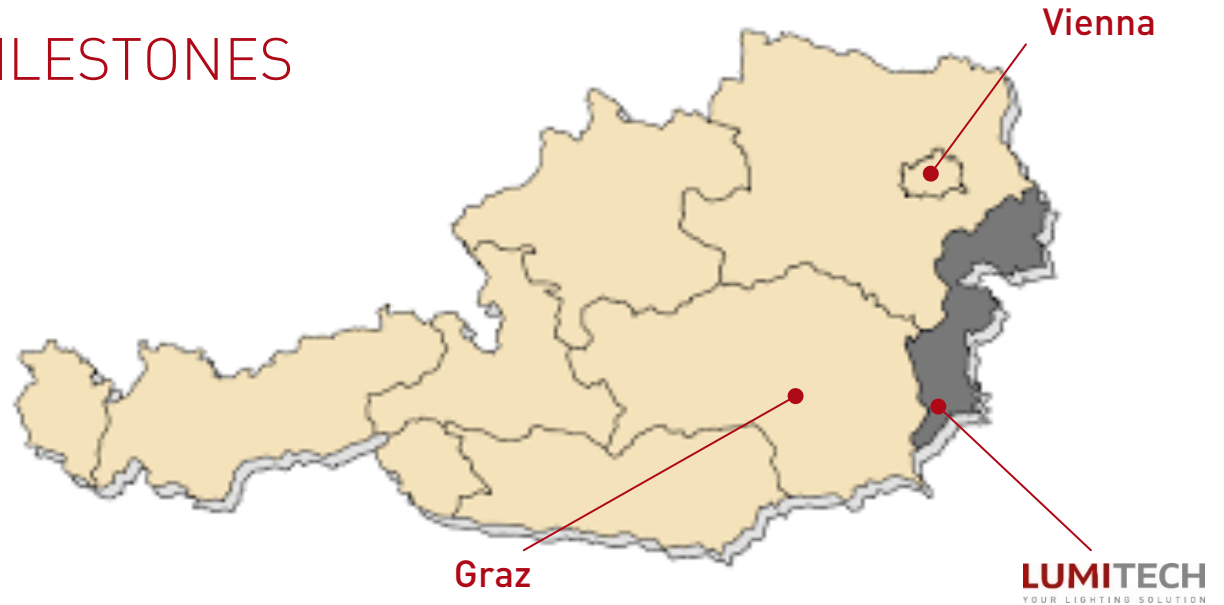




YOUR LIGHTING SOLUTION

# LUMITECH

## LOCATION AND MILESTONES



# LUMITECH

## WHAT'S IMPORTANT TO OUR CUSTOMERS...

„stable and high quality supply chain“

„innovative ideas“

„long-term business relationships“

„individual design“

„single contact for light“

„holistic LED lighting solutions“

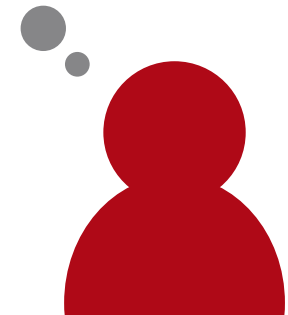
„flexibility“

„development and production on site“

„specific colours and  
light spectra“

„differentiation“

„miniaturization“



„long-term availability“

„UV and infrared  
applications“

„professional solutions“

# LUMITECH

## OUR VISION

# LUMITECH

YOUR LIGHTING SOLUTION

We are proud to develop and deliver the most innovative lighting solutions for our OEM customers:  
To help them to differentiate, to further improve their image  
and to grow their business sustainably.

