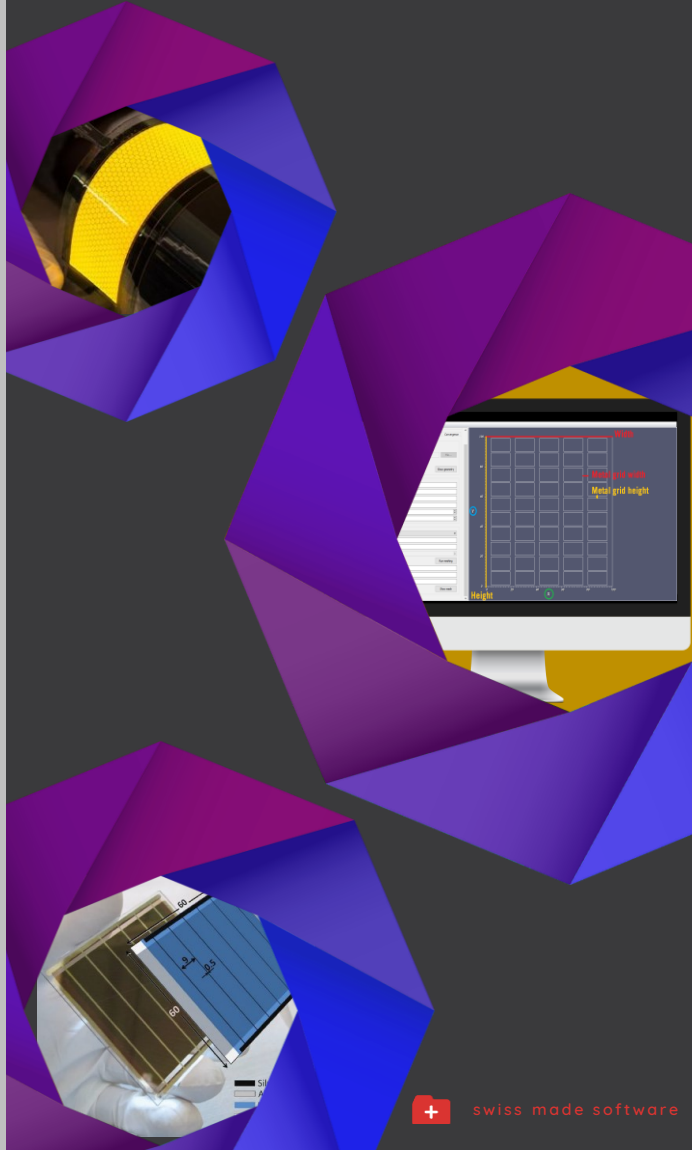


laoss

Design & Optimization Software for Large-Area
LEDs, Solar Cells & Panels



- Electrical
- Thermal
- Optical

www.fluxim.com



 swiss made software

Design & Optimize Large Scale LEDs & Solar Cells

Laoss (Large area organic semiconductor simulator) is a powerful, high speed software package for the design, simulation and optimization of large-area organic and perovskite solar cells and LEDs. (displays, lighting panels, photovoltaic modules).

Electrical Module



Simulate the characteristics of large-area OLEDs & Solar cells

Optimize the electrode design

Reduction of the electrical losses

Analysis of non-ideal effects in OLEDs & Solar Cells

Understand electrical cross-talk in RGD OLED pixel arrays



Thermal Module



Coupled electro-thermal model to simulate the two-way interaction between heat generation and electrical properties of the semiconductor

Calculate the temperature distribution in OLEDs and Solar Cells under standard operations

Explain non-ideal IV characteristics of OLEDs and solar cells due to electrothermal coupling



Optics Module



Optical simulation with a powerful 3D ray-tracing algorithm

Model stand-alone 3D optical elements and their contribution to the device

Simulate optical cross-talk in OLED displays

Easily coupled to Setfos to analyze OLEDs and PVs with complex light-coupling geometries

