



**Everlight
Chemical**

Better Chemistry Better Life



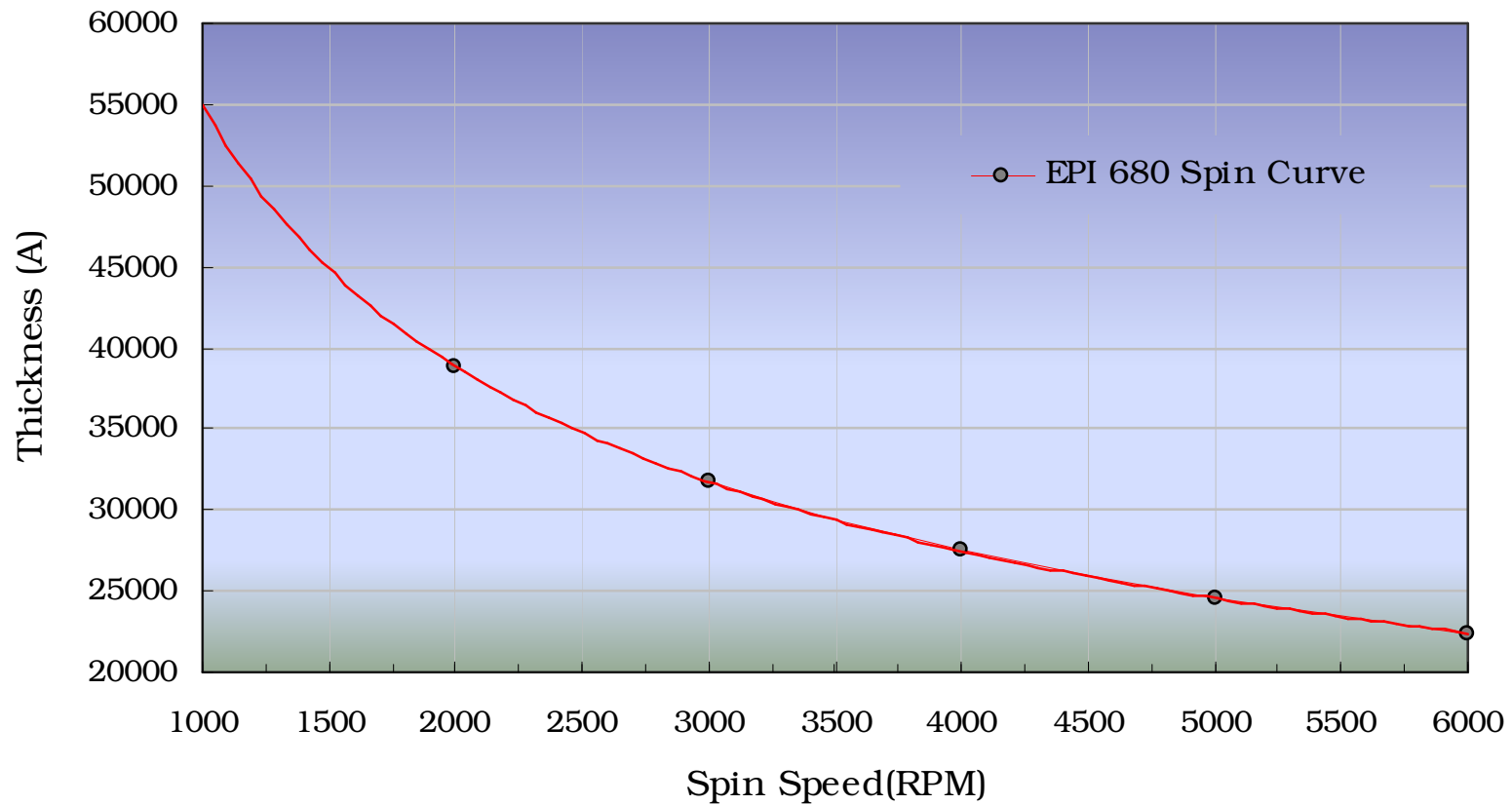
I-Line Passivation Layer Photoresist

EPI 680 Technical Data

Ver.20131204



Spin curve



Evaluation Result

Photoresist	Sensitivity		Eop/Eth	Dark Erosion (Å)
	Eth (msec)	Eop		
EPI 680	543	680	1.26	<50

(Eop Based on 3.0 um L/S)

