



>> TOUCHpoint LED Technology

>> Our competence – Your benefit <<

>> step by step - concept development

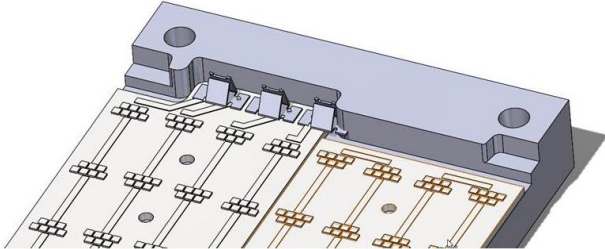
- > knowledge and databases
- > ideas and improvements
- > simulation and optimization
- > verification and validation

Innovation loop

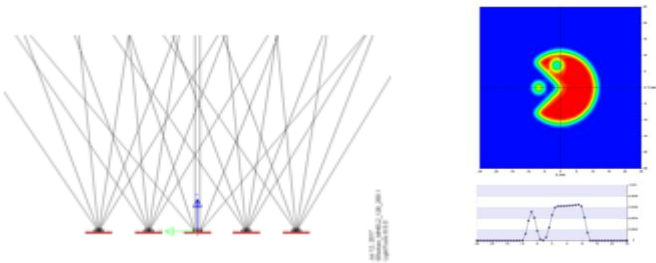
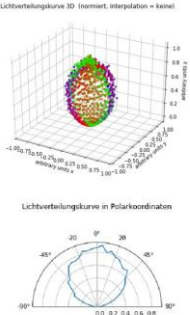
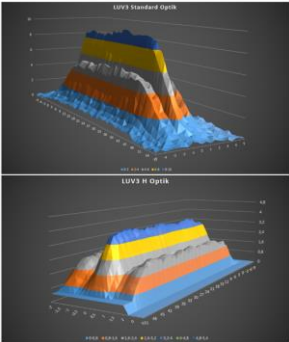


knowledge and databases

ideas and concepts improvements



simulation and optimization



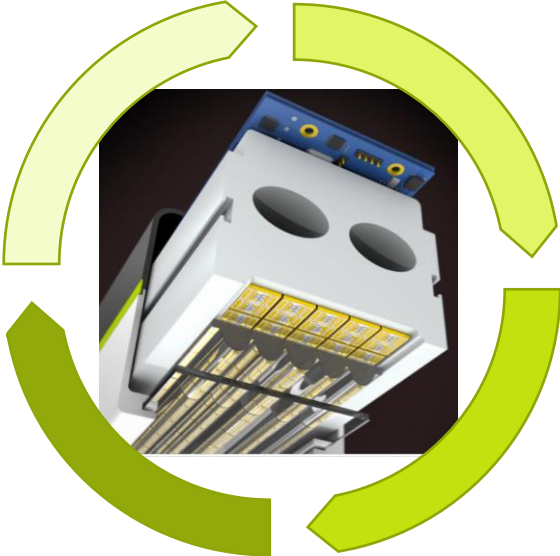
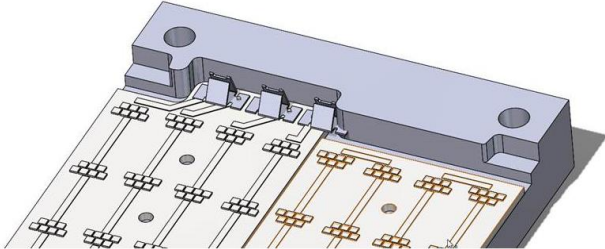
verification and validation

Innovation loop

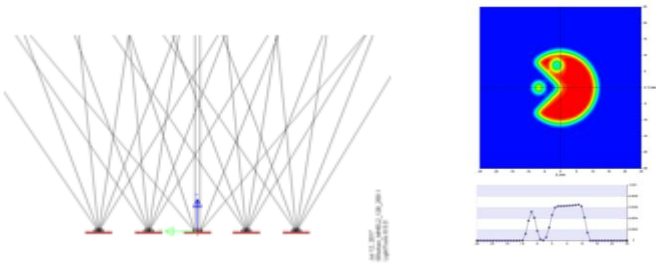
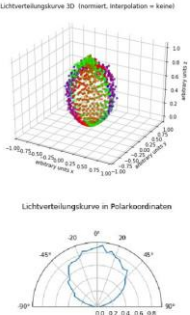
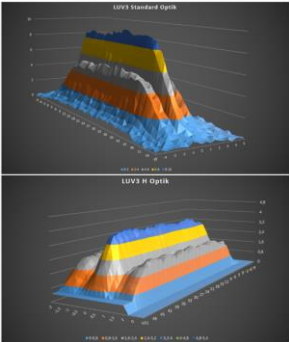


knowledge and databases

ideas and concepts improvements



simulation and optimization

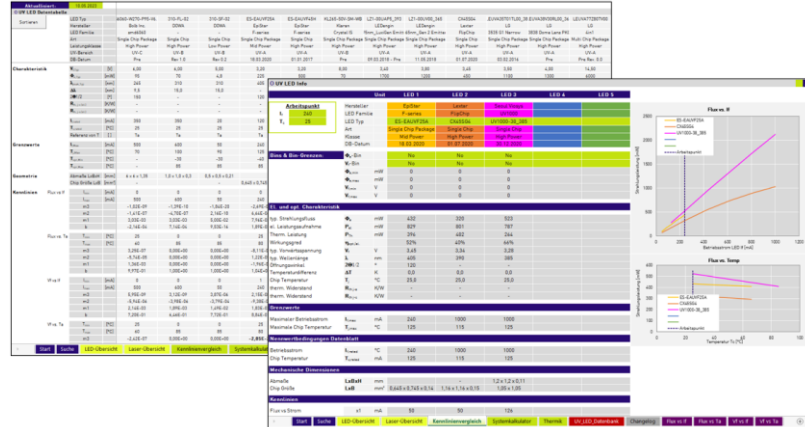


verification and validation

Innovation loop - Database Exampels:



