

TECHNISCHE UNIVERSITÄT DRESDEN

FAKULTÄT ELEKTROTECHNIK UND INFORMATIONSTECHNIK

3D printing task

Topic: „LED Cube“

Goal:

The embedding of electrical circuits is a common process that creates a protective layer on the sensitive components to prevent damage from environmental influences. However, this measure prevents subsequent contacting of the components. As part of this task, the integration into a mold is demonstrated using the example of an LED cube, whereby subsequent contacting is made possible. This is to take place via flexible, i.e. bendable, electrical lines on the outside of the cube. This circuit combines the embedding of sensitive components, such as microcontrollers, with the simultaneous facilitation of contacting via external conductors.



The following sub tasks will be due:

- Research on embedding and inkjet printing
- Definition of functionality and physical requirements
- Creation of a 3D model with CAD software (Autodesk Inventor, Blender, SolidWorks, ...)
- Selection of suitable 3D printing processes, materials and designs
- Soldering, embedding, printing and testing the device

Responsible

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