

Unpatterned Test Wafers

During technology development, various unpatterned test wafers are needed. The following are process capabilities for thin film deposition. The customer can select a film stack consist of one or more layers as per application requirement. We can also cater to you specific applications if not listed herein.

Diffusion

S.No.	Films	Process	Thickness range	Standard thickness available
1.	Silicon dioxide (Gate oxide)	Dry oxidation (800°C - 900°C)	20-50 Å	20Å, 30Å, 40Å & 50Å
2.	Silicon dioxide	Dry oxidation (800°C - 1200°C)	50-2000 Å	70Å, 80Å, 100Å, 130Å, 150Å, 200Å, 280Å, 300Å, 400 Å, 500Å, 600Å, 800Å, 1000Å, 1100Å, 1500Å & 2000Å.
3.	Silicon dioxide	Wet oxidation (800°C - 1200°C)	Up to 10 µm	1000 Å, 2000Å, 2300Å 3500Å, 4500Å, 5000Å, 10000Å & 19000Å.
4.	Annealing	N ₂ / O ₂ anneal (700°C - 1200°C)	--	--
5.	TEOS oxide	LPCVD at 650°C & 700°C	150Å - 1µm	150Å, 600Å, 1000Å, 2000Å, 5000Å & 7000Å.
6.	Poly- Silicon	LPCVD at 630 °C	< 6000 Å	1000Å, 1500Å, 2000Å
7.	Poly- Silicon	LPCVD at 580 °C	< 10000 Å	1000Å, 5000Å, 6000Å & 10000Å.
8.	Amorphous Silicon	LPCVD at 550 °C	< 10000 Å	500Å, 800Å, 1000Å 2200Å, 2300Å 5000Å & 6000Å.
9.	Nitride	LPCVD at 790°C	< 2000 Å	600Å, 700Å, 800Å, 1000Å, 1100Å, 1500Å & 1650Å.
10.	Nitride	LPCVD at 720°C	< 1500 Å	300Å, 500Å, 1000Å & 1300Å.
11.	Nitride	LPCVD at 680°C	< 600 Å	150Å, 200Å & 250Å.
12.	Nitride	LPCVD at 650°C	< 300 Å	250Å.

PVD

Process	Thickness Range
PVD Ta	125 Å ~ 1000 Å
PVD TaN	125 Å ~ 1000 Å
PVD Al	1000 Å ~ 10000 Å
PVD Cu	500 Å ~ 3000 Å
ECP Cu	1000 Å ~ 50000 Å

Dielectric

Standard PECVD oxide, Nitride, low k and HDP oxide processes available.

S.No.	Films	Process	Thickness range	Standard thickness available
1	Oxide	PECVD 400°C	100Å-10µm	100Å, 200Å, 500Å, 800Å, 1000Å, 2000Å, 5000Å, 8000Å, 1µm, 2µm, 5µm, 10µm
2	TEOS oxide	PECVD 400°C	1000Å-1µm	1000Å, 5000Å, 1µm
3	Nitride	PECVD 400°C	200Å-2µm	200Å, 500Å, 800Å, 1000Å, 2000Å, 5000Å, 8000Å, 1µm
4	SiCN (BLok™)	PECVD 350°C	200Å-1000Å	200Å, 500Å, 800Å, 1000Å
5	SiC (BLok™)	PECVD 350°C	200Å-1000Å	200Å, 500Å, 800Å, 1000Å
6	SiOC (Black Diamond™)	PECVD 350°C	1000Å-1µm	1000Å, 5000Å, 8000Å, 1µm
7	HDP Oxide	HDP (400°C-750°C)	1000Å-1µm	1000Å, 3000Å, 5000Å, 6000Å, 8000Å, 10000Å