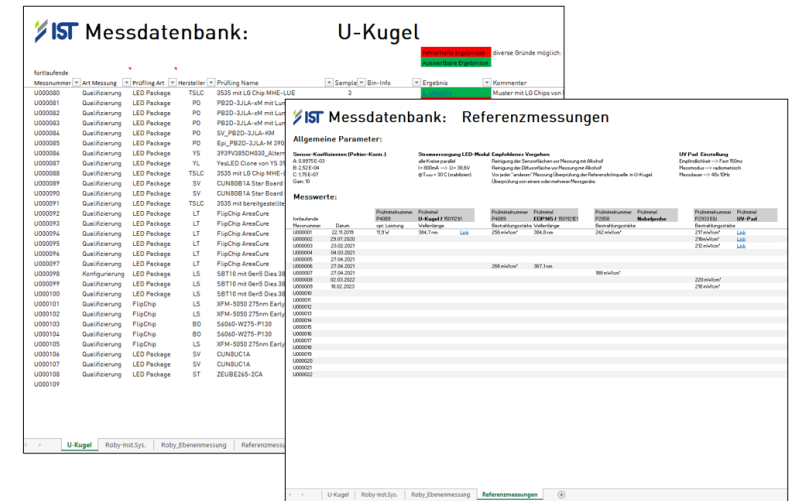
LED Light Sources



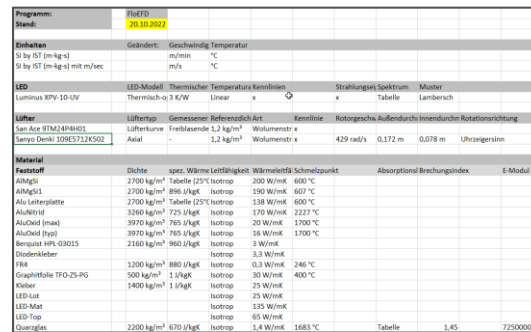
Feedback Loop



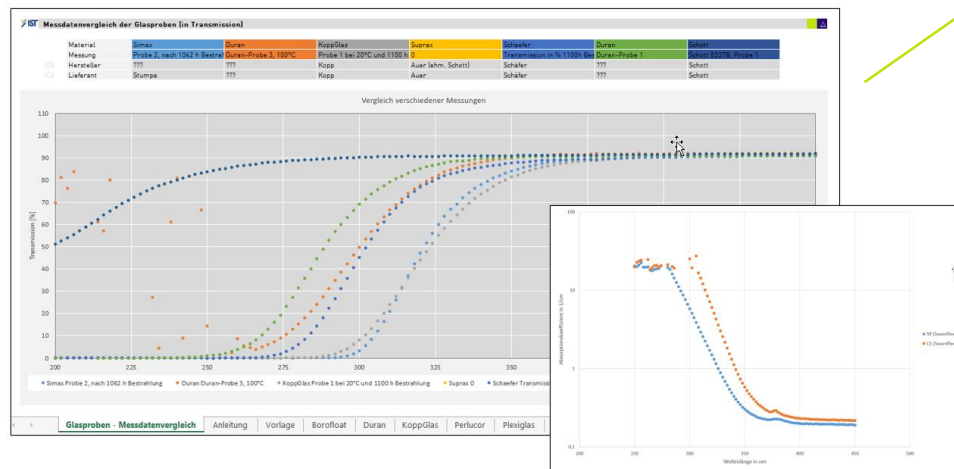
Measurement Data



Simulation



Optical Materials



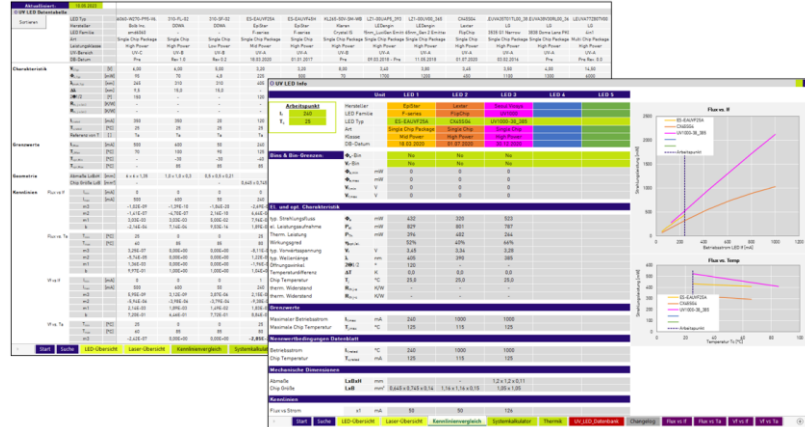
(Early) Samples



Innovation loop - Database Exampels:



