



Lighting Technology

in the Capital Region Berlin-Brandenburg



Quality control at FUTURELED



volaTiles modules can reproduce millions of colors

Companies

Amplex Denmark
 Artrolux
 bdL.Büro für Daten & Lichttechnik
 BRAUN Lighting Solutions
 Brilliance Fab Berlin
 Code Mercenaries
 Concord LED Solution
 ElektroCouture
 EMO Systems
 EPIGAP Optronic
 FoxyLED
 FUTURELED
 G.L.E. – Gesellschaft für lichttechnische Erzeugnisse
 Green Plus
 GUBBEMED International
 GUSTAV HAHN
 H.M. Wörwag
 Hans Boehle
 Elektroinstallationen
 Hansen Neon
 ICE Gateway
 Instrument Systems
 Optische Messtechnik
 INURU
 i-save energy
 Kardorff Ingenieure
 Lichtplanung
 LaserAnimation Sollinger
 Laserlight Showdesign
 LED Expo Berlin
 LEDsparlicht
 LEDs UP
 LEDVANCE
 LEDwork
 Lichtvision Design
 Limax
 LittleSun
 LMT Lichtmesstechnik Berlin
 Lucelab
 Lumi-Con
 Lutron Electronics
 MAWA Design
 MX-ELECTRONIC
 Oligo Lichttechnik
 OSA Opto Light

Lighting technology is an important focus area in the photonics cluster in the capital region. Here, world-renowned developers and producers such as Osram, Siemens or Selux manufacture high-tech lighting systems and illuminants for indoor and outdoor use, signal systems or special applications for the automobile industry and medical engineering. Other global players have their sales offices in Berlin. A multitude of small and medium-sized enterprises with a strong background in R&D develop and produce components such as LEDs and other optoelectronic signals, ballasts, and innovative lighting, control, and management systems for new products and retrofits. Important impulses for lighting technology also come from the vibrant startup scene, especially at the interface of technology, design and architecture. Fashion designers are experimenting with technical applications relating to apparel. Some of the world's leading lighting design offices and architects provide concepts for implementation in a variety of fields of application. And after all, the capital region, as a major location for culture and media, is also a center for enterprises in the field of film and theater lighting.



Thomas Dulas
 CEO
 Oligo Lichttechnik GmbH surface controls

»We use lens-prism optics developed and patented in Lenzen for our surface inspection lamps. We use them where flawless surfaces are required, including with all notable automobile manufacturers.«



Prof. Dr.-Ing. Stephan Völker
 Head of the Department of Lighting Technology
 Technische Universität Berlin

»Intelligent light for an intelligent city: With the LED catwalk in Berlin, we explore and demonstrate innovative LED outside lighting and provide a point of contact for interested scientists, manufacturers, planners, municipalities and citizens.«

Research

The Department of Lighting Technology of the Technische Universität Berlin, which was founded in 1882, is the oldest and most venerable lighting technology institute in Germany. The institute focuses today on basic and applied research in lighting systems, light management, daylight systems, photometry, light quality, the physiological and psychological effects of glare, mesopic vision, and the photobiological and photochemical effects of light. Innovative LED technology plays a significant role. In 2014, the LED catwalk was built as a new testing infrastructure; it simulates the inner-city roads and paths, sidewalks and plazas over an area of 1,500 meters at the Deutsches Technikmuseum. It allows various lighting scenarios to be set up with different lighting fittings to test their effectiveness. Other research activities involve the development of OLEDs and UV-LEDs on the basis of nitride semiconductors. The Fraunhofer Heinrich Hertz Institute in Berlin has developed »high-speed internet from the ceiling lamp«. In this technology, LED light from commercially available lamps is switched on and off at extremely high speeds



UV lamp trolley from Berolina for sewer pipe refurbishment

- Strong scientific basis
- High number of specialist small and medium-sized enterprises and service providers with a wide range of expertise
- Intensive networking of science and industry
- Technological focuses: intelligent illumination systems, semiconductor light sources (LED, OLED, UV-LED, laser diodes), special illuminants, human centric lighting, visible light communication, quantum dots, functional materials, printed electronics
- Consolidation of technology, design and architecture
- Attractive location for a well-trained, specialist workforce
- Excellent funding opportunities

using a modulator. The resulting optical WLAN can reach speeds of up to 3 gigabits per second for a wide range of applications.