# LUMITECH

## SOLUTIONS FOR REFRIGERATED CABINETS AND SHOPFITTING MANUFACTURERS



CANOPY  
KOPFBELEUCHTUNG



DOOR COOLER  
TÜRSTEGBELEUCHTUNG



DOOR FREEZER  
TÜRSTEGBELEUCHTUNG



SHELF  
FACHBODENBELEUCHTUNG



DRY SHELF  
TROCKENREGALE



COUNTER  
THEKENBELEUCHTUNG



HANDRAIL  
BELEUCHTUNG  
HANDLAUF | INSEL



HALF GLASS DOOR  
CABINET  
TRUHENBELEUCHTUNG



# LUMITECH

## SOLUTIONS FOR LIGHTING OEMs



### Human Centric Lighting

Products/Systems



Private Label - Portfolio



Controls



### Internet of Things

- IoT-Solutions for intelligent illumination
- Individual combination and configuration of luminaires, sensors and other devices
- Bluetooth-networks for mobile Apps on your smartphone
- Android and iOS
- Addressing and grouping of PI-LED luminaires and sensors
- Simple and customer friendly



### Linear Solutions

- PI-LED and fixed White (also IP66)
- Ideal for architectural lighting (indoor and outdoor)
- Multiple choice of profiles and optics



# LUMITECH

## INDIVIDUAL, SEMICONDUCTOR BASED LIGHTING SOLUTIONS FOR INDUSTRIAL APPLICATIONS

For demanding customers  
in the field of:

- Medical luminaires and medical equipment
- Railway signals
- Machine vision



# LUMITECH

## CORE COMPETENCIES

### Chip On Board – COB technology

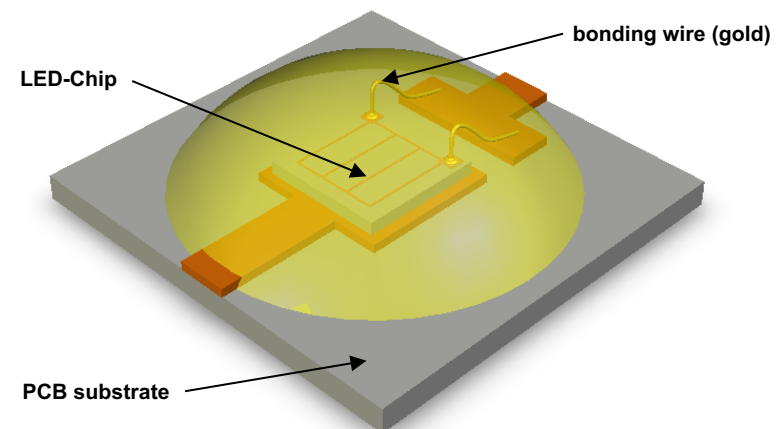
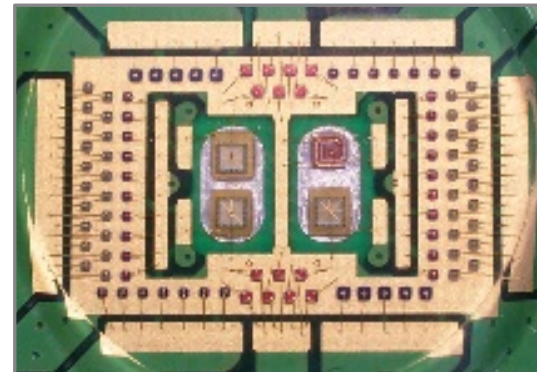
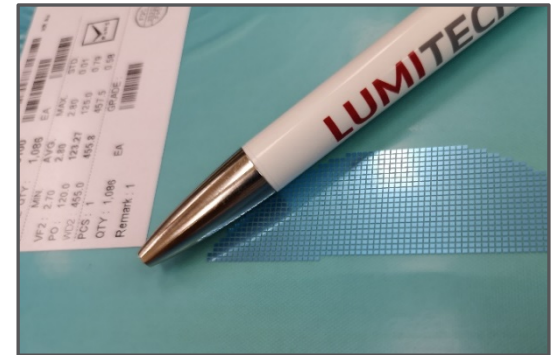
#### Die Bonding:

Direct mounting of the semiconductor (LED chip) on the PCB substrate

#### Wire Bonding:

electrical contacting of semiconductor and PCB substrate

- Excellent thermal behaviour
- High packing density
- High light output on small surface
- High level of miniaturization
- Freedom in design