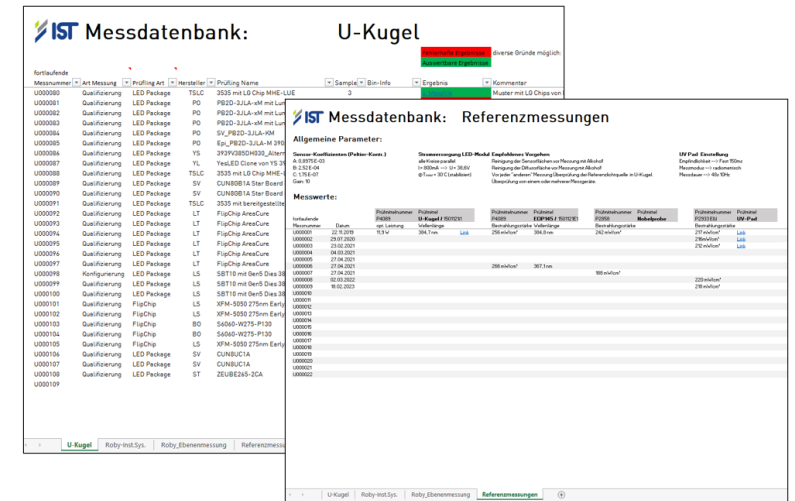
LED Light Sources



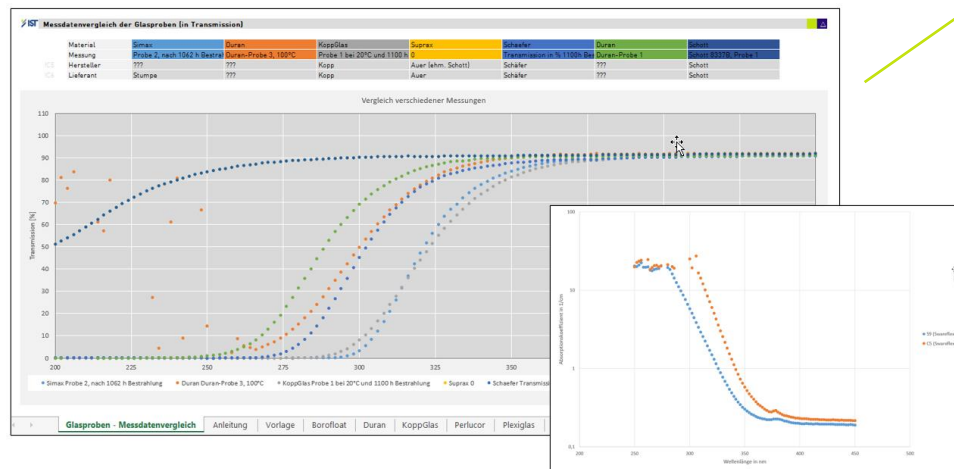
Feedback Loop



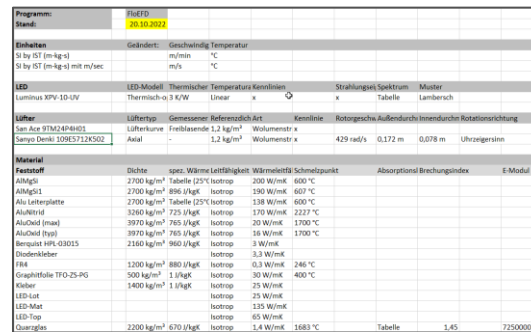
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Optical Materials