Condition

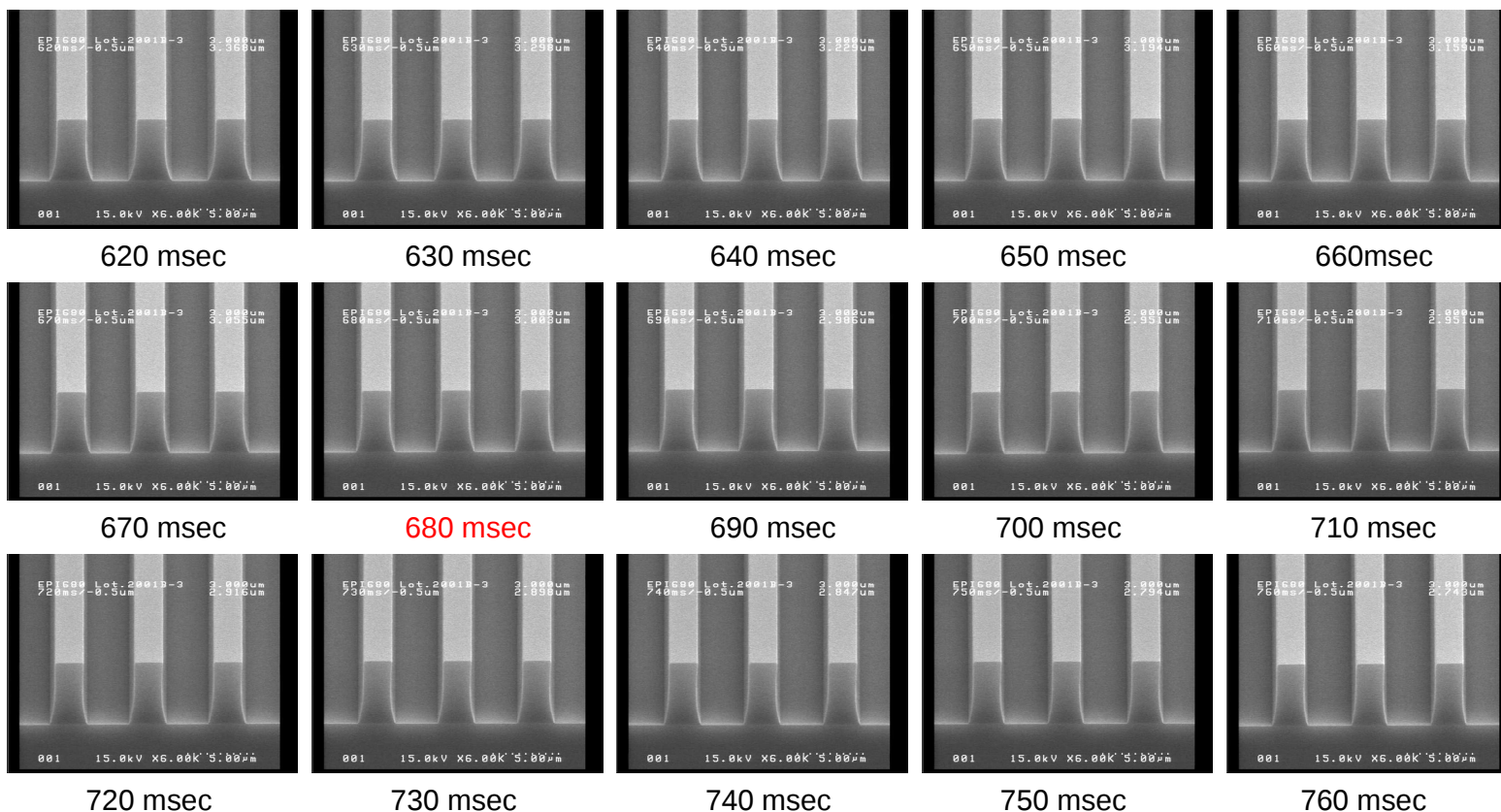
Substrate : Bare Si (pretreatment with HMDS)
 Thickness : 4.93um
 Softbake : 90°C/ 60sec.(hot plate)
 Exposure : Nikon i7a(N.A=0.5)
 PEB : 110°C/ 60sec.(hot plate)
 Development : EPD 2000 Puddle 90sec.@23°C
 Hardbake : Each 90sec.

