

Durimide® 7500

Photosensitive Polyimide Precursor

• Designed with a unique structure and sensitizer that gives it the following characteristics:

- Fast photospeed
- Enhanced resolution
- Wide process latitude
- Self priming
- Excellent adhesion

• Superior mechanical property retention after extended pressure cooker test (> 1000 hour)

• Cured film thickness range: 2-50µm

Type	Viscosity	Cured Film Thickness
Durimide® 7505	1200CS	2-5µm
Durimide® 7510	3300CS	4-15µm
Durimide® 7520	6400CS	11-25+µm

Compatible Ancillary Products:

<u>Developer/Rinse Combinations :</u>	<u>Back Side Rinse:</u>
QZ3501/QZ3512	QZ3501
HTRD2/RER600	HTRD2

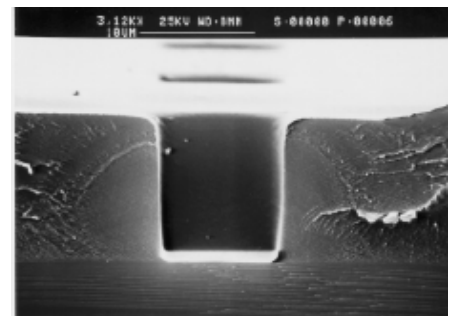
<u>Edge Bead Remover :</u>	<u>Stripper Products:</u>
HTRD2	N-Methyl 2-Pyrrolidone
	QZ 3322

Cured Film Properties of Durimide® 7500 Series

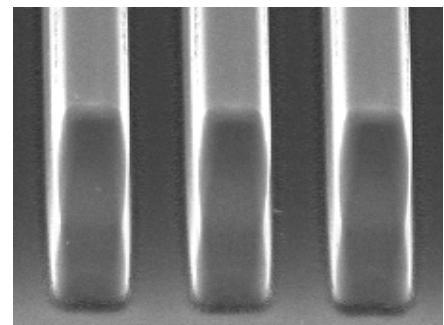
Tensile Strength	MPa	215
Young's Modulus	GPa	2.5
Tensile Elongation	%	85
Glass Transition Temperature	°C	285
Thermal Decomposition Temperature	°C	525
Coefficient of Thermal Expansion	ppm/°C	55
Dielectric Constant		3.2-3.3
Moisture Absorption@50% RH	%	1.08



Contact print resolution mask in 40µm softbake film



10µm via in a 10µm softbaked film, i-line stepper



12µm lines and spaces in a 44µm softbaked film, g-line stepper

Process Window

Exp.Range 60-200mJ/cm²

Focus Range 4-8 microns into film

Substrate: Silicon

Soft Bake: 100°C /3mins

PI Thickness: 12µm

Exposure Tool: Canon i-line stepper
0.6NA , 0.5 sigma

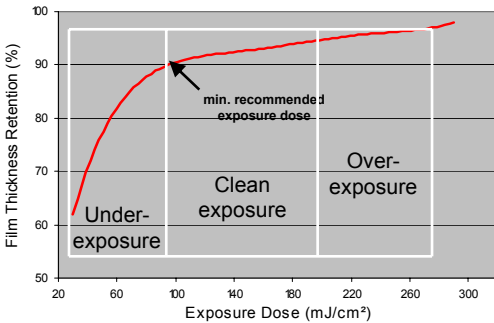
Post Exposure delay: 20-22°C/ 30 mins

Developer/Rinse: HTRD2/RER600
30"/10"/15"

Cure: 350°C/ 60 mins

Cured Film Thickness: 6.2 µm

Characteristic Curve



Process Summary:

Substrate: silicon

Soft Bake: 100°C /3mins

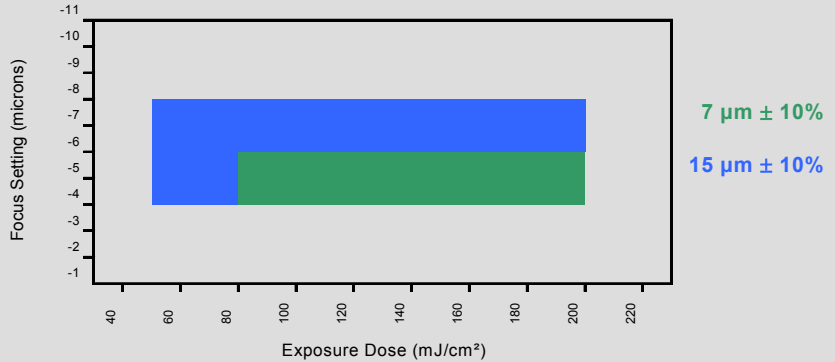
PI Thickness: 10µm

Exposure Tool: Canon g-line stepper
.43NA

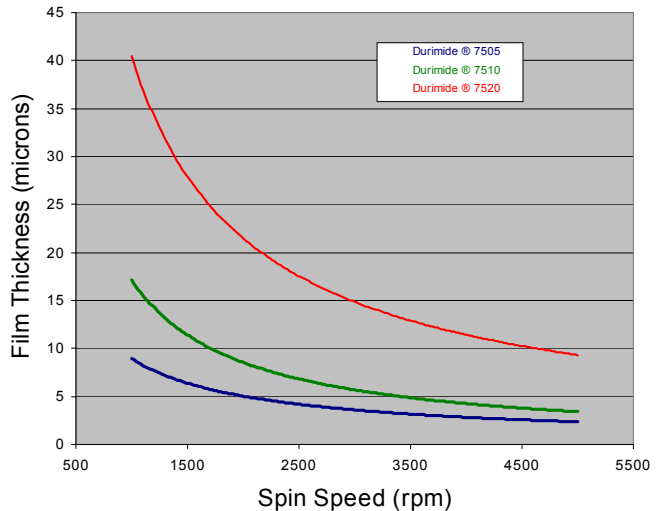
Post Exposure delay: 20-22°C/ 30 mins

Developer/Rinse: HTRD2/RER600
30"/10"/15"

Process Window for a 7 & 15 µm CD space in a 12 µm film



Cured Film Thickness vs. Spin Speed



Durimide® 7500 undergoes a 45% shrinkage from softbake to cure.

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