AR1682J

Superior versatile 193nm Photoresist sold in large quantities worldwide

AR1682J FEATURES

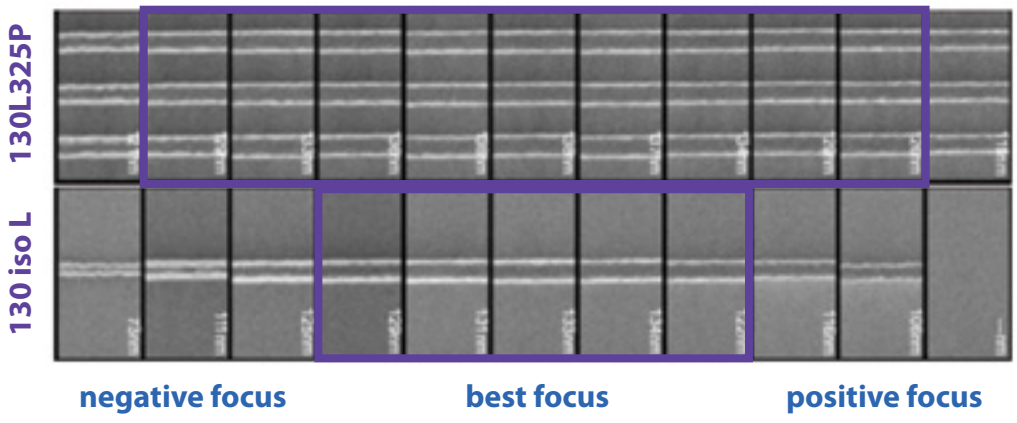
- Wide Process Window
- Good CD-Uniformity
- Good LER/LWR
- Small Mask Dependency
- Good PEB Sensitivity~1nm/C
- Good Defectivity

120nm NODE

Target CD: 130nm semi-dense and isolated Line
NA:0.63, Annular illumination (0.80/0.50)
Substrate: organic BARC
AR1682J: 320nm film thickness
Focus Latitude
130L325P 130 iso L negative focus
best focus positive focus

Well balanced dense & isolated litho performance!

Focus Latitude



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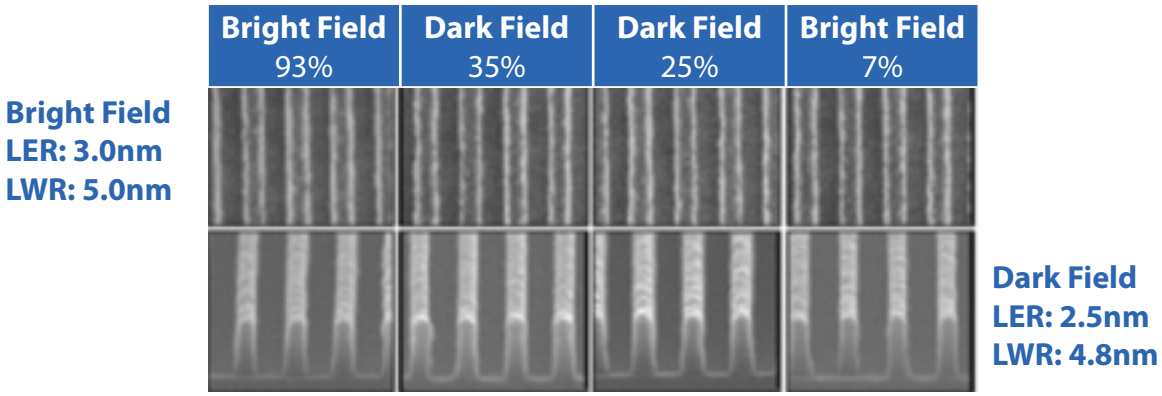
Line Edge Roughness / Line width Roughness

Excellent LER/LEW in bright and dark field!

