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100µPET test-chip

Description

Test-chip for the 100µPET project.

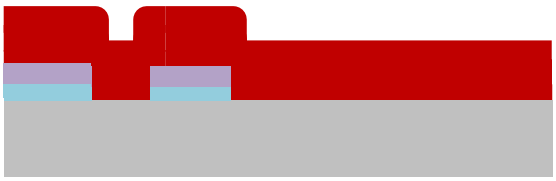
Neural Microsystems Platform's machine needed
Plasma etcher (PINK), Sputter (AC 450), Semi-Automatic Coater, Mask exposure (MLA), developer, Dry etcher (Corial)
Substrate Type
4-inch Si wafer

Process Outline

Color chart

Si | Ti | Pt | PR | Al | SiO_2

01	Surface Preparation Machine: Plasma etcher (PINK) Recipe: 2min_High	
02	Metal deposition 10 nm Ti + 100 nm Pt Machine: Sputter (AC 450) Recipe:	
03	Dehydration & PR Coating Hot plate: 1min @ 110°C Machine: Semi_auto_coater Recipe: Baking:	

<table>
<tr>
<td>04</td>
<td>Mask Exposure + Develop
Machine: MLA + developer
Layer to expose:
• Layer #3
Invert Mask polarity:
Exposure window:
40
-40 40
-40
Dose:
Development:</td>
<td>  </td>
</tr>
<tr>
<td>05</td>
<td>Dry Etching
Machine: Corial
Recipe:
Time:</td>
<td>  </td>
</tr>
<tr>
<td>06</td>
<td>PR Stripping
Ultrasonic bath & Acetone</td>
<td>  </td>
</tr>
<tr>
<td>07</td>
<td>Dehydration & PR Coating
Hot plate: 1min @ 110°C
Machine: Semi_auto_coater
Recipe:
Baking:</td>
<td>  </td>
</tr>
<tr>
<td>08</td>
<td>Mask Exposure + Develop
Machine: MLA + developer
Layer to expose:
• Layer #134
Invert Mask polarity:
Exposure window: See #04
Alignment Cross:
<table>
<tr><th>X</th><th>Y</th></tr>
<tr><td>24000</td><td>36000</td></tr>
<tr><td>33000</td><td>18000</td></tr>
<tr><td>33000</td><td>-18000</td></tr>
<tr><td>-24000</td><td>-36000</td></tr>
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<tr><td>-33000</td><td>18000</td></tr>
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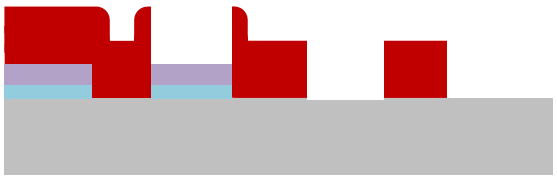
Dose:
Development:</td>
<td>  </td>
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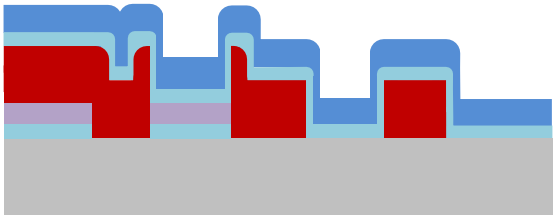
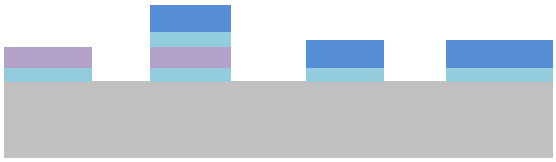
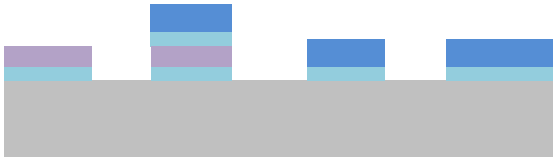
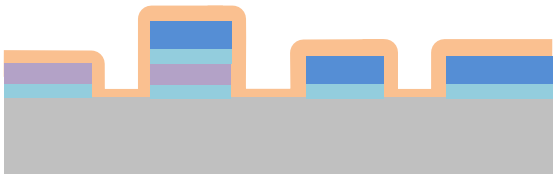
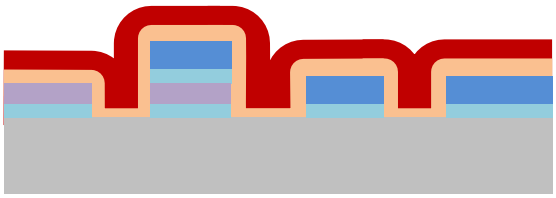
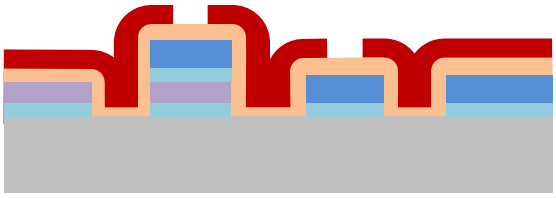
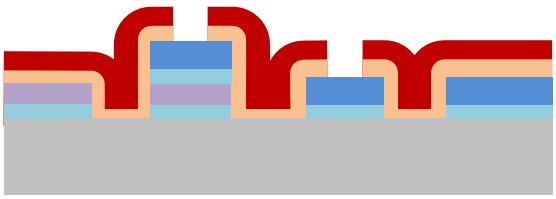
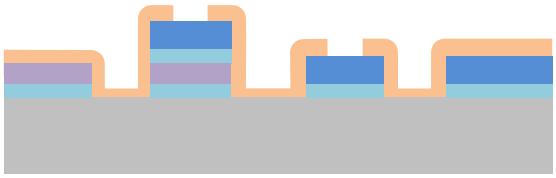
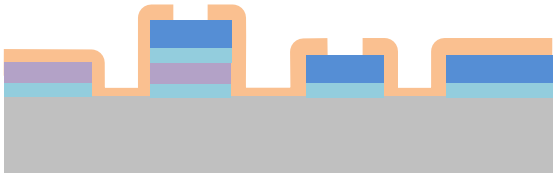
09	Metal deposition 10 nm Ti + 300 nm Al Machine: Sputter (AC 450) Recipe:	
10	Lift off Ultrasonic bath & Acetone	
11	Dehydration Machine: Hot plate Recipe: 110°C – 1 min	
12	Passivation coating 300 nm SiO_2 Machine: Sputter (AC 450) Recipe: Baking:	
13	Dehydration & PR Coating Hot plate: 1min @ 110°C Machine: Semi_auto_coater Recipe: Baking:	
14	Mask Exposure + Develop Machine: MLA + developer Layer to expose: • Layer #9 Invert Mask polarity: Exposure window: See #04 Alignment Cross: See #08 Dose: Development:	

15	Dry Etching Machine: Corial Recipe: Time:	
16	Stripping Ultrasonic bath & Acetone	
17	Annealing 1 hour @ 900°C	
18	Dicing