

Design Competition

Information Pack – ePIXfab 2026

Design Criteria

- Design x1 3dB directional coupler, repeated x3 times on your chip.
- Design for;
 - 50/50 split
 - Lowest optical transmission based on insertion loss
 - Lowest directional coupler imbalance
- The design will be fabricated and measured by CORNERSOTNE. The designs should take into account for fabrication variability.
- The design that is measured showing it is repeatably closest to 50/50 split, the lowest on both insertion loss and lowest imbalance on all three designs wins.
- In case of a tie between designs, the shortest device wins.
- Winner announced at ECOC'26

Sign up deadline 10th July 2026
Submission deadline, 1pm CEST, 24th July 2026

Competition Outline

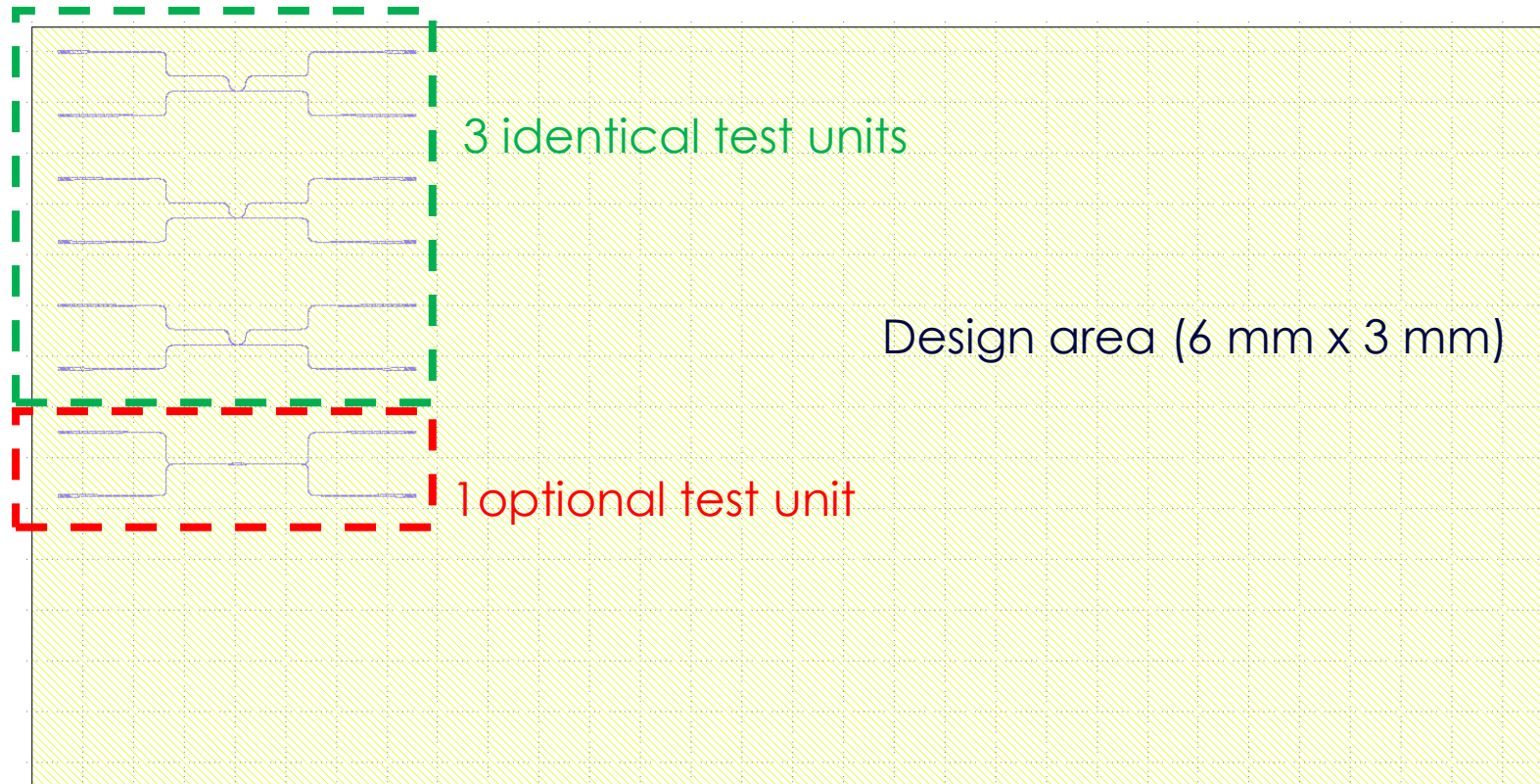
- Sign up and more information here;
■ <https://cornerstone.sotonfab.co.uk/mpw/cornerstone-epixfab2026/>