Target CD: 90nm dense Line
NA:0.75, Annular illumination (0.89/0.50)
Substrate: organic BARC. AR1682J: 270nm film thickness

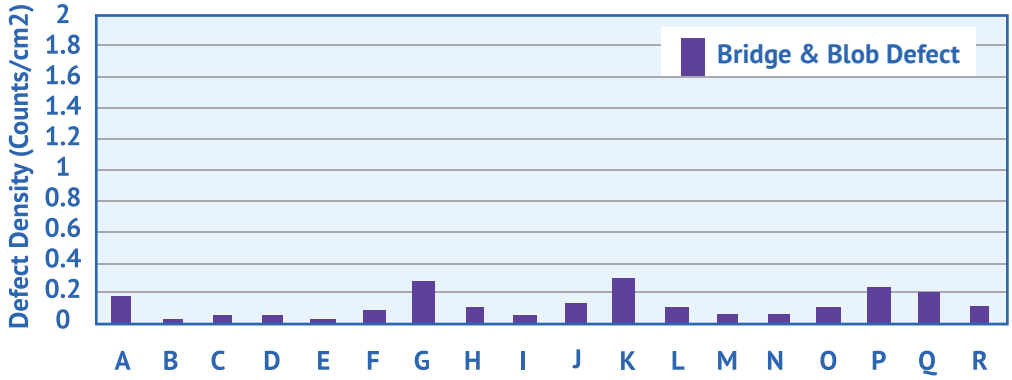


No mask dependency!

Defectivity

Target: Bridge and blob defectivity - Lot-to-lot
Inspection tool: KLA2351
Pattern size: 110nm dense Line

Consistent low defect count through different batches.



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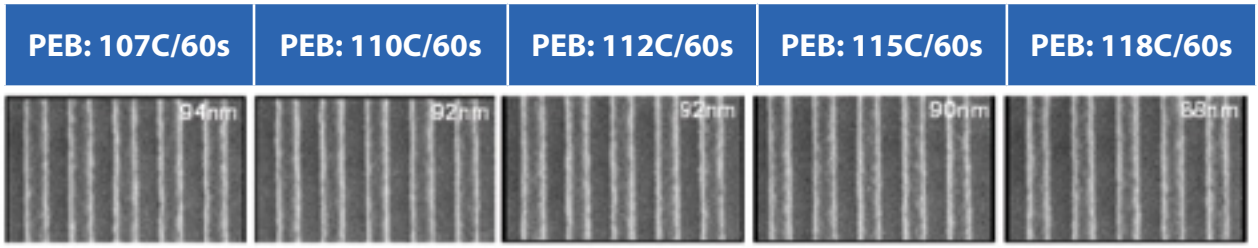
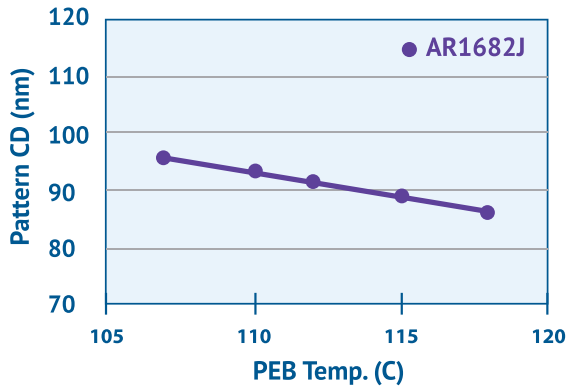
Post Exposure Bake sensitivity

Improved process control by small PEBsensitivity!

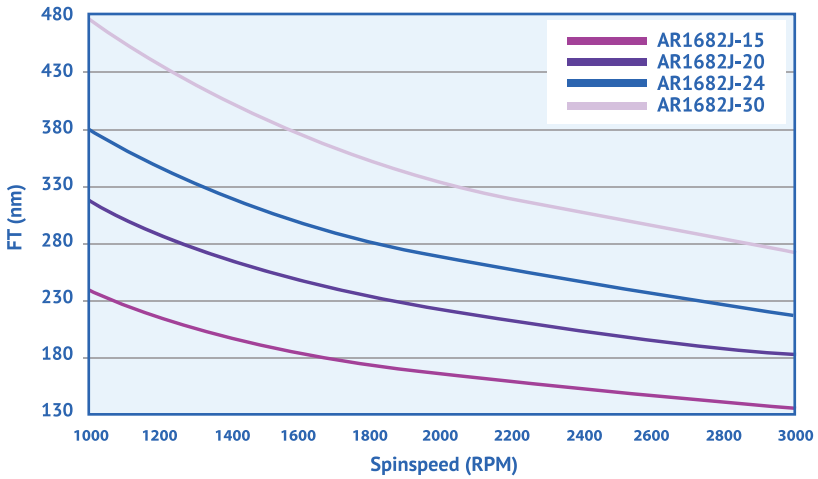
Target CD: 90nm dense Line
NA:0.75, Annular illumination (0.89/0.50)
Substrate: organic BARC
AR1682J: 270nm film thickness





