



Shaping the future

Innovative, sustainable and total cost solutions
Philips Lighting Components

PHILIPS

“We understand our customers and improve your competitive advantage by providing world-class components”

Ever since the company was started in 1891, Philips Lighting has developed and launched hundreds of innovative and important products. With so many products to choose from, this handy and practical 'Guide to better lamps', makes it simpler to make the right choice.



Our Vision

We want to be the worldwide leader in added-value solutions and technologies while, setting the pace in the (lighting) components industry.

Delight Customers and Deliver on Commitment are two of our Philips Values. Sense and Simplicity underpins our values. Our primary focus is you. We strive to understand your needs and develop and offer the right (designed around you and) advanced solutions to help you to create sustainable competitive advantage. We never stop looking to do things better, and to put new ideas into practice. This way we can set the pace in the components industry.



Drive for added value solutions

Philips Lighting Components focuses on your needs for solutions, product, services and delivery. Besides delivering the right products, we collaborate with you from the design stage onwards. Philips Lighting Components can deliver all components you will need to manufacture lighting products, because we consist of nine business lines, each developing and producing its specific components for lighting and non-lighting applications. Our process engineers and innovation managers will help you to find the perfect solution for your needs.

Drive for innovation

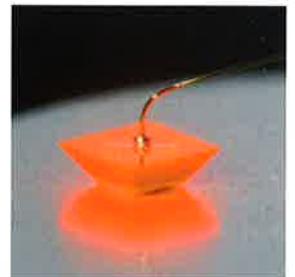
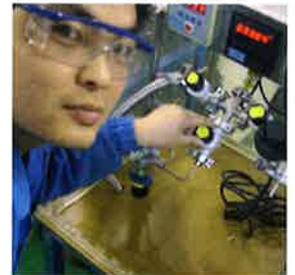
We also support the fast industrializing of new products and technologies, and the joint improvement of components and applications. This ensures you stay one step ahead. We add value to your processes at every level, wherever we are in the supply network. Our Vendor Managed Inventory system and collaborative sales forecasting make us more flexible with order processing; we match development speed with time to market to achieve manufacturing excellence. Our regional and key account managers are present in strategic locations across the world, a global presence backed up by knowledge on the ground. We build on our core competences to provide new value added solutions and products for both the lighting and non-lighting markets. This integral approach over our entire organization enables to capture synergies across our business lines.

Drive for Cost Competitiveness

Our lean and mean mature components production facilities keep your products cost competitive. For every stage in the Product Life Cycle, Philips Lighting Components offers a solution.

Sustainability and taking care of the environment

Philips Lighting Components offers all the components for energy saving lighting products and focuses on 'green' processes. Read more on page 10 about what Philips Lighting Components can do for you to help you to take care of the environment and focus on sustainability.



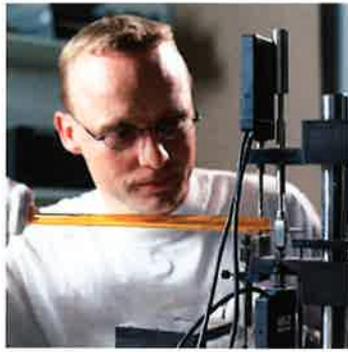
Technologies

For over more than 115 years, Philips Lighting produced its own components for the production of Lighting products. Lighting Components has all the knowhow and technologies to deliver deep drawn or insert moulded metal parts like caps and heatsinks; phosphors based on your prescriptions and needs; chemicals such as inkfrit and lampkit for basic and high end lamps; advanced metal solutions like molybdenum and tungsten wires, filaments and electrodes, powder injection moulding allows improved shape freedom; Quartz and Special Glass bars, tubes and pellets or free form designs; Soft Glass bulbs or other shapes based on your needs and specifications; SON tubes or free-form products of PCA. We have all the technology available to offer you the best solution.

Quality control

Supplying quality products is key for you. That's why Philips Lighting Components and all the production facilities are committed to stringent product control. We adhere to a regime of quality assurance, process control, business excellence and six sigma methodology in manufacturing. This gives you the confidence of falling in line with the most compelling demands for product quality, safety, lifetime and continuously improved performance. Our certifications include ISO 9001, ISO 14000, OHSAS 18001 and TS16949. Our unique and very demanding "zero defect program" sets us apart.





