Royal Philips Electronics of the Netherlands is a diversified Health and Well-being company, focused on improving people's lives through timely innovations.

As a world leader in healthcare, lifestyle and lighting, Philips integrates technologies and design into people-centric solutions, based on fundamental customer insights and the brand promise of "sense and simplicity".

Founded in 1891 by Gerard Philips
Turnover: > EUR 24.7 billion in 2012
Worldwide brand (global Top 50)
121,284 employees in more than 100 countries
Investment of >7% of sales in R&D
We are Philips
Organized around the people we serve

In the Philips Horticulture Team

• We are a global team of experienced plant and engineering professionals, deeply knowledgeable about LED’s, and fully focused on Horticulture.

• We have horticultural experts and HortiPartners located in:
  – Western Europe
  – Central and Eastern Europe
  – North America
  – Asia/Pacific Region
  – South America
  – Middle-East
In the Philips Horticulture Team

- As a dedicated team of horticultural professionals, we support growers through **personal interaction** and a **collaborative approach** in order to provide the correct solution for the growers’ needs.

- Our Plant Specialists and Physiologists are experts in the fields of
  – tissue culture,
  – plant propagation (flowers and micro-greens),
  – flower production,
  – vegetable production.

- We work on a project-by-project basis so we can fully understand the goals and objectives of the grower.

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Key global market trends

- *Growing population and urbanization*: in 2050, 70% of the world population is projected to live in cities. New megacities want to be green and responsible, also when it comes to food supply.

- Increasing *demand for vegetables* and meat in a world where *natural resources are scarce*: already today, 80% of useful land is in use.

- More and more consumers want *safe and healthy food*, produced in a sustainable way: using resources like land, water, and energy wisely, and close to their homes. Cities, retailers and restaurants tap into this need.
Introduction

Complete Growing Product Portfolio

Philes GreenPower LED toplighting

Philes is introducing an LED based toplichting solution for greenhouses or greenwaw, easy to install and no need for water cooling system.

Philes GreenPower LED research module

The research module is specially developed for basic research with light, the light is intensity adjustable.

Philes GreenPower LED production module

This production module is developed for modularity and flexibility, in co-confined environments with technical and day light.

Philes GreenPower LED flowering lamp

The flowering lamp is the alternative for extending day length for plants that are sensitive to the photoperiod.

Philes GreenPower LED string

The LED string is ideal in tissue culture and in seeding storage.

New opportunities, new applications

Growers and breeding companies

High Wire Vegetables

Leafy Vegetables & herbs

Soft fruits

Cut Flowers

Potted Plants

Bedding Plants and Perennials

Tissue Culture

Seedlings, cuttings & young plants

Research Institutes and new project developers

Climate cabinets

Other Custom Installations

Algae

City Farm

innovation + you horticulture
Multilayer: low energy and cost per tulip (Kreuk), lettuce, potted plants

Roses: more roses, less energy (Marjoland)

Tissue Culture: more layers, less energy for lighting and climate (Vitro Plus, ferns)

Tomato: >15% more kilos (IC)

WUR: less energy total greenhouse

Improvement Center: 30% less energy

Strawberries: early flowering, more production, less energy (v. Oers)

Chrysanthemum: energy efficiency

Universities and Research Centers: Extend research possibilities with flexible spectrum and light level

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**Case studies**
The plants flowered 10 to 14 days earlier

Michael Ruibal, Ruibal’s of Texas

Floriculture
Horticulturalist / grower
Ruibal’s Plants of Texas
Sector
Floriculture
Crop
Petunia
Location
Dallas, Texas, USA
Solution
Philips GreenPower LED flowering lamp
Philips LED Horti Partner
Hort Americas LLC
Objective
Dream petunia series flowered 10 to 14 days earlier regardless of flower color
“LEDs are the future, that’s why I am opting for this solution”
Leo van der Harg, Manager, Leo van der Harg BV

Floriculture
Horticulturalist / grower
Leo van der Harg BV

Sector
Ornamental plant cultivation

Crop
Kordana pot roses

Location
Vierpolders, the Netherlands

Solution
Philips GreenPower LED toplighting and Philips GreenVision 1000 W (HPS)
Philips LED Horti Partner
Light Interaction Agro BV
“The payback in only a few years made the decision much easier”
Cliff Beumel, Vice President, Sierra Gold Nurseries

Propagtion

Horticulturalist / grower
Sierra Gold Nurseries

Sector
Trees

Crop
Propagation of fruit and nut trees, including almonds, pistachios, walnuts, apples, cherries, pears, peaches and prunes

Location
Yuba City, California, USA

Solution
Philips GreenPower LED production module

Results
More efficient tree propagation
“A win-win for the nursery and our customers”
Jean Marc Versolato, Bailey’s Plant Health Department

Propagation
Horticulturalist / grower
Bailey Nurseries Inc

Sector
Young plants and cuttings

Crop
Multiple crops

Location
St. Paul, Minnesota, USA

Solution
Philips GreenPower LED production module
Hort Americas, LLC

Results
Faster propagation, better plant quality, a higher success rate, and energy savings
Food production

Horticulturalist / grower
Kwekerij Wim Peters

Sector
Fruit and vegetables

Crop
Plum tomatoes

Location
Someren, the Netherlands

Solution
Philips GreenPower LED interlighting and GreenPower 600 W HPS lamps

Philips LED Horti Partner
BE de Lier

Results
All-year-round production of tomatoes on site and substantial energy savings

“Tomatoes of the very best quality all year round”

Wim Peters, Director, Kwekerij Wim Peters

“Tomatoes of the very best quality all year round”

Wim Peters, Director, Kwekerij Wim Peters

Food production

Horticulturalist / grower
Kwekerij Wim Peters

Sector
Fruit and vegetables

Crop
Plum tomatoes

Location
Someren, the Netherlands

Solution
Philips GreenPower LED interlighting and GreenPower 600 W HPS lamps

Philips LED Horti Partner
BE de Lier

Results
All-year-round production of tomatoes on site and substantial energy savings
“We’re constantly improving the yield and making business operations more sustainable”

Michel Zwinkels and the brothers Arjan and Andy de Jong

Food production
Horticulturalist / grower
Growers association Van Nature / Jami VOF
Sector
Vegetables
Crop
Tomatoes (Komeett)
Location
Bergschenhoek, Zuid-Holland, the Netherlands
Solution
Philips GreenPower LED interlighting and GreenVision 1000 W (HID)
Philips LED Horti Partner
Lights Interaction Agro b.v.
Results
Increase in production, especially rise in winter production
“Indoor Vertical Farming means more growth and less footprint”
Robert Colangelo, Founding Farmer/President, Green Sense Farms

City Farm
Horticulturalist / grower
Green Sense Farms

Sector
Vegetable production

Crop
Micro greens, baby greens, culinary herbs, lettuces

Location
Portage, IN near Chicago, USA

Solution
Philips GreenPower LED production module

Philips LED Horti Partner
Hort Americas

Objective
To provide locally grown, pesticide, herbicide and GMO free fresh produce throughout the year
“We found the right light recipe for the propagation of living lettuce without daylight”

Roy and Mark Delissen

City Farm
Horticulturalist / grower
Deliscious
Sector
Vegetables
Crop
Leafy vegetables and herbs
Location
Beesel, Limburg, the Netherlands
Solution
Philips GreenPower LED production module
Philips LED Horti Partner
Certhon and Lights Interaction b.v.
Results
Efficient use of space due to multilayer cultivation, less water usage, increased and consistent plant quality