Exposure Latitude @CD=3um

Thickness = 4.93um

$E_{OP} = 680 \text{ msec}$

C.D.= 3.0 um

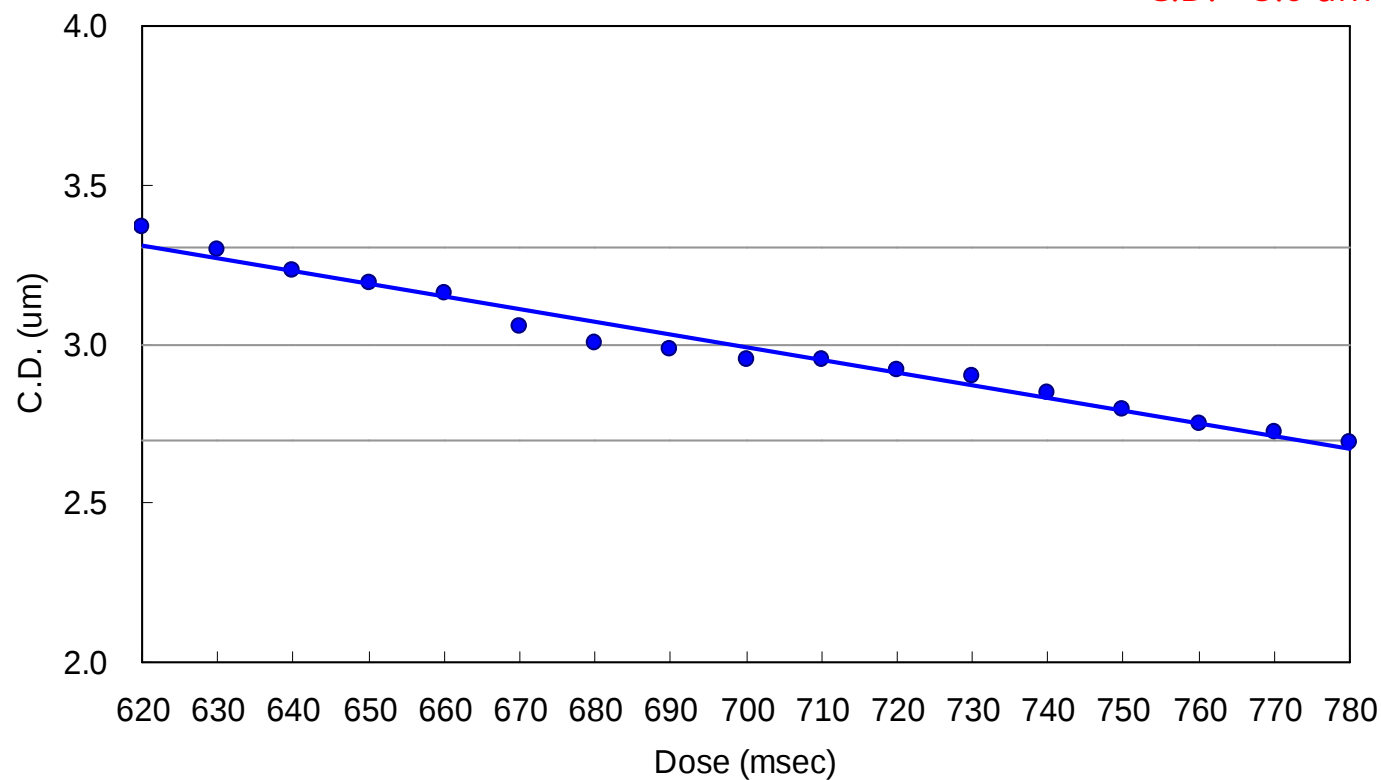


Exposure Latitude @CD=3um

Thickness = 4.93um

E_{OP} = 680 msec

C.D.= 3.0 um

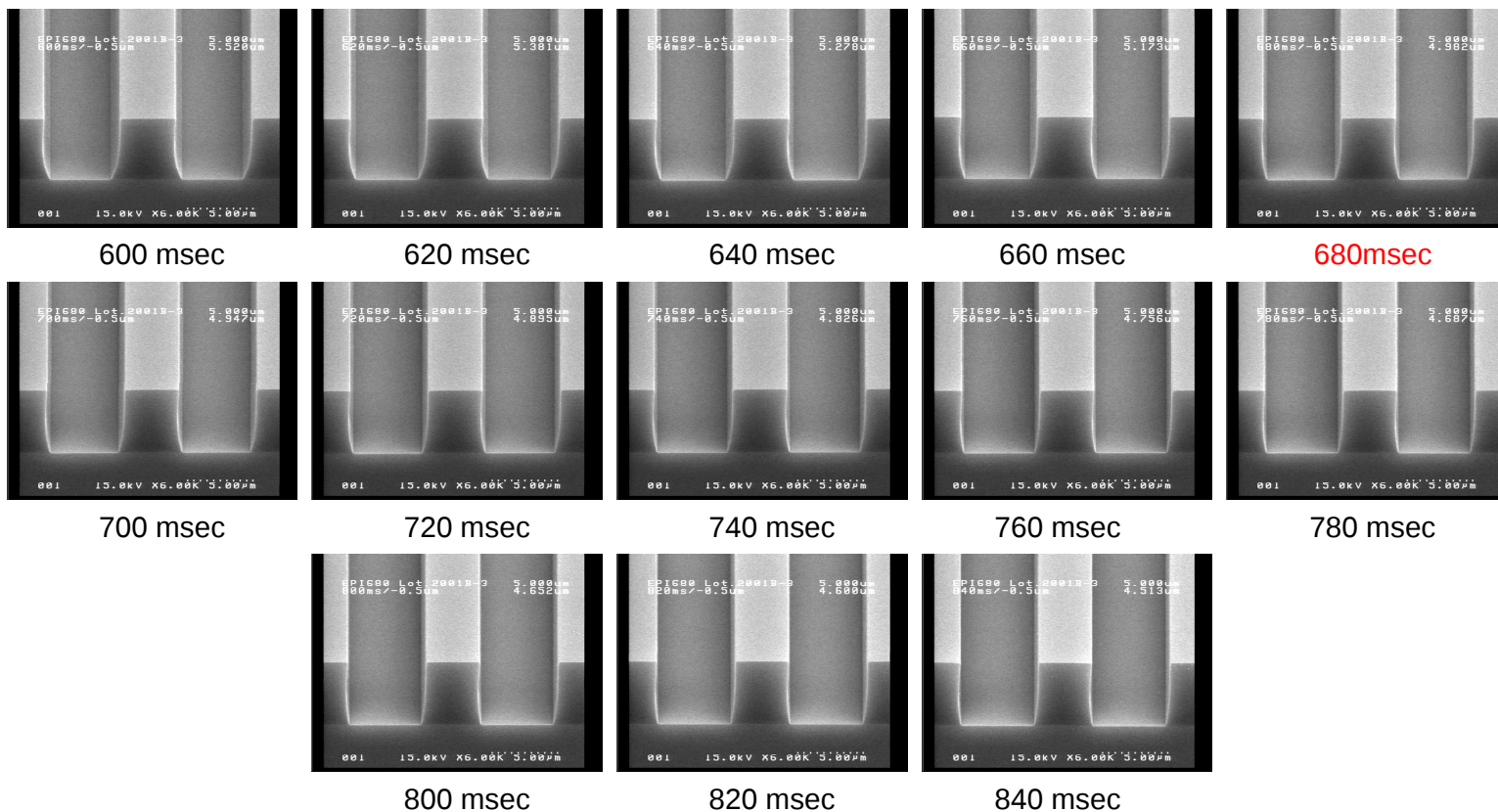


Exposure Latitude @CD=5um

Thickness = 4.93um

$E_{OP} = 680 \text{ msec}$

C.D.= 5.0 um

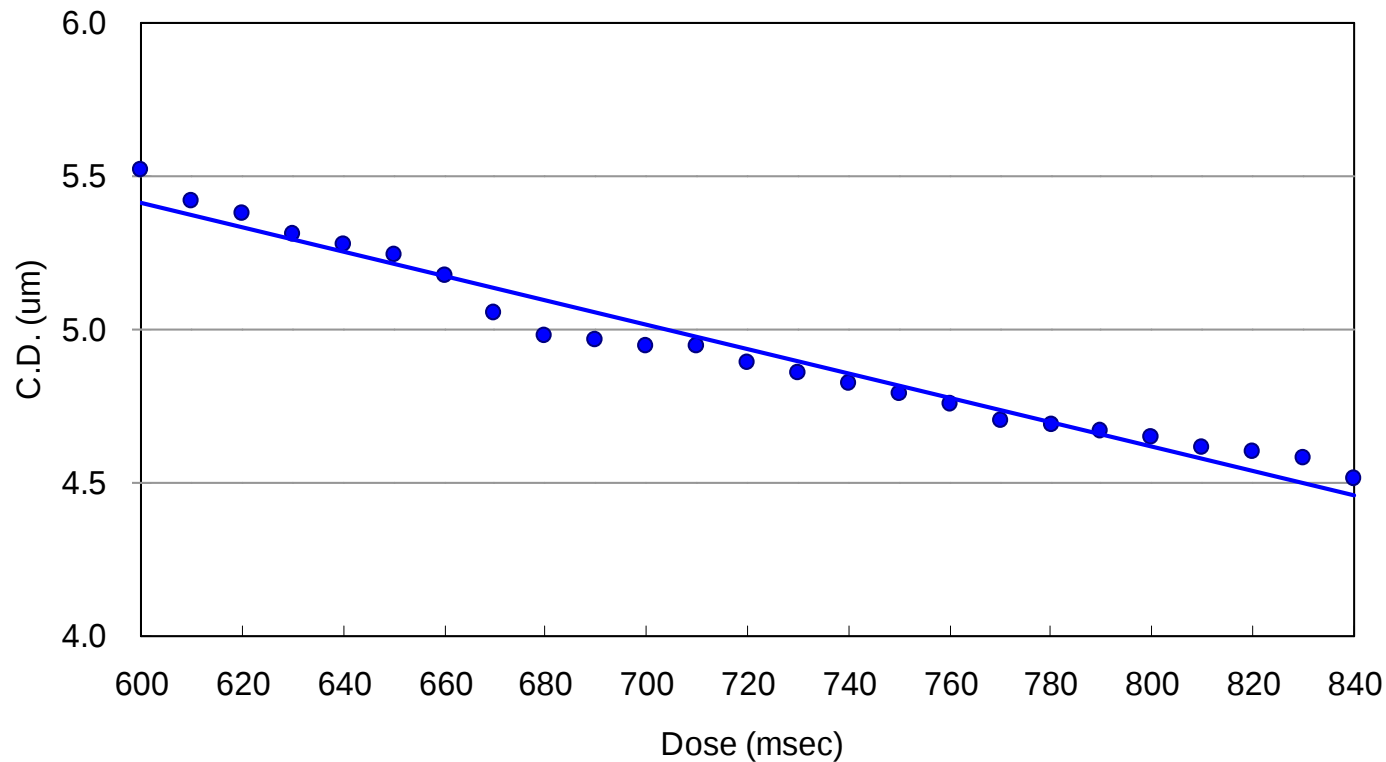


