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Development of a Novel Low-Mass Flip-Chip-Capable Module Flex PCB

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To reduce the material budget and maximize the active area of sensors for future experiments, a 30 µm thick lightweight flex has been developed. The fabrication technology, combined with novel interconnection techniques, enables compact packaging through the direct attachment of chip connection pads to the flex. In addition to interconnection methods such as Anisotropic Conductive Films and gold studs, the successful integration and bonding of nanowires is demonstrated using advanced principles like sintering and glue-assisted bonding. This contribution introduces the module concepts and presents the initial electrical and mechanical results from demonstrator modules. Furthermore, the principles and preliminary results are shown, demonstrating how the current fabrication technology can be extended to address ASIC yield and increase the packaging density of the assembly.

Type of presentation (in-person/online)

in-person presentation

Type of presentation (I. scientific results or II. project proposal)

I. Presentation on scientific results

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