Test bits – reference

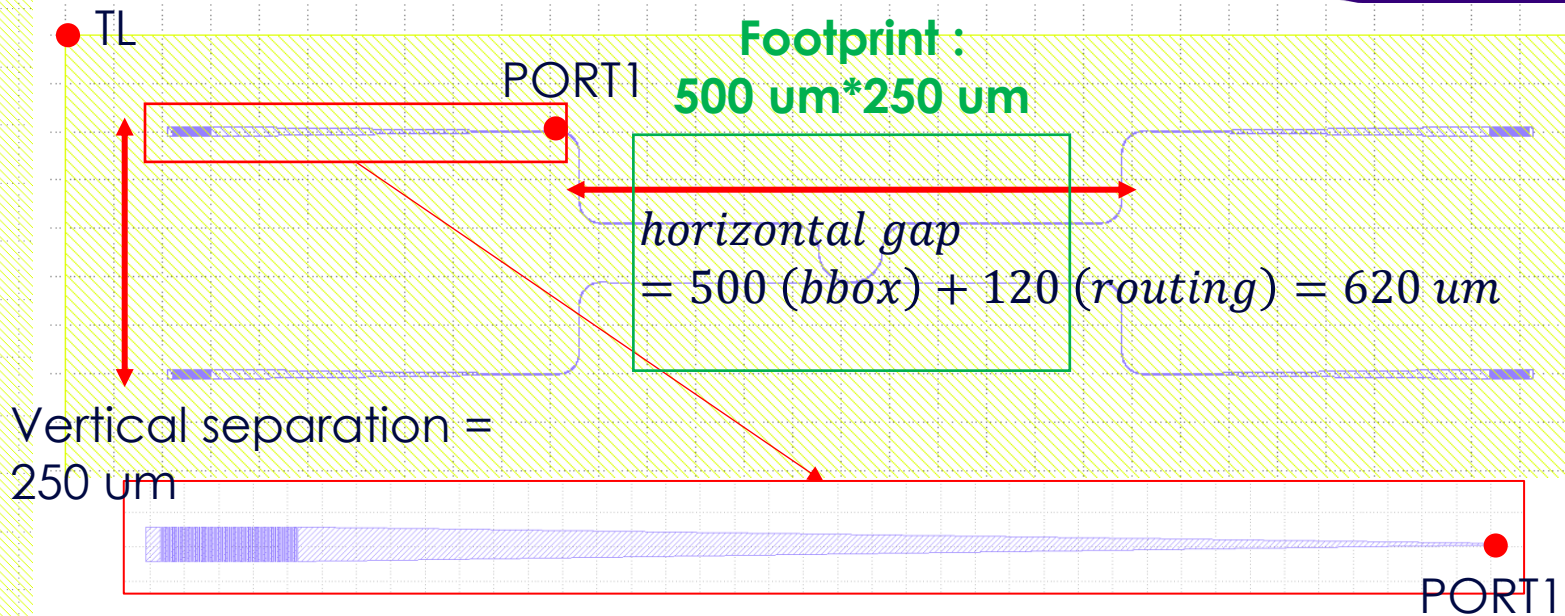
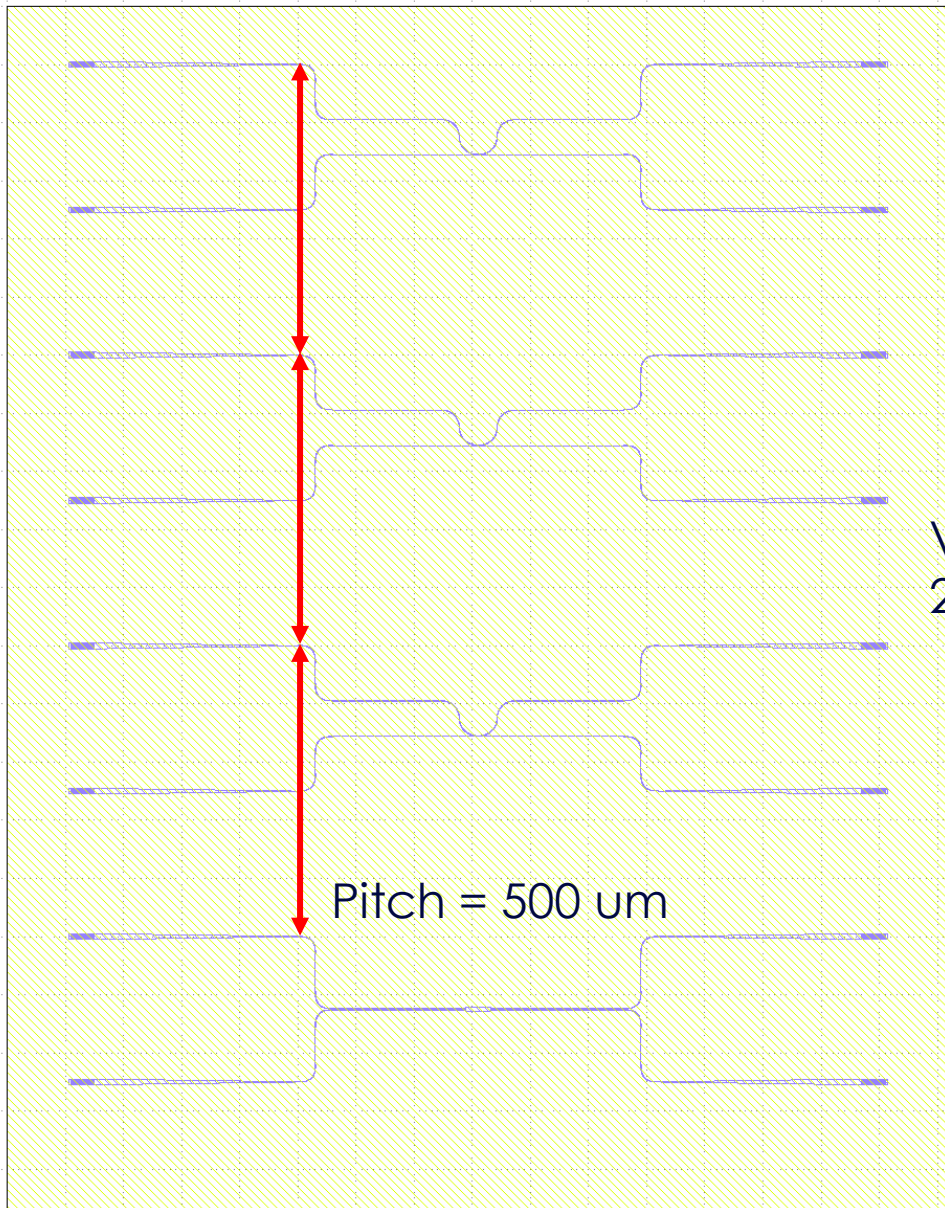
created by Dr Shengqi Yin





- The dimensions and layout allocations for the competition test units have been fixed
- The maximum footprint for the 50:50 splitter is restricted to 500 um horizontally by 250 um vertically
- Grating coupler orientations must strictly adhere to the reference design

Design rule



- Relative coordinate of PORT1 from TL: **(500 um, -100 um)**

For test units

- grating pitch must be **250 um** in vertical
- grating pitch must be **620 um** in horizontal
- 30 um bending radius for connection

* If the port positions are misallocated, you risk losing your competitive edge.