Supply Chain Management

Lighting Components offer SCM expertise and project support to reduce your supply chain costs significantly while maintaining our high level of delivery performance.

To achieve this we developed a stepwise approach of several integral supply chain solutions for our lighting and automotive accounts.

Technical Support & Expertise

Our central development department PDLC develops and improves components, processes and production equipments. For this task, a multi-disciplinary team of well educated engineers and scientists work together with external research institutes and other development departments within Philips.

For improvement processes tools are used like the Black-Belt approach, DfSS and Zero Defect. Often these improvements programs run directly within the receiving factories.

Our Competence center, IS&S, can support your business by providing service and advice how to improve your business.

Global Presence

To provide the best possible level of service to its customers worldwide, Philips Lighting Components' global network ensures that it is always close to the customer. Besides our local sales organizations we have a very strong network of agents all over the world.

Account Management

With several significant players in the lighting industry we have agreed on leveraging joint businesses through our Account Management approach, building and extending partnerships.



Products and applications



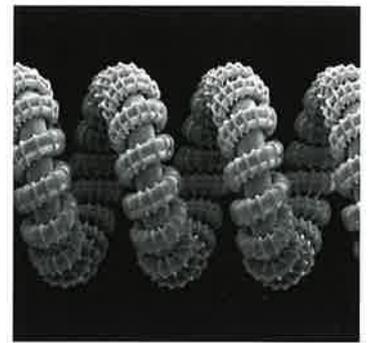
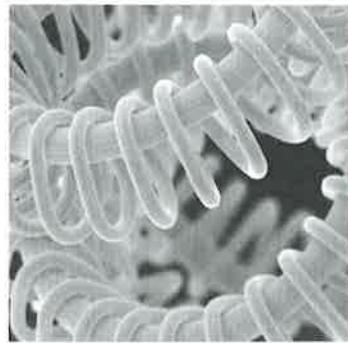
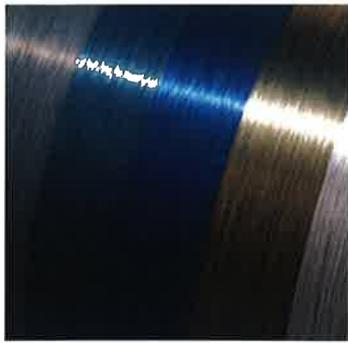
Phosphors

The fluorescent powders made by Philips Lighting Components are used in high-pressure and low-pressure mercury discharge lamps. Today, the phosphors group develops and manufactures two main groups of phosphors: Triband phosphors (80 colors) and Specialties (for example UV). Triband phosphors (80 phosphors) are a combination of red, green and blue results in a 50% increase in efficacy compared to standard phosphors and excellent color rendering properties. Philips was among the first to introduce Triband phosphors on a worldwide scale and we are proud of the know-how we have built and the

continuous, ongoing developments in this area. Triband phosphors are available in ready-for-use premixed blends or in single components. Specialty phosphors consist of a wide variety of chemical compositions. These phosphors are used in e.g. tanning lamps, in skin treatment applications and in non-lighting applications.

Chemicals

Chemicals are needed in every type of lamp. Philips has over 115 years of experience in perfecting lamps to fit customer requirements. We offer a broad range of expertise, built during decades of developing and producing



chemicals. With quality and innovation as the main drivers, the chemical department manufactures various special chemicals and components. Our main products include capping cement powder, ceramic rings, emitter and getter. In addition, the chemical department also produces many other chemicals. All of our products are easily applicable in all lighting and non-lighting applications.

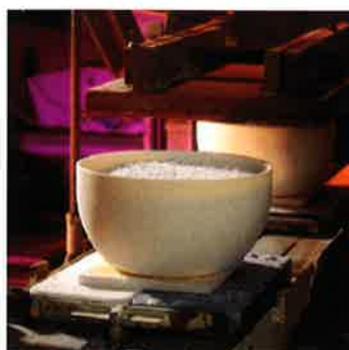
Advanced Metal Solutions

Philips Advanced Metal Solutions is the specialist in designing and manufacturing refractory metal components. Our services are stimulating and enabling a wide range of applications and industries. We're a global center of competence for our customers. Our R&D and manufacturing facilities complement companies that demand value-driven support, application specific solutions and zero-defect production. Our creative and knowledgeable development engineers are equipped with state-of-the-art facilities, and we invest 7 per cent of our sales into R&D. From specific manipulation of metal properties through to mass production, you will find the solution here. Our components and R&D contribute to many industries; opening

opportunities for automotive, health, aerospace, glass, microelectronics and IT industries and the activities of the Philips Group.

