

# **Design rules for packaging**

## Design rules wafer dicing:

➤ Maximum wafer size, circular 6" and square 4", thickness of maximum 1.2mm

(If wafer thickness >1.2 only scribing can be done, OR it can be done on a manual machine but contamination may be a issue.)

➤ Material of wafers can only be Silicon, Glass and bonded wafers.

➤ Saw Street/ gap between dies has to be minimum 0,4 mm

➤ Die size should be a minimum 1.5 x 1.5 mm

➤ The pitch in 'X' and 'Y' should be consistent though the whole wafer, including the spacing provided for alignment marks.

➤ Released structures such as thin diaphragms, beams *etc*, cannot be diced, they have to be diced and then released.

## Design rules wire bonding:

- Bond pad size to be minimum 200 X 200 um with a pitch of minimum 300 um
- Bond pad metallization thickness to be minimum 80nm, with a appropriate seed layer
- Available wire sizes Al (33 um) and wires Au (25 um) only.
- Thin film materials should be deposited using suitable clean room processes with good mechanical properties such as surface roughness scratch resistant and hardness
- The devices should be desiccated properly and without any formation of an oxide layer.
- Attachments for wire pull gauge to test the pull strength available