Simulation



(Early) Samples



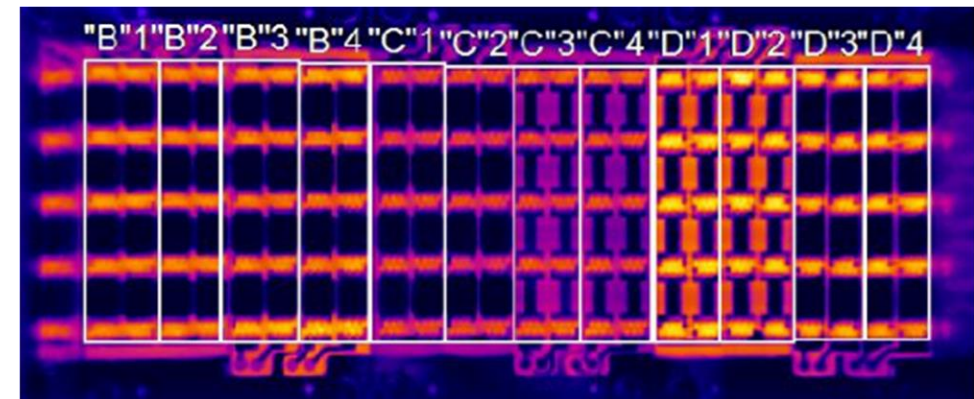
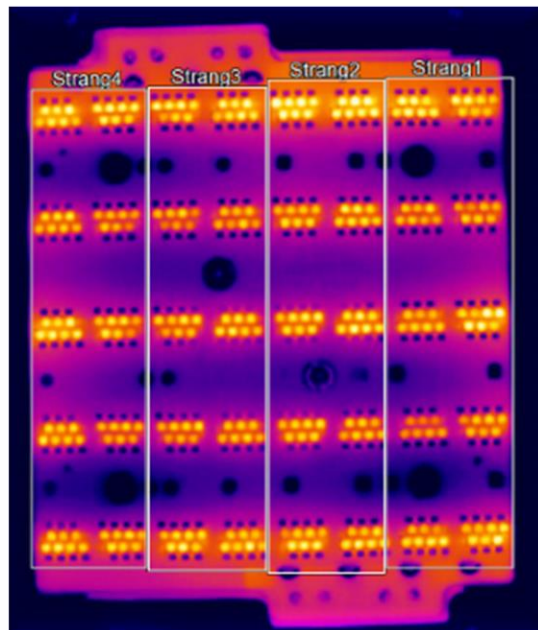
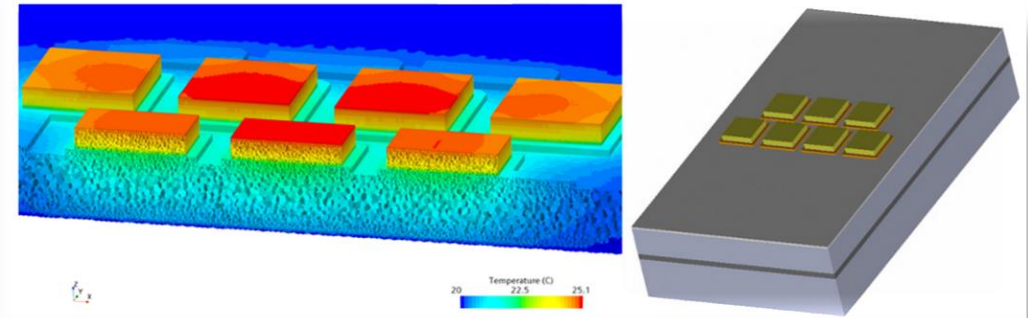
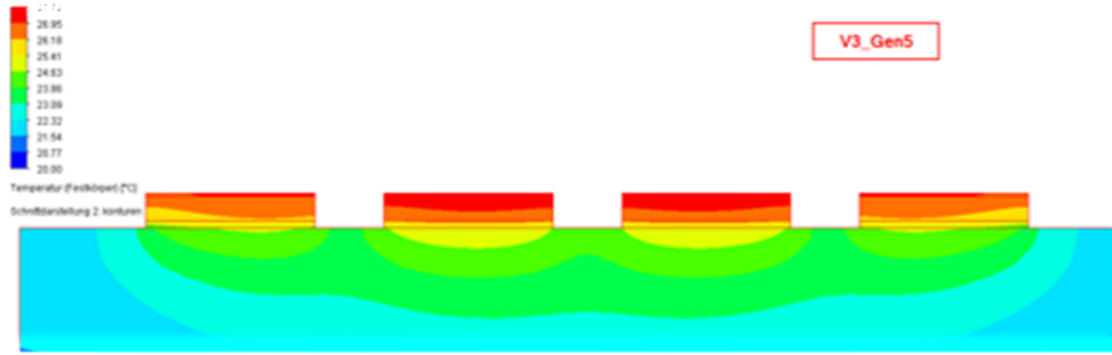
The background of the entire image is a close-up, top-down view of a fire. The coals are glowing with a bright orange and yellow light, with some darker, charred areas. The texture of the coals is rough and irregular.

»» Heat management

>> Why is heat management for LED UV so important?

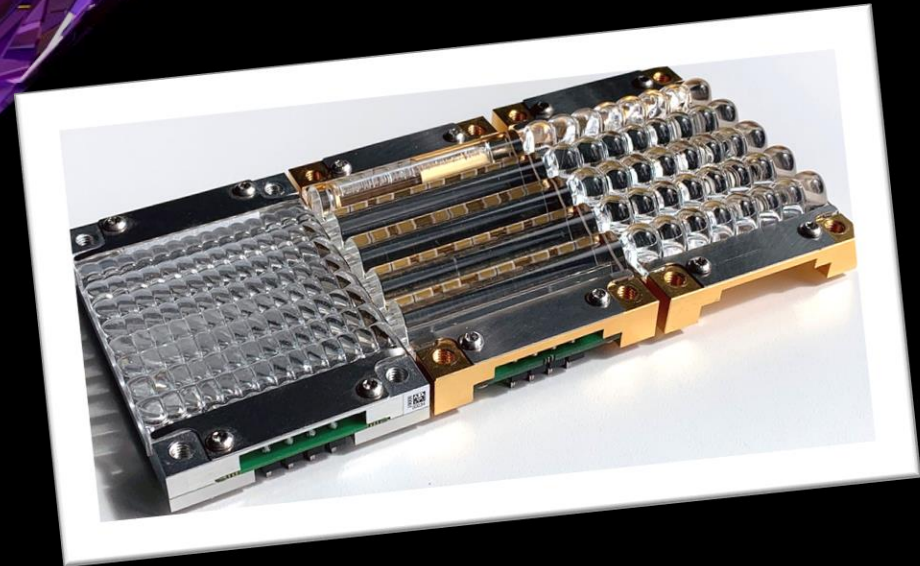
- > high performance
- > long product life
- > high reliability

