ArF 포토리소그라피공정을 위한 실리콘이 함유된 반사방지막코팅

이준호, 김형기, 김명웅, 임영택, 박주현
금호석유화학 전자재료연구소

Silicon Containing Bottom Anti-Reflective Coating for ArF Photolithography

Jun-Ho Lee, hyung-Gi Kin, Myung-Woong Kim, Young-Toek Lim and Joo-Hyun Park
Kumho Petrochemical Electronic Materials Division

Abstract : Development of ArF Photo-lithography process has proceeded with the increase of numerical aperature (NA) and the decrease of resist thickness. It makes many problems such as cost and process complexity. A novel spin-on hard mask system is proposed to overcome many problems. Spin-on hard mask composed of two layers of siloxane and carbon. The optical thickness of two layers is designed from reflectivity measurement at specified n, k respectively. The property of photo-resist shows different results according to Si contents. Si-contents was measured XPS(X-ray Photoelectron spectroscopy).