Exposure Latitude @CD=5um

Thickness = 4.93um

E_{OP} = 680 msec

C.D.= 5.0 um

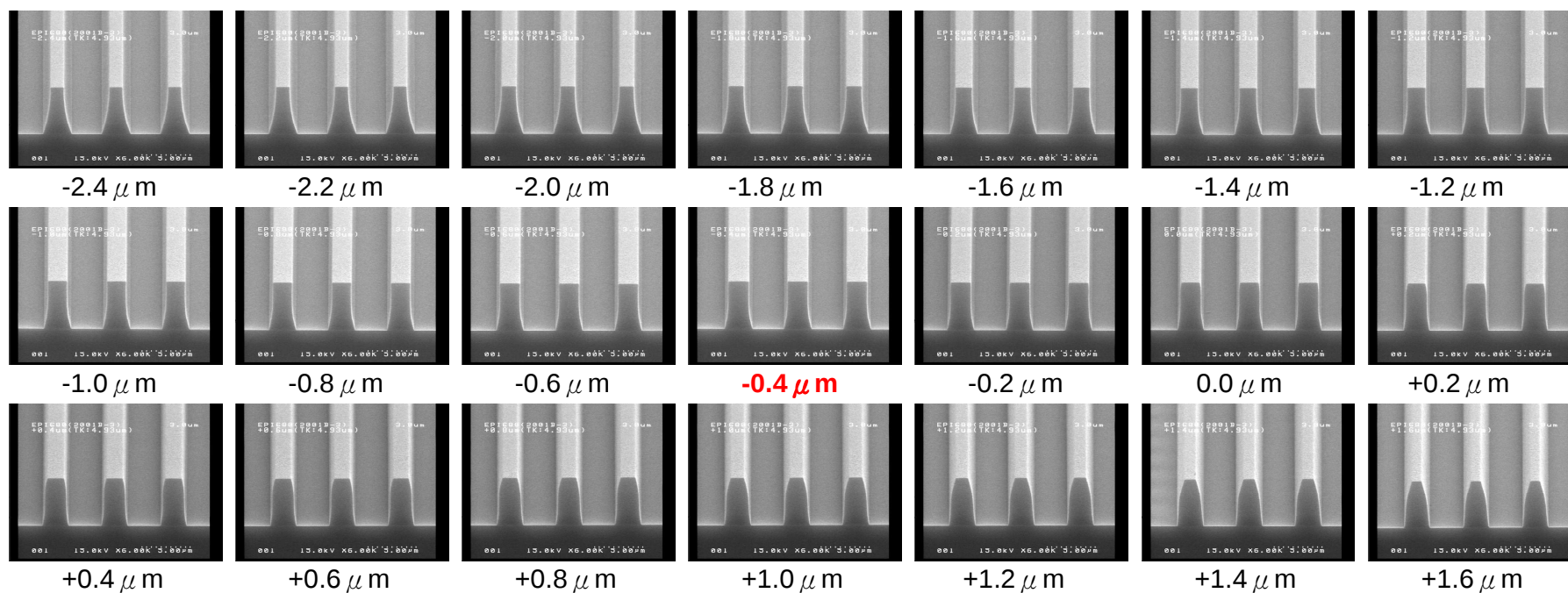


Depth of Focus @CD=3um

Thickness = 4.93um

$E_{OP} = 680$ msec

C.D.= 3.0 um

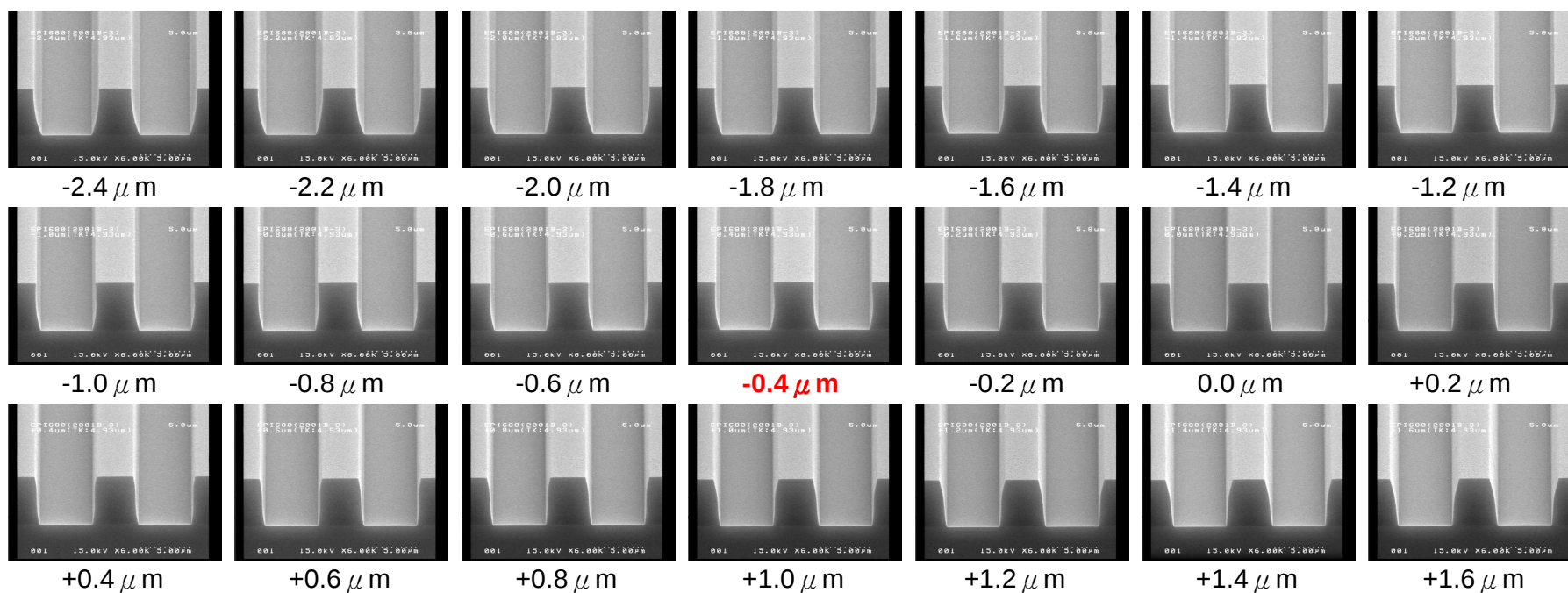


Depth of Focus @CD=5um

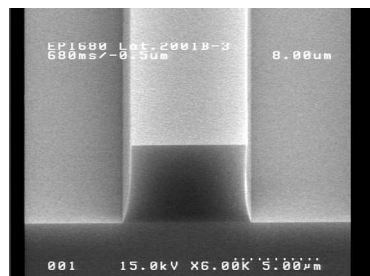
Thickness = 4.93um

E_{OP} = 680 msec

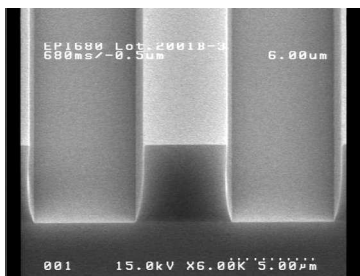