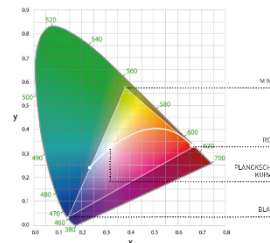
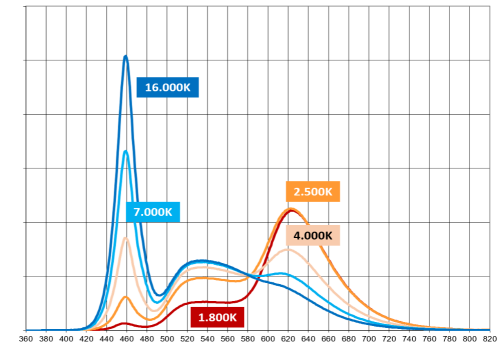
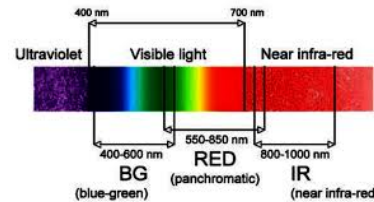
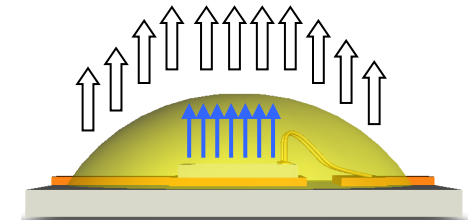
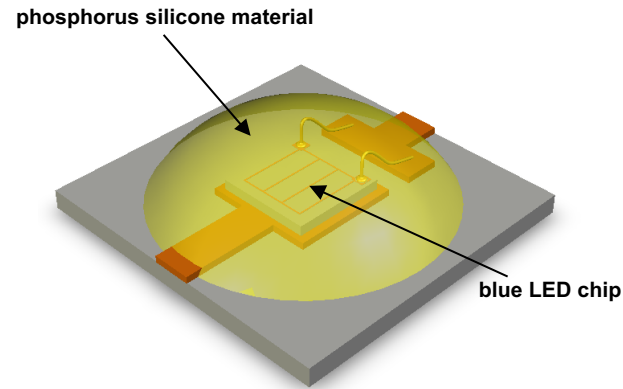
# LUMITECH

## CORE COMPETENCIES

Colour conversion and sealing – dispensing

Potting the LED with silicone material (transparent or phosphor converted)

- UV, visual spectra and infrared
- Competence in phosphor conversion
- Individual light colours
- Colour changable white light **PI-LED®**
- Individual designs (globetop, dam & fill, remote)
- Ideal conditions for use of secondary optics



# LUMITECH

## CORE COMPETENCIES

### SMT

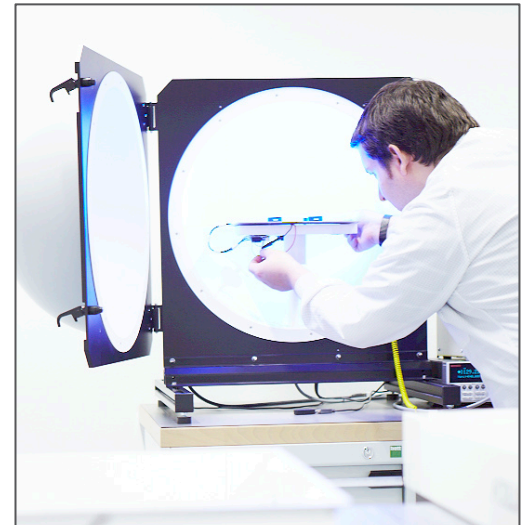
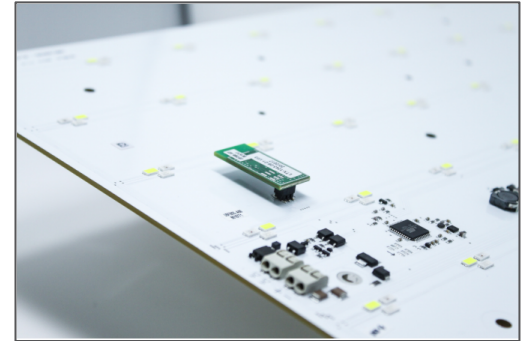
- Mounting of electronic components, LEDs and optics
- Maximum component size 33x33x18mm
- High flexibility due to dispensing process
- No solder masks necessary
- Combination of COB and SMT
- PCB layouting competence

### Quality control along manufacturing process

- Inline testing
- 100% functional testing
- 100% final measurement of electro-optical parameters