Lead-in-Wires

Producing lead-in wires requires the highest accuracy in straightening, cutting and welding the wire parts. Fractions of millimeters will make the difference between good and bad. We control all processes to produce lead-in-wires of the highest quality. First, the wire parts are straightened and cut. For hard metals this is done under special conditions (e.g. tungsten and molybdenum). Next, the different parts of the lead-in wire are welded together to form the final lead-in-wire. For special applications the lead-in-wire can be supplied with a glass bead which is melted on the sealing wire part. Product packaging is an important step, as damaged products can cause major problems in the lamp production process. Special precautions are taken to prevent degradation during storage and transport (e.g. humidity). Many development projects and projects focused on cost savings are ongoing, and we combine tailor-made products with competitive prices to offer the best quality/price ratio.



Quartz & Special Glass Tubing

As a world leader in development and manufacturing of quartz and special glass tubes we offer you a wide range of products within the applications Automotive Headlighting and Signalling, HID & Projection lamps, Thermocouples, Disinfection/ Germicidal and Waterpurification. In the Automotive segment our customers consider us being the best. Besides clear fused quartz we offer you several UV block quartz glasses.



You can obtain from us tubes in the sizes and lengths that you require, either in full lengths or as cut pieces which directly fit into your process. You can even get our technical support to help you to apply our tubes in your process and improve it where possible. Our Quartz and Special glass tubes are produced to meet the highest standards to lighten your business. Let us convince you.

Glass bulbs

High quality glass bulbs are made in Ribbon technology (from 25-63 mm) and Rotary technology (up to 120 mm) in many different sizes and shapes. Within the product range there are bulbs for lighting and also non-lighting applications.

Tubes

Tubes for fluorescent lamps made in Pila in Danner technology show high quality and durability. T12 and T8 tubes are manufactured with wall thickness between 0,5 - 0,8 mm.

Flares

Flares find their application in GLS, TL, and CFL lamps production. Flares are manufactured of lead and lead-free tubing glass.



PCA

Poly Crystalline Alumina or PCA tubes are translucent ceramic envelopes used in High Pressure Sodium lamps (HPS) and Ceramic Discharge Metal Halide lamps (CDM).

The high quality of the tube guarantees a long lifetime and a high light output. As a professional business partner and innovative leader, the group PCA tubes develops and produces PCA tubes for customers throughout the world. Because of its in-depth experience, the group excels in manufacturing these specialized ceramic envelopes.

Caps

Philips Caps is the world's number one suppliers of caps. We satisfy our customers from all over the world by offering the highest quality level, outstanding support and logistics, as well as continuous innovation. We produce a product range of caps, which are used for lighting applications such as Compact Fluorescent Lamps, Incandescent lamps, Fluorescent lamps, Halogen lamps, Automotive, HID and Special lighting. Through many decades we have been able to build up a significant know-how in our key production technologies. These are: Deep drawing, Glass pressing, Nickel plating, Insert moulding, Injection moulding and High speed mounting / Assembling.



Taking care of the environment

Global Warming, our climate is changing. Global energy consumption is growing rapidly. According to the IEA Lighting uses 19% of all electricity consumption worldwide. New lighting technology provides higher quality lighting and saves energy, money and CO₂ emission. It is also why Philips has led the 'green switch' initiative to encourage governments, industries and consumers to move from incandescent to energy saving lamps.



Sustainability

Philips Lighting Components offers all the components for energy saving lighting products. Our Business is an industry involving the planet's raw materials, and we must respect the efficiency of their use, their wastage and the impact on the world. The policy that we pursue upholds these values, and ensures we are compliant with even the strictest environmental regulations. Our new 'green' pickling installation in Pila is a prime example where we are leading on environmental, social and economic responsibility:

increasing output but using less acid; minimizing waste and actively using its bi-products; complying to the most stringent environmental legislation and safe working practices; handling mass production and an increase in coiling capacity at the Pila plant; serving as a responsible community member. This attitude ensures the stability and longevity of our business as a whole, creating harmony between the needs of our staff, stakeholders, customers and wider world. It's a policy that we encourage our partners to follow.



More information

For more details on what we can achieve for you, please contact us or our local sales representatives.

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