C.D.= 5.0 um



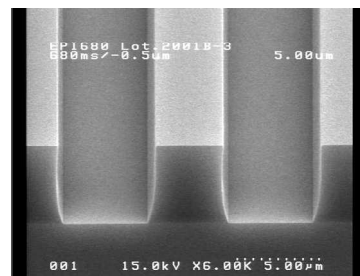
Resolution



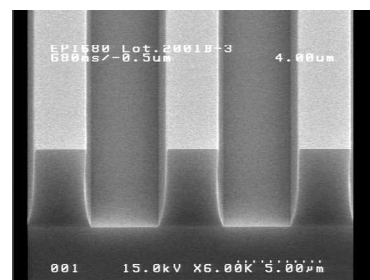
8.0 μm



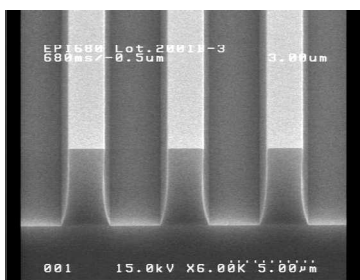
6.0 μm



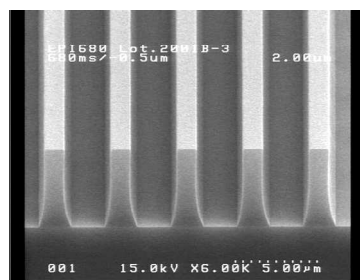
5.0 μm



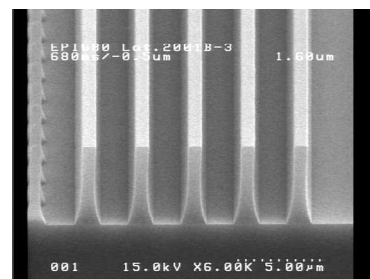
4.0 μm



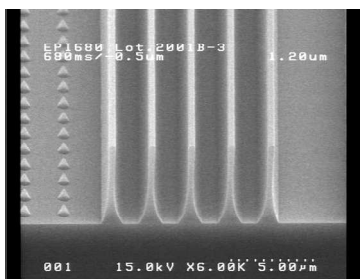
3.0 μm



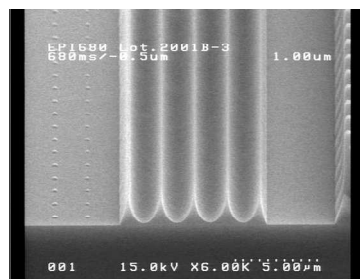