### Assembly

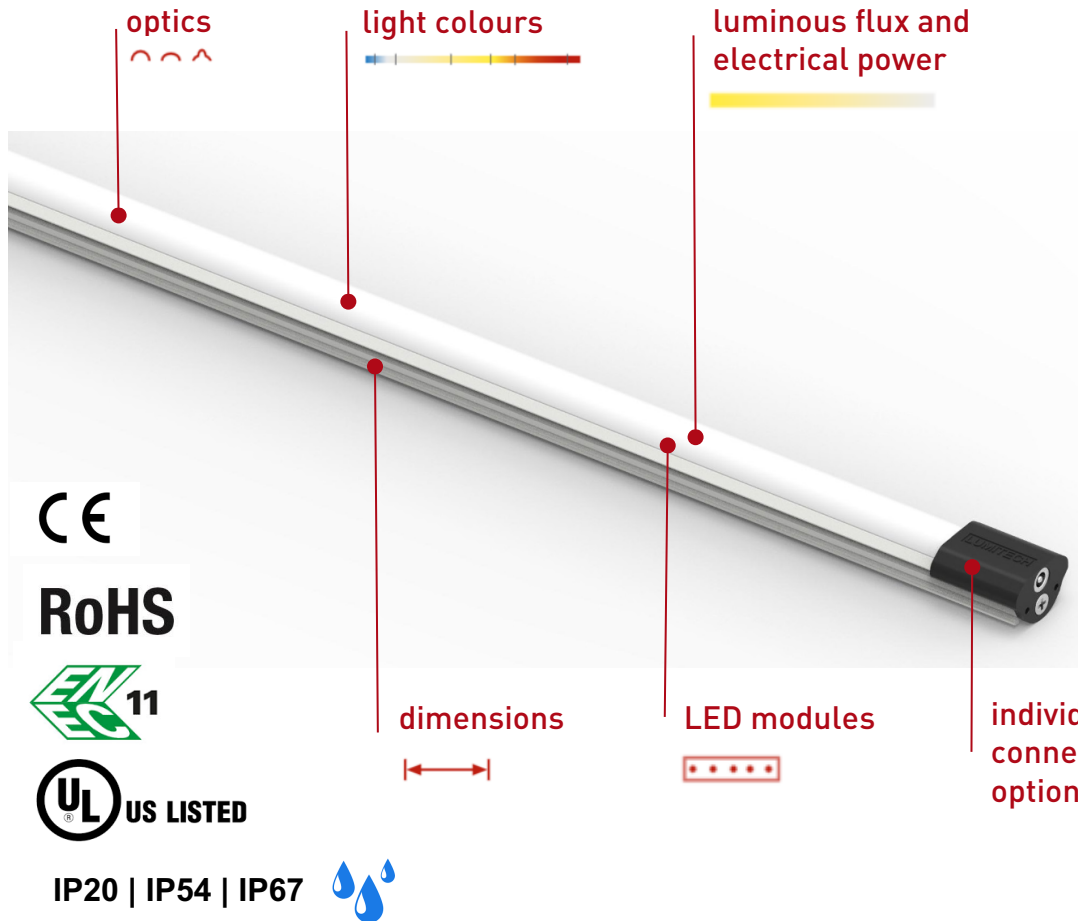
- Manual process steps (e.g. soldering, gluing, etc...)
- Manufacturing of complete light engines



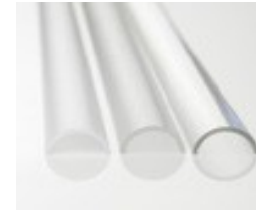
# LUMITECH

## CORE COMPETENCIES

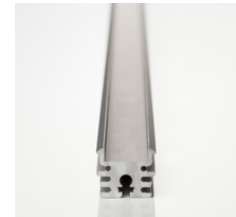
Development and manufacturing of individual light engines and luminaires



