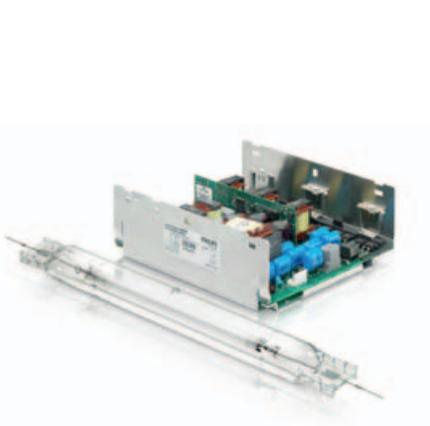
Vegetables



Cut flowers



Fine-tuning flowering



## Philips MASTER GreenPower Plus 1000W

Philips MASTER GreenPower Plus 1000W offers 4% more growth light than the familiar 1000W system. For existing installations this means more light for the same amount of energy, and for new installations it means substantial energy savings. In both cases it ultimately means more profitable growth.

## Philips GreenVision DIM

With this flexible lighting installation you can easily control the light level and monitor the performance of GreenPower lamps (SON-T) 600W and 1000W EL 400V lamps at any time. This ensures you that every watt of energy consumed adds value to your crop.



## Philips GreenPower LED interlighting module

This is the first module to be positioned between the crops. Because LEDs generate only a very small amount of heat, it is possible to provide light between the plants. This gives you greater control over plant growth, thus ensuring better results and a higher yield, e.g. for tomatoes.

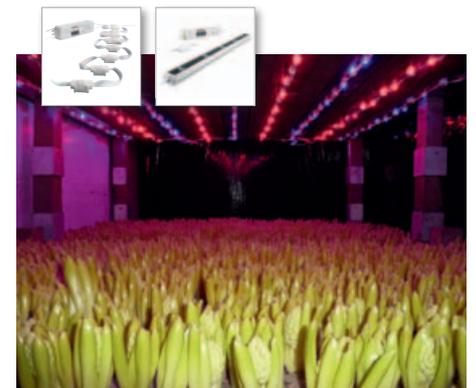


## Philips GreenPower LED flowering lamp

This is an energy-saving way to extend daylight hours when cultivating strawberries and bedding plants or producing cuttings from chrysanthemums and kalanchoes. We have developed three different lamps to provide the specific spectrum of light that is required for optimum control.



Propagation – in vitro tissue culture

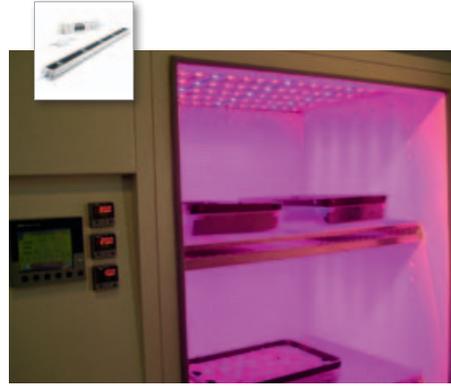


Bulbs

# Research facilities



Flexible test installations



Climate cabinets



Climate chambers

# Multilayer



## Philips GreenPower LED-module HF (research module)

The Philips GreenPower LED module HF is specially designed for multilayer cultivation and research. It allows you to use light as a tool to control plant growth and development, and enables you to select any given light intensity and color ratio. The module is available in three versions: red, blue and far red.



## Philips GreenPower LED string

Philips GreenPower LED string is designed for applications requiring low-growth light levels, e.g. for tissue culture, storage and transport of plants. LED string enables a uniform light distribution across the shelves, ensuring that every crop receives the same level and quality of light, regardless of its position.



## Philips GreenPower LED production module

The Philips GreenPower LED production module for multilayer applications (50-400  $\mu\text{mol/s/m}^2$ ) can be used to replace conventional fluorescent lighting (36 or 58 W), reducing energy consumption by up to 60%. In addition to the most commonly used deep red/blue mix we also supply a deep red/white version for applications where work light is needed.



Potted plants and young plant production



Storage and transport



Vegetables and herbs

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