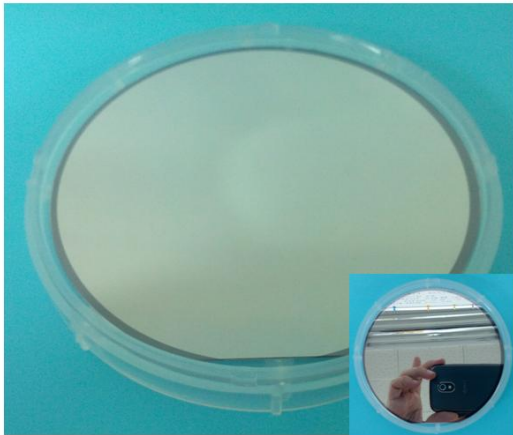


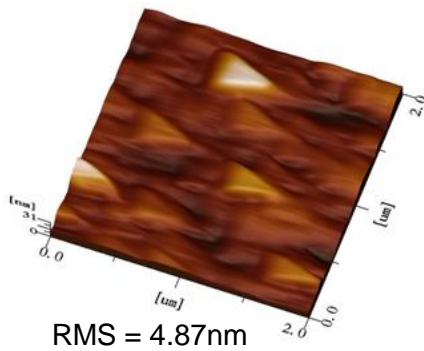
Thick Al film/Si wafer



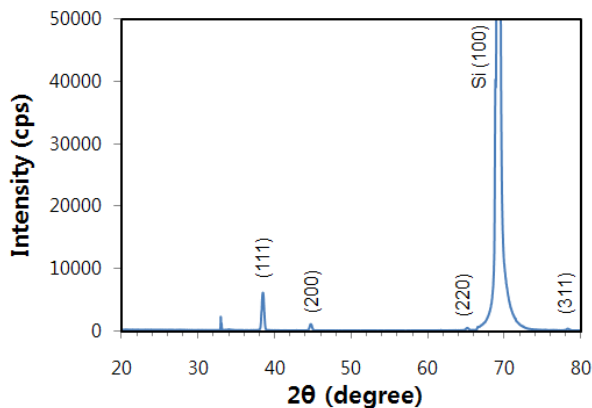
Features:

- **Thick Al film** ($\sim 3\mu\text{m}$)
- Purity: 99.99%
- Deposition by e-beam evaporation
- Slow growth rate: $2\text{\AA}/\text{sec}$
- Low base vacuum: below 1×10^{-6} Torr
- No intentional heating during depo.
- **Highly reflective film surface**
- **High conductivity**

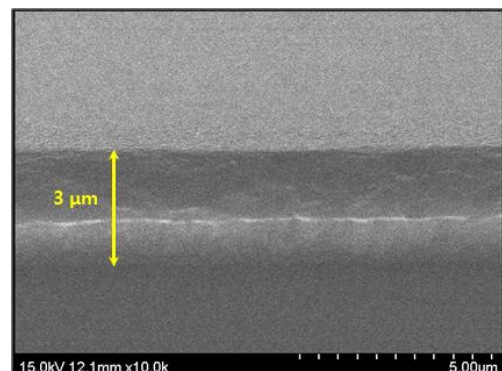
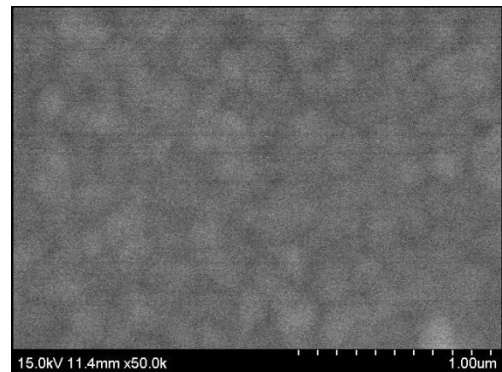
Items	Data (Typ.)
Al Film Thickness	3 μm
Film Resistivity ($\mu\text{ohm.cm}$)	2.65
Film Crystallinity	Weak (111)-oriented polycrystals
RMS Roughness (nm)	< 10
Substrate	n-type, <100>Si wafer Resistivity: 1-10 $\Omega \cdot \text{cm}$



AFM Image of thick Al film



XRD spectra of thick Al film/Si wafer



SEM micrographs of thick Al film