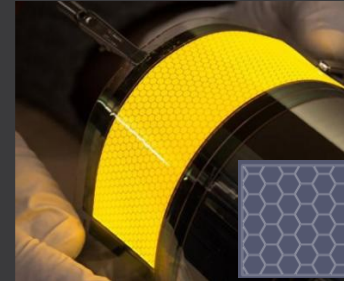


Laoss Module Options

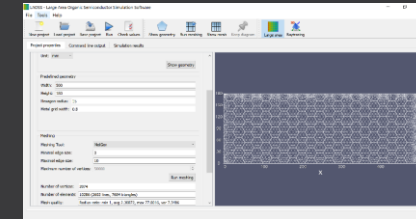
We offer three modules with Laoss: *Optical, Electrical and Thermal*. The optical and electrical modules can be purchased separately. The thermal module requires a license of the electrical module and considers electro-thermal coupling.

Intuitive Work Flow

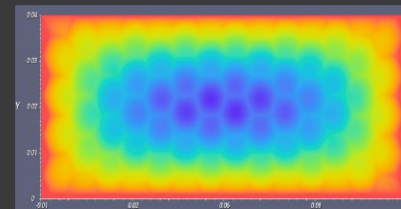
Select the Geometry and generate the CAD file.



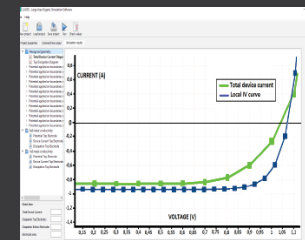
Import a CAD drawing or create a geometry in Laoss.



Run the simulation and visualize the selected output.



Import the I-V characteristics of the reference device. Define the material parameters.



The characteristics of the large-area device can be compared to the local I-V curve

Calculate, Simulate & Optimize

- Analyze the electrical losses in large area electrodes. (LEDs & PVs)
- Evaluate the current flow in the electrodes. (LEDs & PVs)
- Calculate the I-V curves of large devices. (LEDs & PVs)
- Optimize the power efficiency of full solar-cell modules. (PVs)
- Calculate the temperature distribution on the device. (LEDs & PVs)
- Quantify pixel cross-talk effects. (LEDs)
- Optimize the geometry of the electrodes. (LEDs & PVs)
- Simulate the impacts of defects and shunts on the device operation. (LEDs & PVs)

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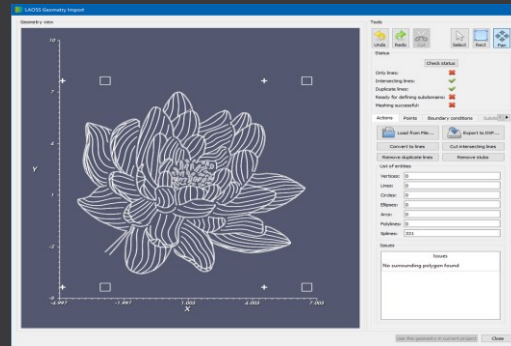
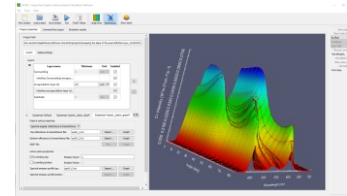
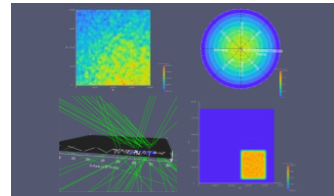
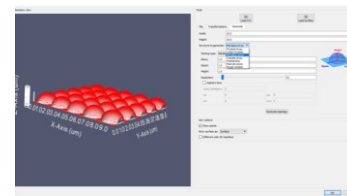
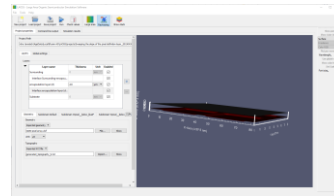
Laoss Optics Workflow

Setup your layer structure including thickness and refractive indices (i)

Load your own XYZ file or use a predefined topography (ii)

Define emission and passive optics properties per subdomain (iii)

Analyze and optimise output (iv)



The Laoss GUI has an intuitive layout and will display your LED or solar cell designs and simulation results in a format that is suitable for detailed analysis and publication. Laoss performs high-speed computations on standard PCs.

Full technical support is included with every Laoss software license.

Contact us today to arrange a free 1 month evaluation.



Trusted by Academics & Industry



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