>> Heat management





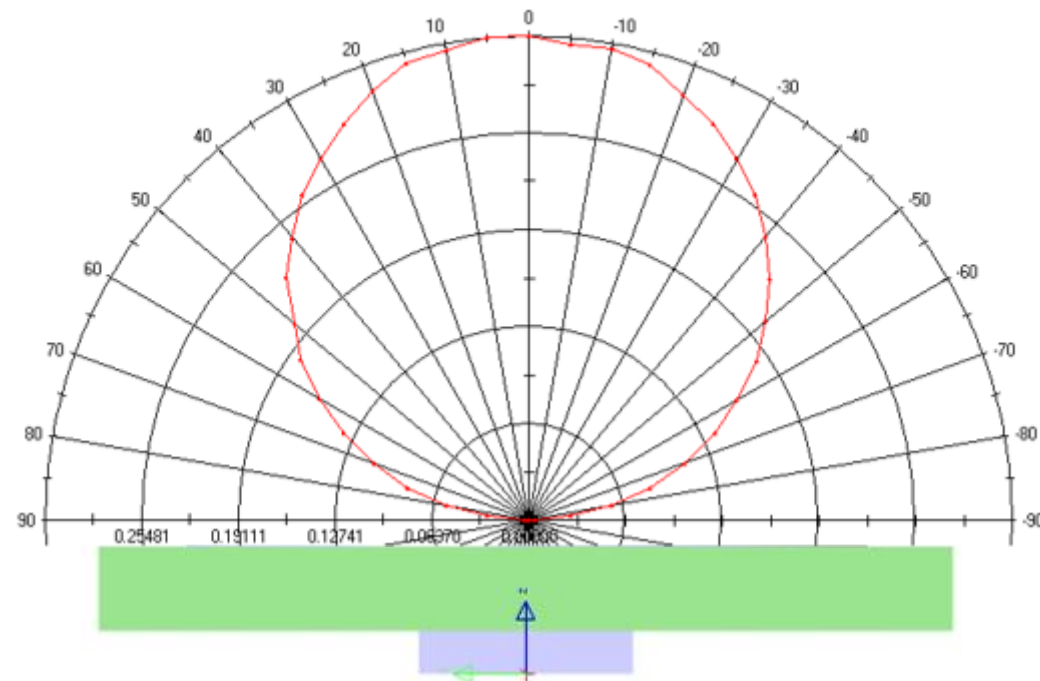
- Like a diamond
- different optics
- different applications



Why or when does it need optics?

Light guiding

... to enable optimal energy input on the substrate at larger distances

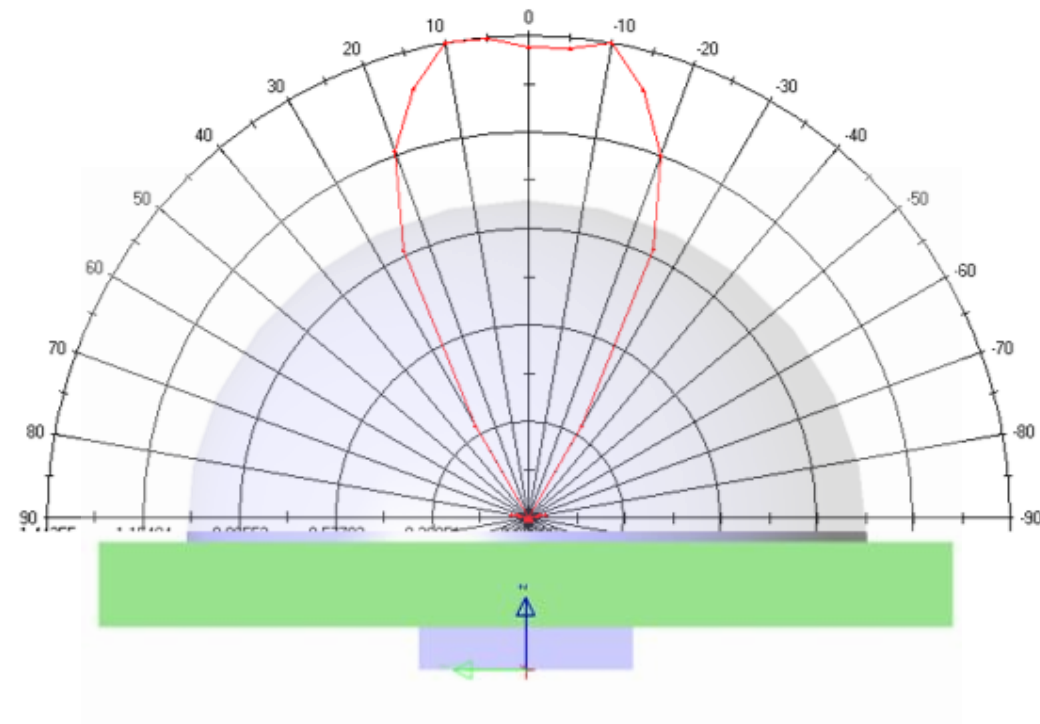


radiation characteristic of an LED without optics

Why or when does it need optics?

