TECHNICAL PRODUCT INFORMATION

FUJIFILM

Durimide® 7000
Photosensitive Polyimide Precursor

- Negative acting photosensitive material for processing on broadband or g-line exposure tools. Durimide 7000 has the following characteristics:

Fast photospeed
Good resolution
Self priming
Excellent adhesion

- Durimide 7000 has a high Tg making it suitable for applications with subsequent high temperature (>400°C) process steps.

- Cured film thickness range: 2-50µm

Type	Viscosity	Cured Film Thickness
Durimide® 7005	900CS	2-5µm
Durimide® 7020	5500CS	11-25^{+}µm

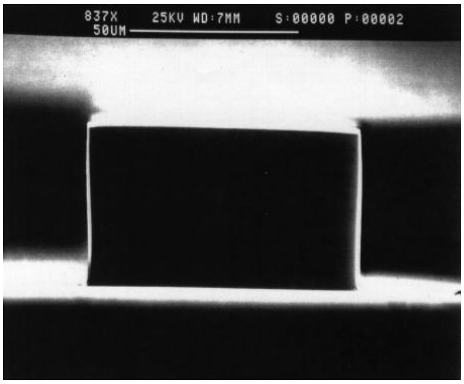
Compatible Ancillary Products:

Developer/Rinse Combinations :	Back Side Rinse:
QZ3501/QZ3512	QZ3501
HTRD2/RER600	HTRD2

Edge Bead Remover :	Stripper Products:
HTRD2	N-Methyl 2-Pyrrolidone
	QZ 3322

Via mask in 40µm softbake film

100µm via in 40µm softbake film



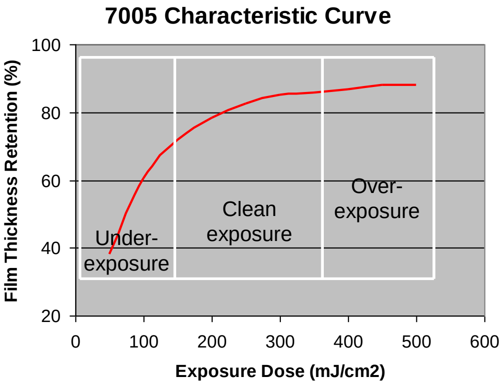
Broadband exposure, Contact print 250mJ/cm^2

Cured Film Properties of Durimide® 7000 Series

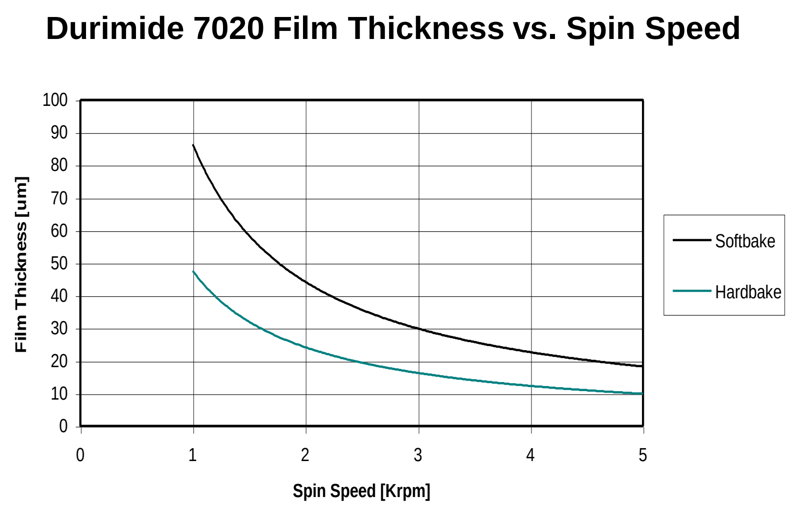
Tensile Strength	MPa	170
Young's Modulus	GPa	2.9
Tensile Elongation	%	73
Glass Transition Temperature	°C	> 350
Thermal Decomposition Temperature	°C	> 510
Coefficient of Thermal Expansion	ppm/°C	27
Dielectric Constant		3.3
Moisture Absorption@50% RH	%	1.3

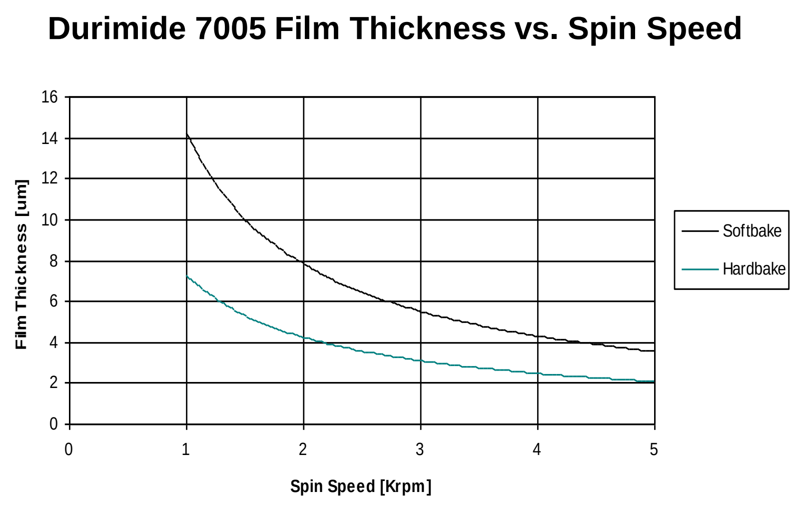
Durimide 7020 Thick Film Process

Spin: 1000rpm/7” + 1900rpm/10”
Soft Bake: 70°C / 6 mins +
100°C / 6 mins
PI Thickness: 40µm
Exposure Tool: Broadband or g-line
Exp. Range 200-300mJ/cm^2
Focus Range 12 microns into film
Post Exposure delay: 20-22°C/ 30 mins
Developer/Rinse: HTRD2/RER600
85”/10”/15”
Cure: 350°C/ 60 mins
Cured Thickness: 22 µm


7005 Characteristic Curve

Process Summary:
Substrate: silicon
Soft Bake: 110°C /2 mins
PI Thickness: 5µm
Exposure Tool: GCA g-line stepper
.38NA
Post Exposure delay: 20-22°C/ 30 mins
Developer/Rinse: QZ3501/QZ3512
30”/10”/15”


Durimide 7020 Film Thickness vs. Spin Speed


Durimide 7005 Film Thickness vs. Spin Speed

Durimide® 7000 undergoes a 45% shrinkage from softbake to cure.

FUJIFILM

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