2.0 μm



1.6 μm



1.2 μm



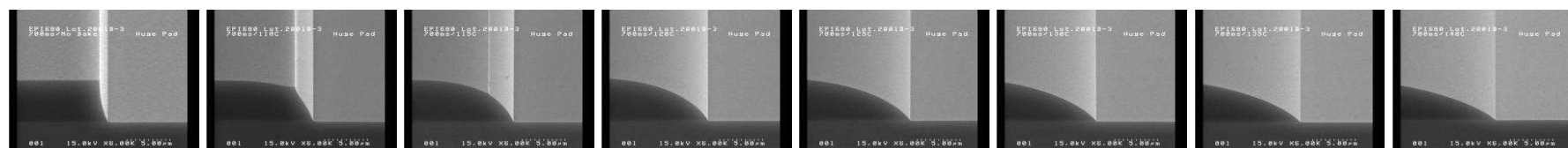
1.0 μm

Thickness = 4.93 μm

E_{OP} = 680 msec

Thermal stability

EPI680 (TK=4.93) Huge Pad



No Bake

110 °C

115 °C

120 °C

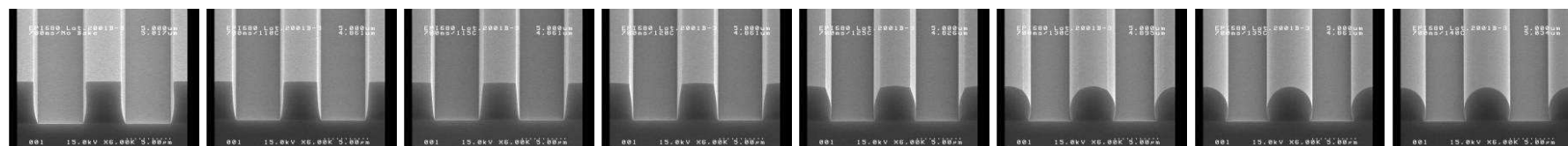
125 °C

130 °C

135 °C

140 °C

EPI680 (TK=4.93) 5.0 μ m



No Bake

110 °C

115 °C

120 °C

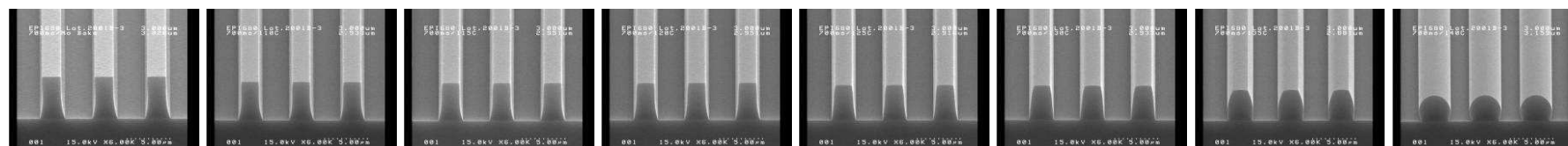
125 °C

