

**Project Name**

# Description of the fabrication project

Brief description of your project in few lines, with fabrication keypoints if there are …

Here is an example of process flow that show you some fabrication steps and the way you can describe them. Each step number corresponds to those of the runcard. For your drawings, try to respect aspect-ratios as much as possible.

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| --- | --- | --- | --- |
| **Technologies used**  *!! remove non-used !!* | | | |
| Mask fabrication, LPCVD, PECVD, sputtering, evaporation, positive resist, negative resist, SU-8, Polyimide, Lift-off, Dry etching, Wet etching, E‑beam lithography, FIB, Electro-Plating, Wafer Bonding, CMP, Dicing, SEM | | | |
| **Ebeam litho data - Photolitho masks - Laser direct write data** | | | |
| Mask # | **Critical** Dimension | Critical Alignment | Remarks |
| 1 | 2um | First Mask | Oxide structuration |
| 2 | **20 um** | 2um | Metal structuration |
| 3 | **20um** | 10 um | KOH mask |
| **Substrate Type** | | | |
| Silicon <100>, Ø100mm, 525um thick, Single Side polished, Prime, p type, 0.1-0.5 Ohm.cm | | | |

# Interconnections and packaging of final device

Thinning/grinding/polishing of the samples is required at some stage of the process.



Dicing of the samples is required at some stage of the process.



Wire-bonding of dies, with glob-top protection, is required at the end of the process.



# Step-by-step process outline

|  |  |  |
| --- | --- | --- |
| **Step** | **Process description** | **Cross-section after process** |
| **01** | **Substrate**: ***Si test***  *Wet Oxidation*  Machine: *Centrotherm*  Thickness: *0.5 μm* |  |
| **02** | *Photolith PR coat*  Machine: *ACS200*  PR : *AZ1512 – 1.1μm* |  |
| **03** | *Photolith expo+ develop*  Machine: MA + ACS200  Mask : *CD = 5um*  *Align wafer flat* | 5 *μm* |
| **04** | *Dry Etch*  Material : *Si02*  Machine: *SPTS*  Depth : *0.5 μm* |  |
| **05** | *Resist Strip*  Material: *AZ1512 – 1.1μm*  Machine: Tepla + Remover |  |
| **06** | *Photolith PR coat*  Machine: *ACS200*  PR : AZ1512 on LOR – 1.5+0.5 *um* |  |
| **07** | *Photolith expo + develop*  Machine: *direct laser W + ACS200* Mask : *CD = 20 um Align tol: 1.5 um* | 20 *um*  1.5 *um* |
| **08/09** | *Metal Evaporation*  *+ lift-off*  Machine: *LAB600H*  Metal *:Ti / Au* Thickness : *10 / 60 (nm)* + Solvent - sonication |  |
| **10** | *Photolith PR coat*  Machine: *ACS200*  PR : *AZ1512 – 2.0 μm* |  |
| **11** | *Photolith expo + develop*  Machine: *MA or Direct laser + ACS200*  Mask : *CD = 20um*  *Double side align* |  |
| **12** | *Dry Etch – Back Side*  Material : *Si02*  Machine: *SPTS*  Depth : *0.5 μm* |  |
| **13** | *Resist Strip*  Material: *AZ1512 – 1.1μm*  Machine: Tepla + Remover |  |
| **14** | *KOH Etch – Back Side*  Material : *Si*  Machine: *KOH Wetbench*  Depth : *525 μm* |  |

Rem. : You can add any interesting information about this process flow, your devices, ...