PEB-sensitivity 0.97nm/°C

AR1682J available viscosities



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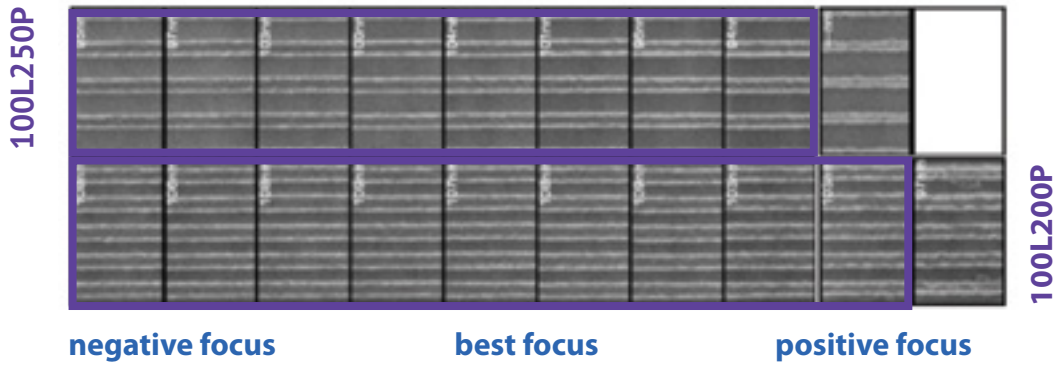
90nm node

Superior litho performance at tight features!

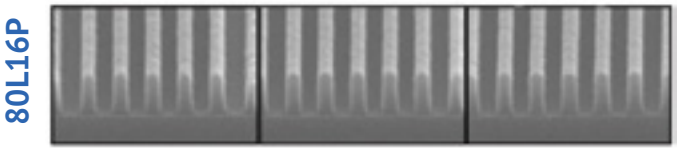
Target CD: 100nm dense and semi-dense Line
NA:0.75, Annular illumination (0.89/0.50)
Substrate: organic BARC
AR1682J: 320nm film thickness

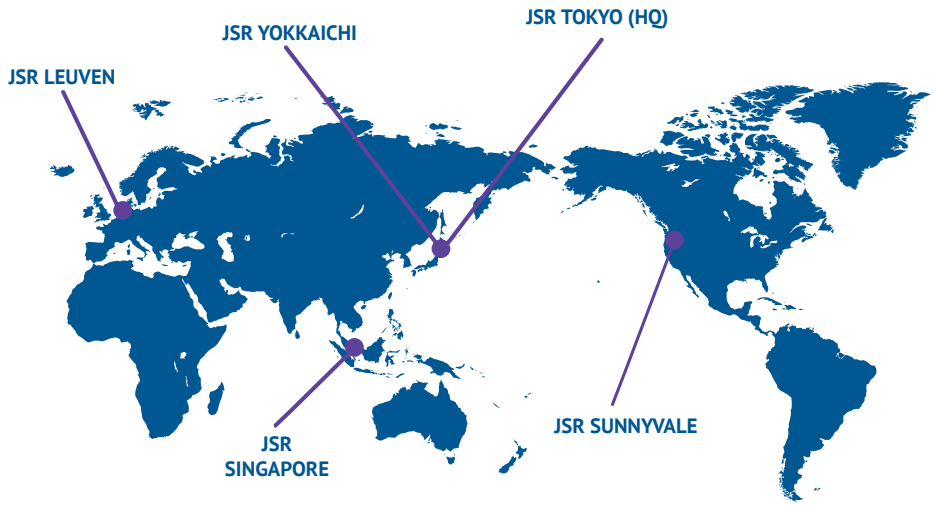
Focus Latitude



65nm node

Target CD: 80nm dense line
NA:0.75, Dipole illumination (0.89/0.59)
Substrate: organic BARC
AR1682J: 210nm film thickness





For more information, please contact semiconductor@jsrmicro.be

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