Spec for the Straw Man design on ILC detector

Sensors (Barrel and Endcap)
- Area 10 cm x 10 cm
- Thickness 100 um total Si, 50 um of which active, 15 um oxide/metal processing additional
- Thickness/X0 to be calculated
- Pixel size 50 um x 50 um
- Dead Area 400 um strip along one side
- Power: low power (integrating tracking) and high power (timestamp/multiple readout) variants; to be determined by Konstantin and Fergus
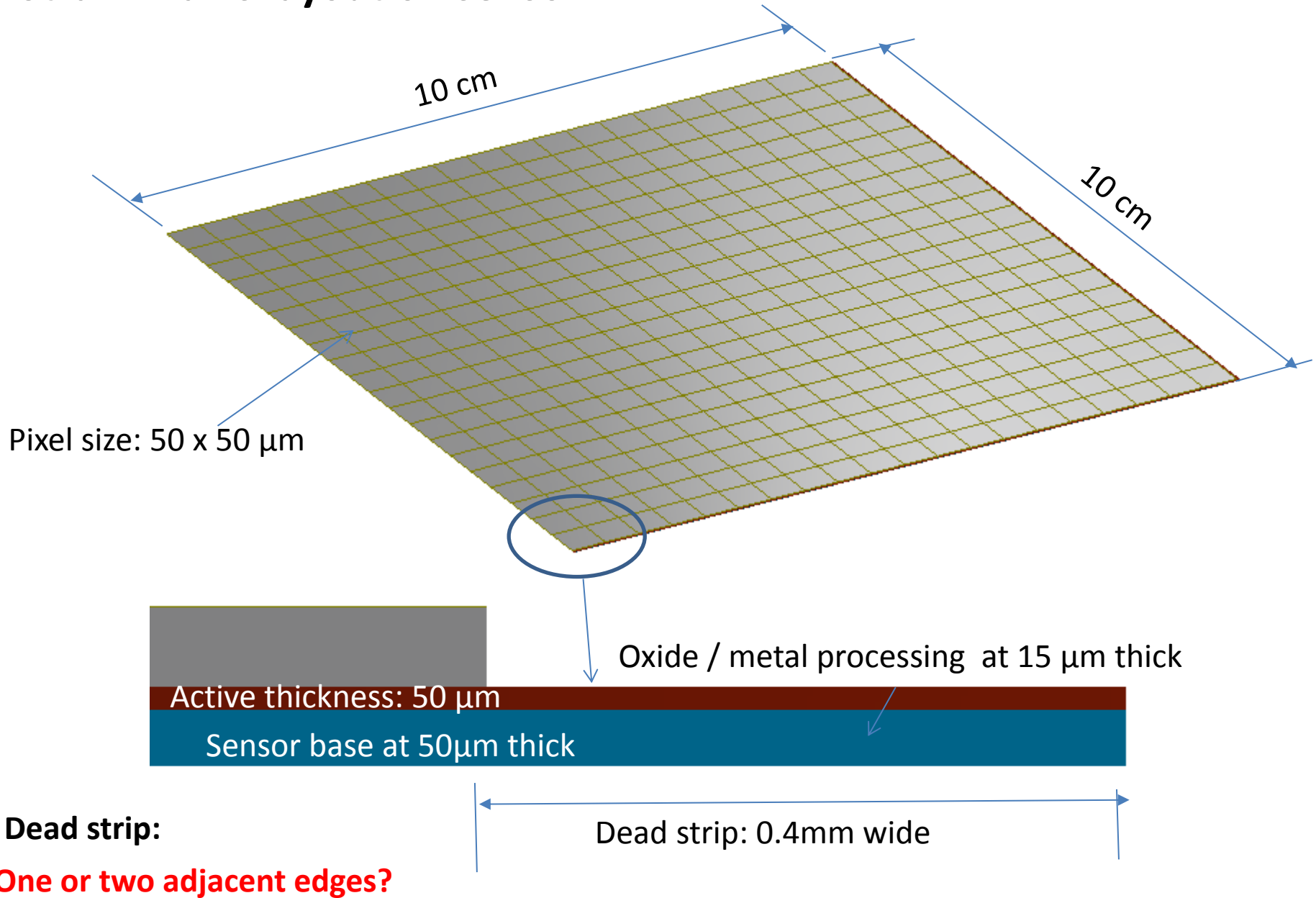
Module Geometry
- Overlap of 1 mm for perpendicular tracks
- Sensors connected via wire bonds to kapton tapes
- Auxiliary/service electronics size, position etc. to be determined
- Other services to be determined

Tracker Geometry
- Minimum of 5 hits
- Approximately equally spaced.

Straw Man's layout on sensor

10 cm

10 cm

Pixel size: 50 x 50 μm

Oxide / metal processing at 15 μm thick

Active thickness: 50 μm

Sensor base at 50μm thick

Dead strip: 0.4mm wide

Dead strip:

One or two adjacent edges?

Decisions required to build on the Straw man design:

- Dear Strip –

  - *Are the dead strip positions right?*
  - *Is dead strip on one side or on both adjacent sides?*

- Is the 15 µm Oxide Metal processing layer part of the 100 µm total thickness of the silicon layer?

- What are the locations and dimensions of the bonded areas?

- Is there any additional electronics (chips, caps, power conversion etc) which is part of the module?

- Other additional requirements?