In the research area of »functional polymer systems«, the Fraunhofer Institute for Applied Polymer Research (IAP) in Potsdam-Golm is developing materials with semi-conductive properties, as well as chromogenic, phototropic and luminescent polymers, which can be processed into organic light-emitting diodes (OLEDs). The latest developments include quantum dots, which ensure brilliant colors in LC displays.

Close cooperation between science and business

The consortium »Advanced UV for Life« is an alliance of enterprises and research facilities, which is dedicated to the development and implementation of UV LEDs. Projects cover the entire value chain from material and customized semi-conductor components, modules, and devices through to application. Key areas of application include medicine, water treatment, and production technology, as well as the environment and life sciences. »Advanced



»OSRAM has been in Berlin for over 100 years and, just like the city itself, combines tradition and innovation in lighting technology. There are many creative, young enterprises here, with whom we develop new ideas, products and applications.«

Dr. Josef Kröll
Specialty Lighting –
Innovation and IP Management
OSRAM GmbH



»Inuru illuminates packaging and printed products. Berlin provides us with the optimal research environment and the infrastructure appropriate for the development of printed light systems.«

Marcin Ratajczak
Founder
INURU GmbH

UV for Life« is sponsored by the Federal Ministry of Education and Research within the »Zwanzig20 – Partnerschaft für Innovation« program.

In the INAM Innovation Network for Advanced Materials, concepts for the use of new materials and technologies in electronics, optics and photonics are developed and implemented. Focuses include cost-effective processing in printing technology, alternative transparent, conductive coatings for mass application in thin-film solar cells, or the introduction of OLED technology in the automotive industry.

As a non-profit, independent research facility, the Optotransmitter-Umweltschutz-Technologie e.V. (OUT) links small and medium-sized enterprises, other research facilities, and natural persons. It conducts nationwide, application- and industry-oriented research and development for optoelectronic, thin-film, sensor, and signal processing technologies, through to the development of prototypes.

OSRAM
Power Light Systems
PRC Krochmann
RL-Design
Schott Beleuchtungstechnik
Seitec
Selux
Siemens – Signaltechnik
Sill Leuchten
SIUT
SUMOLIGHT
sygns
UVphotonics NT
volatiles lighting

Research

Beuth University of Applied Sciences Berlin
Brandenburg University of Applied Sciences
Ferdinand-Braun-Institut, Leibniz-Institut fuer Hoechstfrequenztechnik (FBH)
Fraunhofer HHI
Fraunhofer IZM
Integrative Research Institute for the Sciences IRIS Adlershof
Leibniz Institute for Astrophysics Potsdam (AIP)
Leibniz-Institut für Kristallzüchtung (IKZ)
Optotransmitter Umweltschutz Technologie (OUT e.V.)
Paul Drude Institute for Solid State Electronics (PDI)
Physikalisch-Technische Bundesanstalt (PTB)
Technische Universität Berlin, Department of Lighting Technology
Universität der Künste (UdK)
University of Potsdam

Organizations

Berlin Leuchtet
Deutsche Lichttechnische Gesellschaft (LiTG)
Festival of Lights
LEDnetwork
Optec-Berlin-Brandenburg (OpTecBB)

Our aim: your success!

Berlin and Brandenburg support the focal area Lighting Technology with an economic policy developed across state borders in the Photonics cluster. The cluster is managed under the aegis of Berlin Partner for Business and Technology, the Brandenburg Economic Development Board (ZAB) and the network OpTecBB.

Our aim is to provide comprehensive support to companies and scientific institutions interested in inward investment or further development in the capital region.

We are ready to assist you with:

- Finding a site
- Funding and financing
- Technology transfer and R&D cooperation
- Cooperating in networks
- Recruiting personnel
- Developing international markets

Reach out and contact us!

www.photonics-bb.com

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