INFRASTRUCTURE EN RECHERCHE ET DÉVELOPPEMENT DU QUÉBEC

# Low Pressure Chemical Vapor Deposition (LPCVD)

MANUFACTURER : Tystar

MODEL : Tystar

## Samples

- Sample sizes : 75 mm (3 in.) to 152 mm (6 in.)
- Temperature : 250 °C to 1275 °C
- Across wafer uniformity : 5% on 152 mm, 10% on 75 mm

## Characteristics

- Tube 1: LPCVD with $SiH_4$, $SiH_2Cl_2$ or $NH_3$
- Tube 2: atmospheric tube with $N_2$, $O_2$, $H_2$ and Trans-LC liquid source
- Automated wafers push-in and pull-out
- Recipes stored on computer
- Internal torch for wet oxidation

ROUTINE PROCESS

## Deposition

**Oxide**

- Thickness: from 10 nm to 10 µm
- Refractive index : 1.45 – 1.47

ROUTINE PROCESS

## Deposition

**Nitride**

- Thickness: from 100 nm to 2 µm
- Refractive index : 1.98 - 2.30
- Stress : 60 MPa – 1200 MPa

MATERIALS SYNTHESIS AND SURFACE FUNCTIONALIZATION