130 °C

135 °C

140 °C

EPI680 (TK=4.93) 3.0 μ m



No Bake

110 °C

115 °C

120 °C

125 °C

130 °C

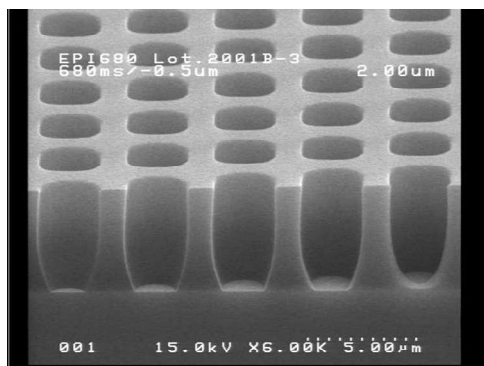
135 °C

140 °C

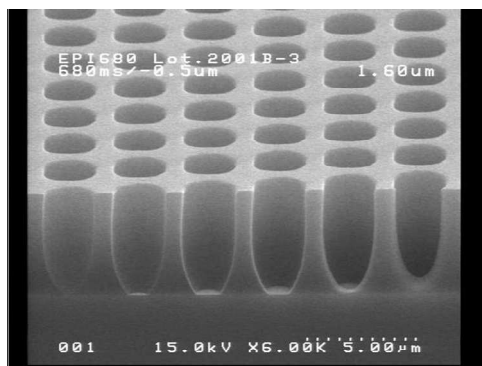
Contact hole

Thickness = 4.93um

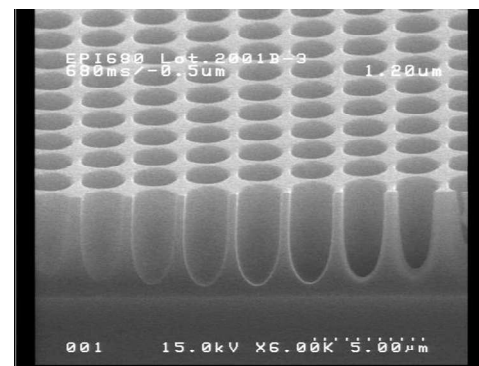
$E_{Op} = 680 \text{ msec}$



2.0 μm

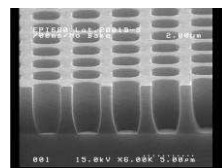


1.6 μm

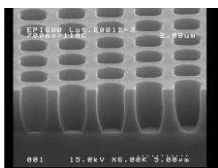


1.2 μm

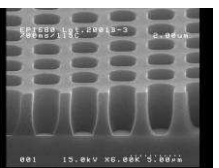
EPI680 (TK=4.93) 2.00um Hole



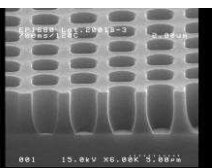
No Bake



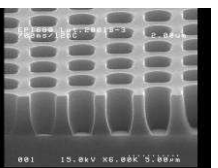
110 °C



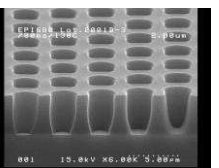
115 °C



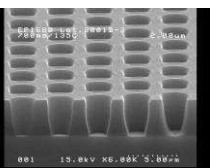
120 °C



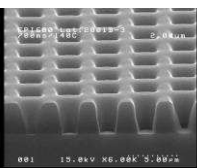
125 °C



130 °C



135 °C



140 °C