CORNERSTONE

Quick reference design guidelines for the seventh fabrication call – April 2018

Mask submission deadline – Friday 25th May 2018

File format = *.gdsII*.

Manufacturing grid size = 1 nm.

Design area = **11.47 x 4.9 mm²**, with 0.5 mm bleed regions on the east and west facets if desired.

Top cell name: 'Cell0_*[Name of Institution]*'.

1. Design rules summary

A summary of the design rules and GDS layer numbers can be found in Table 1 below.

Table 1 – Design rules summary.

Layer description	GDS number	Field	Min. feature size	Min. gap	Max. feature density
Silicon Etch 1 (140 nm ± 10 nm)	6	Dark	250 nm	250 nm	N/a
Silicon Etch 2 (340 nm to BOX)	3	Light	250 nm	250 nm	N/a
	4	Dark			
High Resolution Silicon Etch 4 (340 nm to BOX)	42	Dark	100 nm*	100 nm	1%
Cell Outline	99	N/a	N/a	N/a	N/a
Bleed Area	98	N/a	N/a	N/a	N/a

* Smaller feature sizes are allowed but not advised as they may not resolve correctly.

2. Minimum feature sizes, tolerances and other design rules

- Minimum feature sizes and maximum feature densities (where applicable) for each GDS layer are detailed in Table 1.
- Allow for a 30 nm alignment tolerance between GDS layer 3 (waveguides) and GDS layer 42 (photonic crystals).
- A minimum spacing between waveguides of at least 5 µm is recommended to avoid power coupling.
- All structures drawn in GDS layer 6 (Grating couplers) must overlap by at least 200 nm with GDS layer 3 (Waveguides).

3. Technical support

For all queries, email cornerstone@soton.ac.uk.