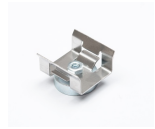
linear optics



linear mounting profiles

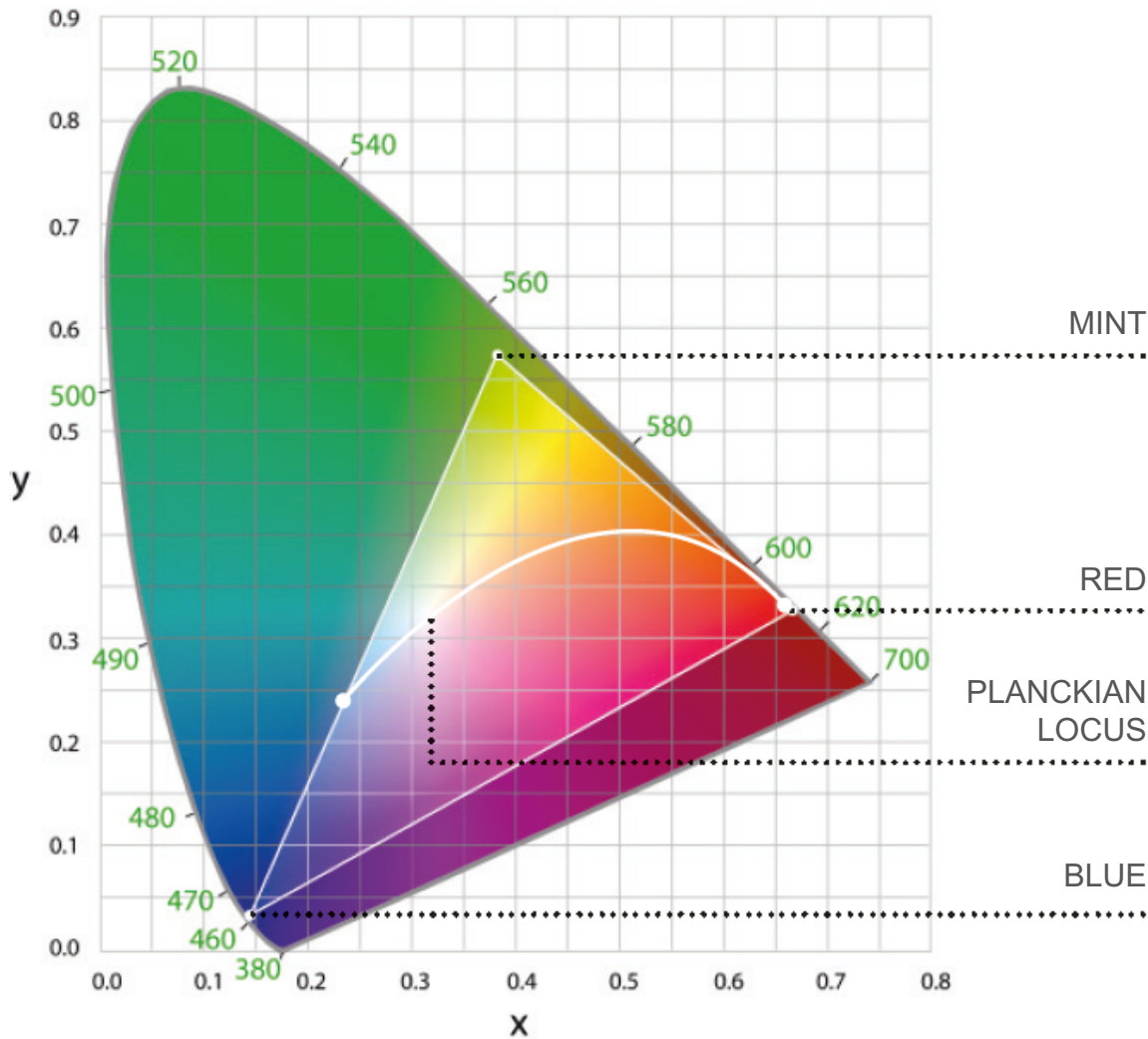


fixing plates



# LUMITECH

## CORE COMPETENCIES



**Tunable white**  
1.800K - 16.000K



**Brightness dimmable**  
1% - 100%



**RGB/CIE-xy adjustable**  
Colour points and sequences



**2 Control modes**  
DALI DT8, ZigBee 3.0



**Excellent CRI**  
CRI > 90

# LUMITECH

## MANUFACTURING IN THE HEART OF EUROPE

### Fully automated Multichip Die Bonding – Datacon 2200 EVO

- Up to 3500 pick and place processes per hour
- Individual PCB-size (100-330mm length / 22-103,6mm width)
- Mounting accuracy +/- 10 $\mu$ m @ 3sigma
- Multiwafer handling of different chip formats



