OPTICS & SYSTEMS FOR MANUFACTURING DISPLAYS.

FOCUSED BEAM SHAPING & EXPANSION.

BERLINER GLAS
BERLINER GLAS GROUP

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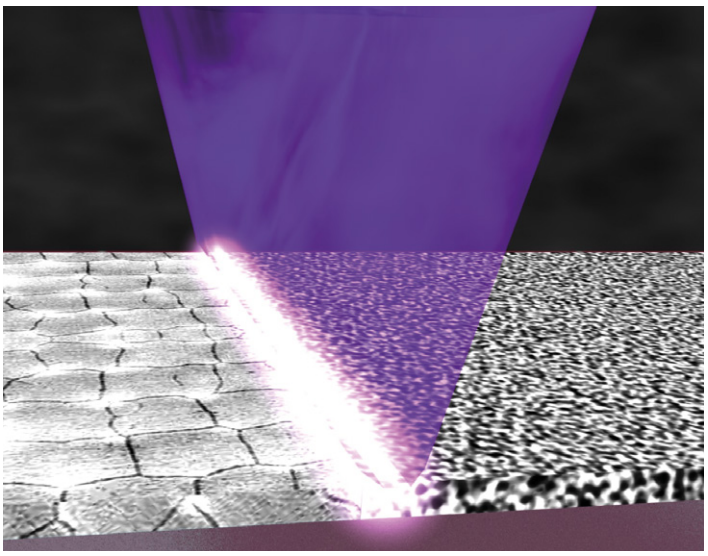
OLEDs have revolutionized displays. OLED displays offer high-contrast images with brilliant colors. Text and graphics are strikingly sharp, fast moving images and videos are displayed without streaks, from all viewing angles.
Various technologies have been developed to produce OLED displays – in rigid and flexible designs – such as laser annealing and laser lift-off processes. The Berliner Glas Group develops and produces optical components and systems for beam control and homogenization of lasers for these technologies.

Four reasons why you should choose the optics and systems from the Berliner Glas Group:

1. We have expansive development and production knowledge to create highly precise large-area optics (> 2,000 mm)
2. We employ various fine correcting procedures in combination with innovative measurement technology
3. Our process chain is completely in-house
4. We have extensive knowledge and experience in developing and manufacturing finely adjustable mechanical optic frames



The principle of laser annealing, image: Coherent GmbH

APPLICATION

- Production of OLED displays (flexible and rigid) for smartphones, tablets and TVs

PRODUCTS

- Plane and cylindrical mirrors
- Array lenses and systems for beam homogenization
- Combinations of plane, spherical and cylindrical optics

SPECIFICATIONS

Material	Quartz, optical glass, MgF_2, glass ceramics, borosilicate glass
Length	Up to 2,000 mm, larger on request
Outer outline	Free form
Radii	2 to ∞ (short and long axis)
Fitting	λ/10 at 100 mm
Centering	Rotation: 10", offset: 4 µm, wedge: 3 µm
Surface error	better 5/1 x 0.025
Roughness	Up to 2 Å
Laser damage threshold	> 2 J/cm²

COMPLETE IN-HOUSE PROCESS CHAIN

We provide it all from one source: Optical design, product and process development – manufacturing – coating – mounting in finely adjustable, low-stress frameworks – quality control.

METROLOGY

We have developed an innovative measurement process for large-size plane and cylindrical lenses and employ the stitching method, among others.

Large cylindrical lens (up to 2,000mm, cylindrical and plane) for laser annealing and laser lift-off

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