

5.2.3 Summary to: Chips on Wafers

- Typical wafer size for new factories (2007) : **300 mm** diameter, **775 μm** thickness, flatness in lower **μm** region
 - Chip size a few **cm^2** , much smaller if possible
 - Yield **Y** = most important parameter in chip production = % of chips on a wafer that function (= can be sold).
 - **$Y = 29\%$** is a good value for starting production
- Chip making = running about **20** times (roughly!!) through "materials" - "structuring" loop.
 - About **400 - 600** individual processing steps (= in / out of special "machine") before chip is finished on wafer
 - More than **30** processing steps for packaging (after separation of chips by cutting)
 - Simple estimate: **99.9%** perfection for each processing step means **$Y < 70\%$** .