### Fully automated Ball-Wedge Wire Bonding – Palomar 8000

- Up to 8000 wire bonds per hour
- Mounting accuracy +/- 1,5 $\mu$ m @ 3sigma
- Dual z-axis for deep access bonding
- Bonding area x=300mm / y=103,6-150mm / z=15-20mm



# LUMITECH

## MANUFACTURING IN THE HEART OF EUROPE

### Fully automated SMT production line – Essemtec Paraquda

- Mounting of electronic components and optics
- Accuracy XY +/- 51 $\mu$ m @ 3sigma
- Use of feeders or trays possible
- Maximum component size 33x33x18mm

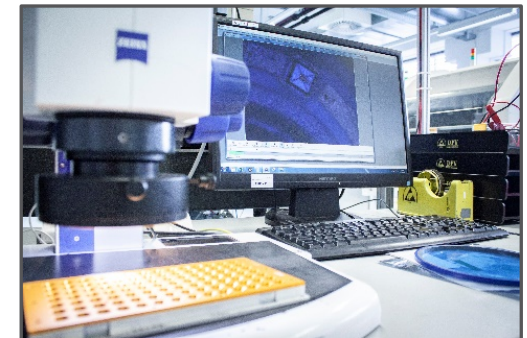


### Fully automated dispensing – Essemtec Scorpion

- Accuracy XY +/- 51 $\mu$ m @ 3sigma
- Different kinds of dispensing technology (piezo & pneumatic jetting, time/pressure)
- Accuracy of dispensing volume +/- 2%
- Finest decompositions in the pLiter range

### 100% quality inspection of the products

- Inline testing
- Binning of LED modules
- 100% measurement of electro-optical parameters  
(lightflux, CRI, CIE x/y, Vf, If, etc...)

