OXFORD INSTRUMENTS

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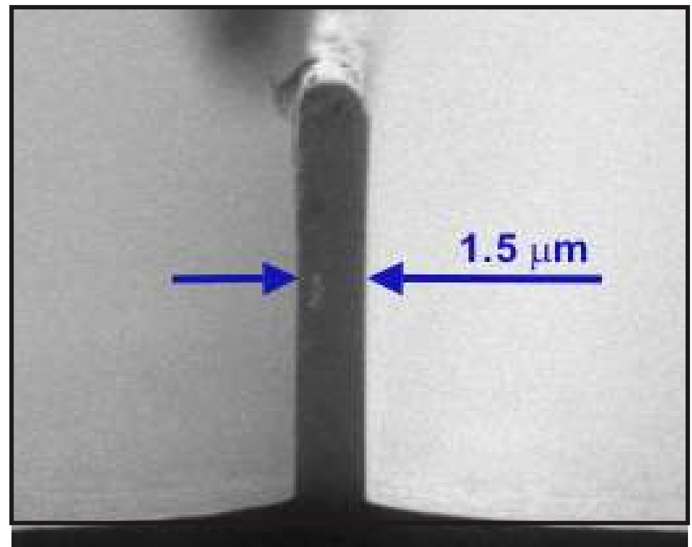
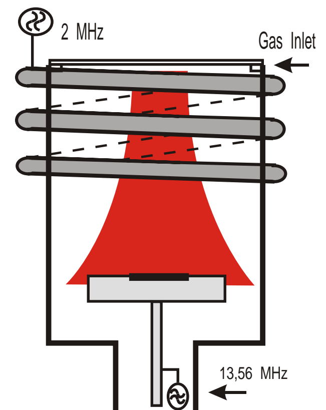
Plasmalab Data

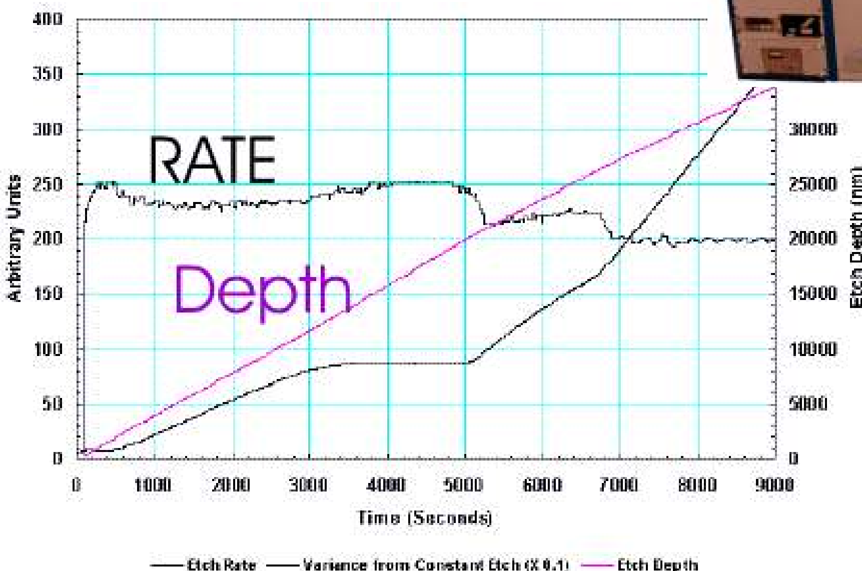
Deep SiO_2 ICP-RIE for Waveguides



OPT application lab, Yatton/ UK:
top left: 8 µm deep, anisotropic SiO_2 ICP-RIE



OPT application lab:
etch rate, etch depth and rate variance vs process time
The laser interferometer provides depth control to
+/- 0.25 µm with automatic process end.
The raw interference data is processed to display
continous real time etch etch rates and depth.
Here the plot identifies transitions between the
BPSG upper clad/ Ge doped core and the
core/ undoped lower layers.



Plasmalab 80 Plus

Plasmalab System 100

Plasmalab System 133

Rate : 200 - 300 nm/ min
Uniformity: <= +/- 5% (6")
anisotropic etch with smooth walls
selectivities: 50 : 1 to Cr or Al
profile control 89 - 90°
no plasma clean during process
minimum 1.000 µm before mechanical clean
no notching at doped/ undoped SiO2 interfaces