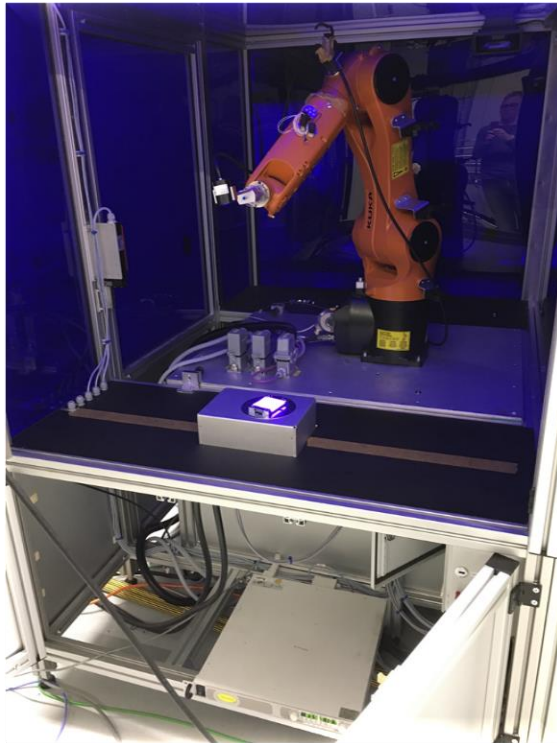
Light guiding

... to enable optimal energy input
on the substrate at larger distances

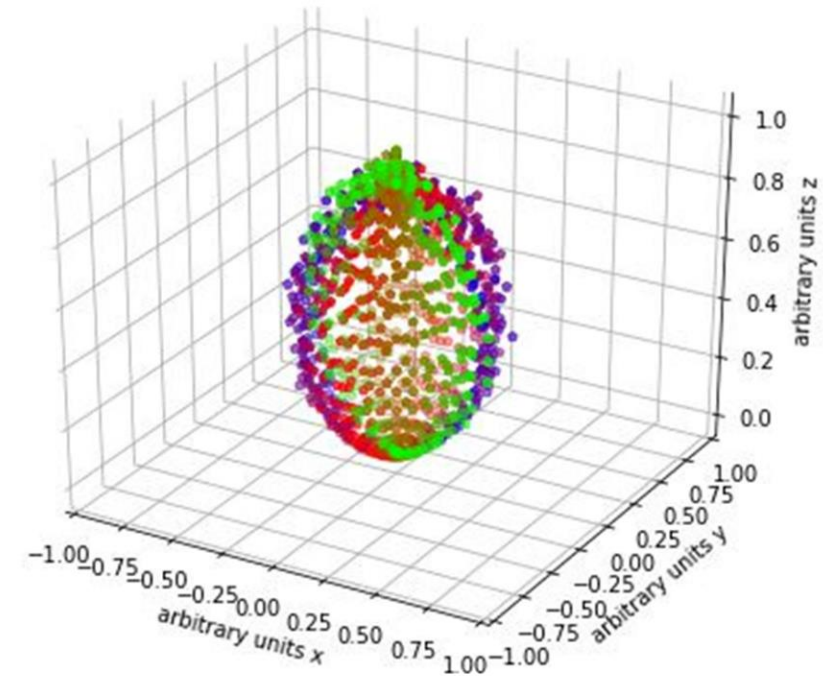


radiation characteristic of a LED with a simple ball lens

Why or when does it need optics?



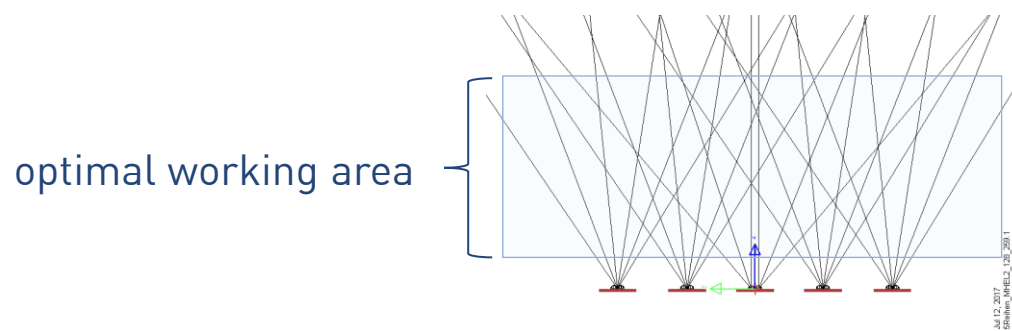
Lichtverteilungskurve 3D (normiert, Interpolation = keine)



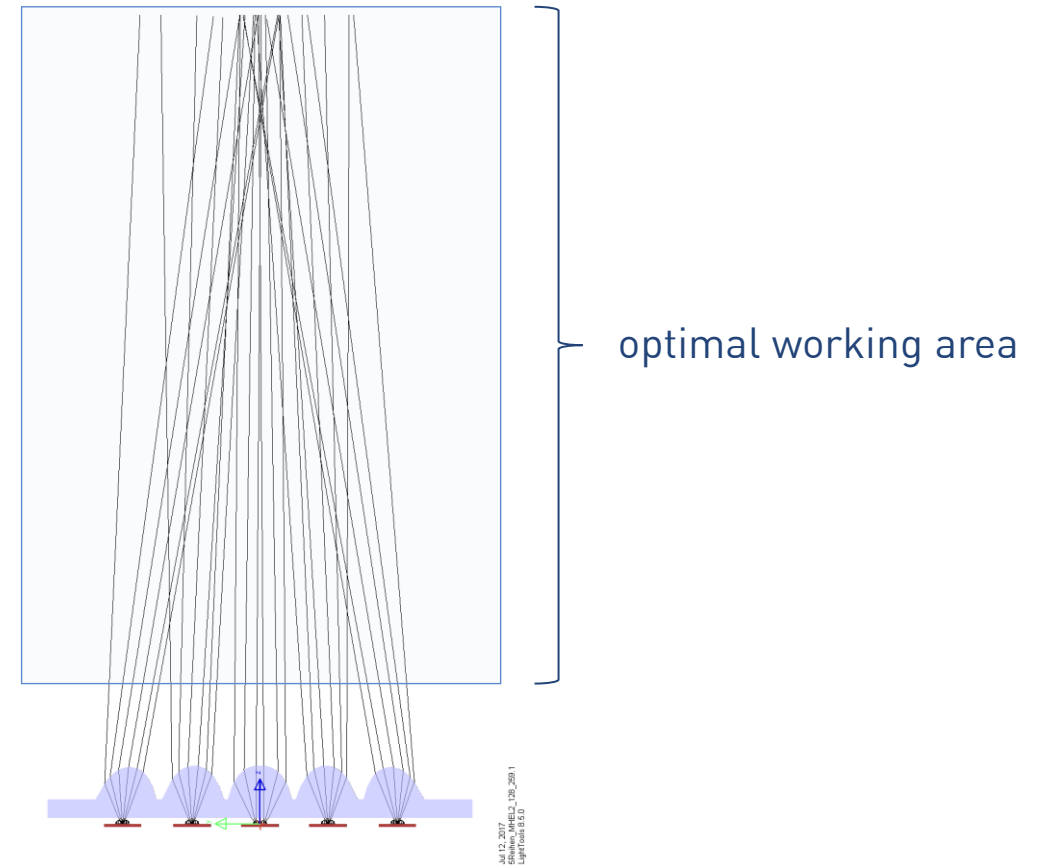
Why or when does it need optics?