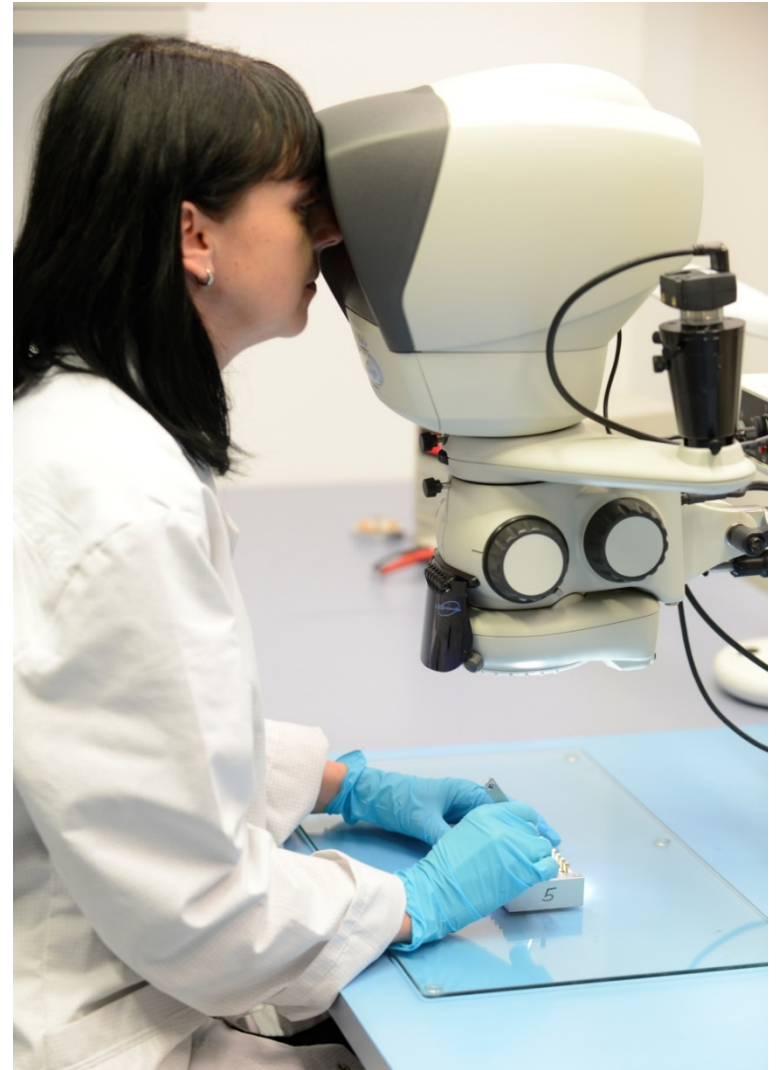


# LUMITECH

## OUR SERVICES

### Our employees are there for you

- LED know how for more than 20 years
- Specialists in their field
- Qualified network with selected partners
- High level of quality and reliability



# LUMITECH

## OUR SERVICES

### Regional single point of contact for semiconductor-based lighting solutions

- Centralized competencies on-site in sales, R&D, production, quality management and logistics
- On-site support from the very first contact
- Efficient coordination and product development
- „We don't think in terms of products, but in terms of solutions“



### Quality and sustainability

- Materials from qualified and well-known suppliers
- Extensive qualification and approval of new materials
- 100% inline quality control
- Reliability and lifetime testing
- Change management
- Long-term availability due to life cycle management



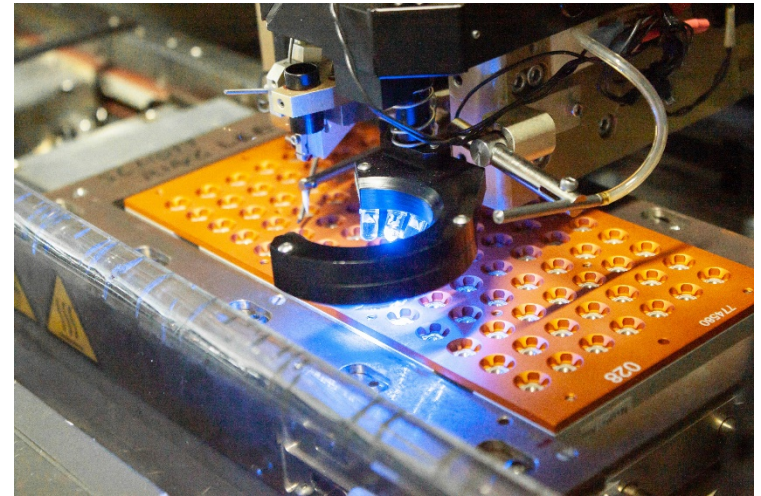


# LUMITECH

## OUR SERVICES

### Broad range of competencies in R&D and production

- Chip On Board
- SMT (electronics and optics)
- Dispensing and coating
- Colour conversion and **PI-LED**® technology
- 100% testing
- Assembly



### Differentiation of our customers due to flexibility and individuality

- New design approaches
- Miniaturization
- Specific light colours and spectra
- UVC, UVB, UVA, visual spectra, infrared
- Holistic lighting solutions



# LUMITECH

## WHAT'S IMPORTANT TO OUR CUSTOMERS...

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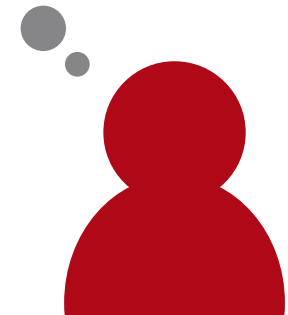
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„professional solutions“

# LUMITECH

## YOUR ADVANTAGES AS A PARTNER OF LUMITECH

- ✓ **Regional single point of contact in Austria**
- ✓ **Competent employees with more than 20 years LED know how in sales, R&D and production**
- ✓ **Close and partnership-based cooperation**
- ✓ **Finding a solution as the ultimate goal**
- ✓ **Suitable lighting solutions due to flexible processes and equipment**
- ✓ **Differentiation due to chip on board and colour conversion**
- ✓ **Advantages in your market due to individual concepts and solutions**
- ✓ **Long-term and sustainable product availability due to life cycle management process**
- ✓ **High degree of quality assurance due to qualification, 100% testing and change management**





YOUR LIGHTING SOLUTION