Light guiding

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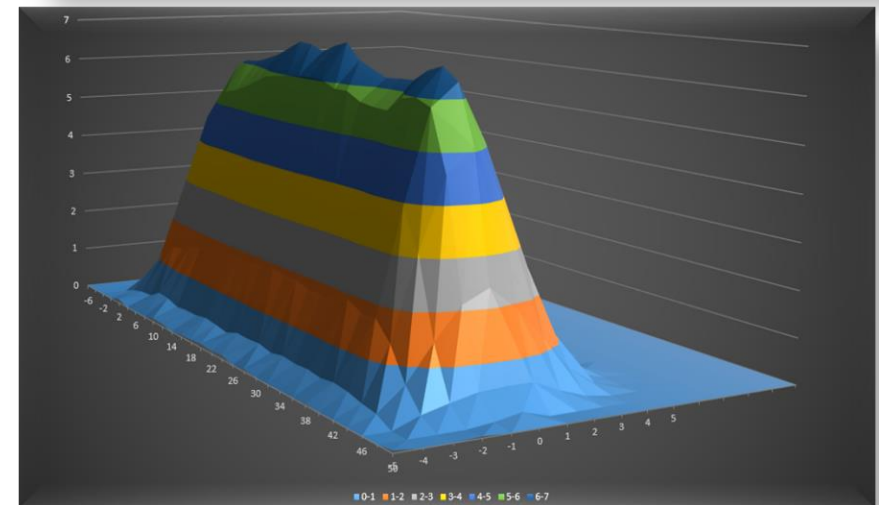
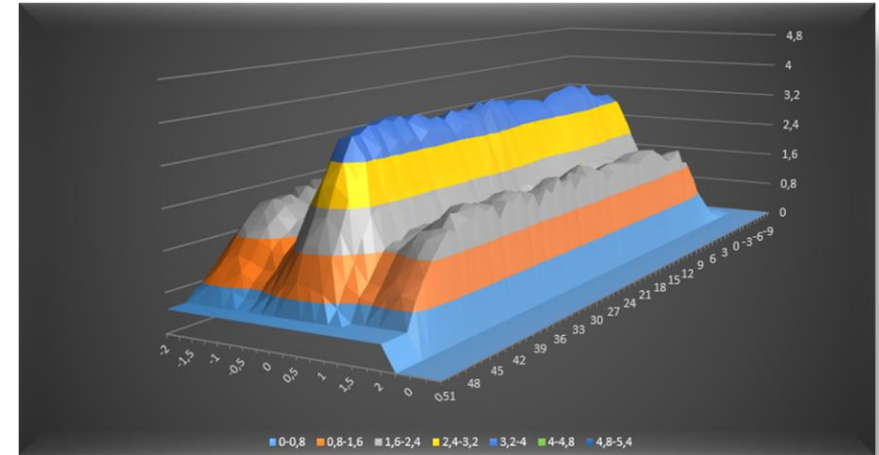
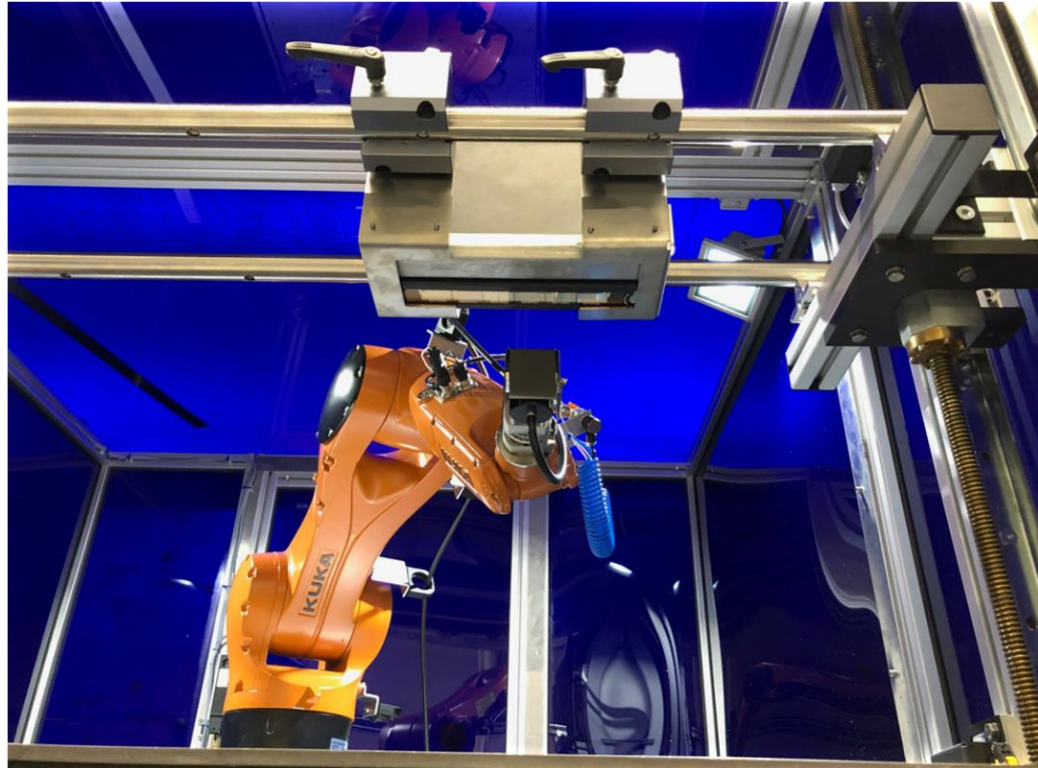


System without optics



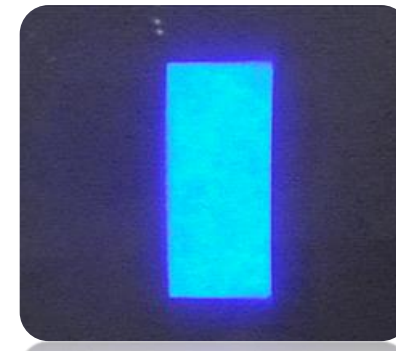
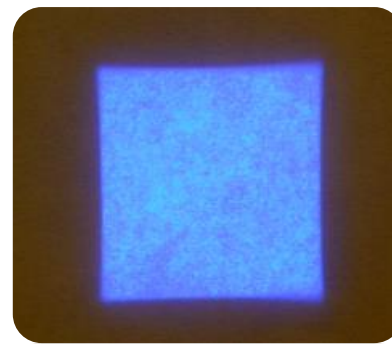
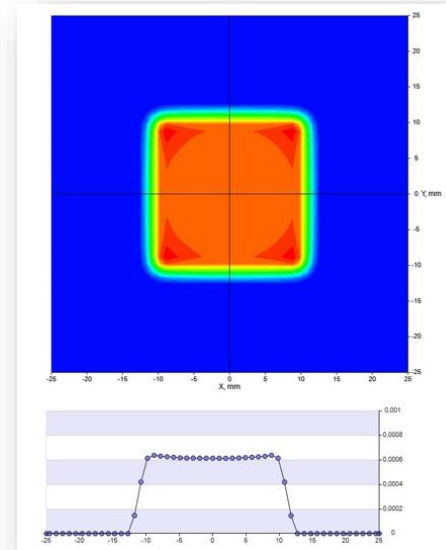
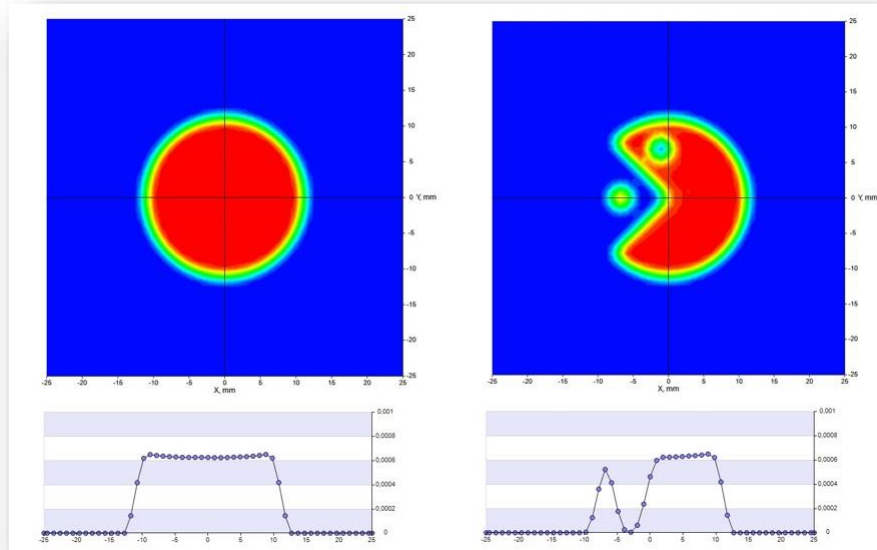
System with more complex optics

Why or when does it need optics?





>> Light forming with optics



A female technician with blonde hair, wearing dark blue overalls and a black t-shirt, is kneeling in a factory setting. She is using a screwdriver to work on a piece of machinery. The background is a large industrial machine, and the overall lighting is a deep blue. The technician is smiling slightly at the camera.

>> meet a special**IST**