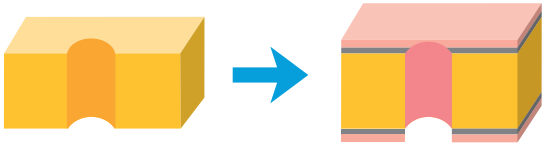


# TOP SAPINA PROCESS

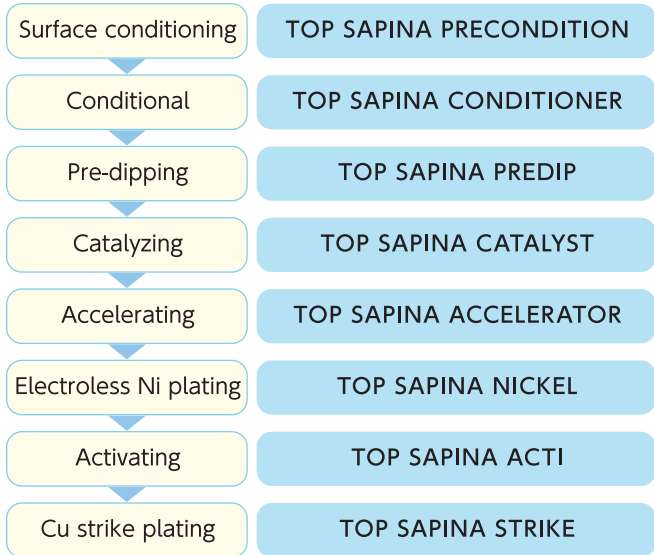
## Ni seed layer forming process to polyimide film with hole

### All wet process

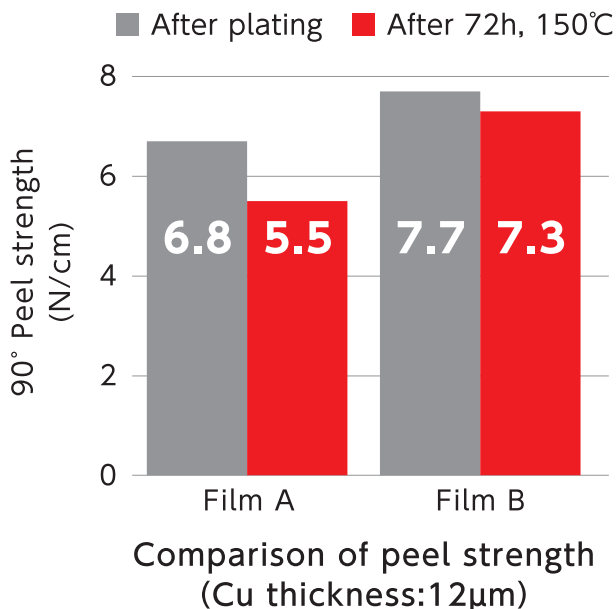


Polyimide with hole

Metalize both side at once including holes



### Great adhesion and stability after aging



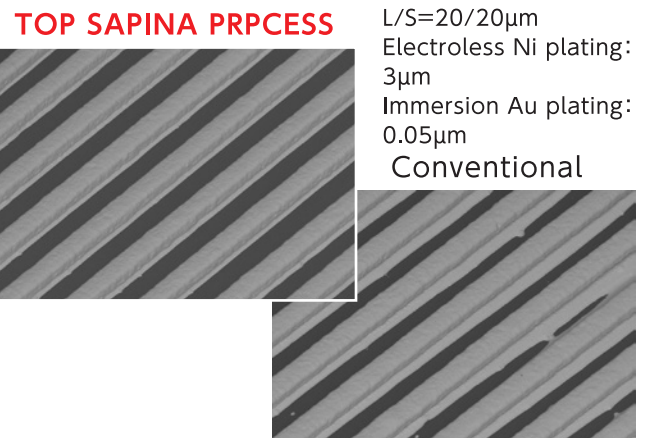
### Low Pd concentration Prevent Pd adsorption

Comparison of Pd concentration and adsorption amount

	Pd concentration in catalyst (mg/l)	Pd adsorption amount (µg/dm <sup>2</sup> )
<b>TOP SAPINA PROCESS (Alkaline ion type)</b>	<b>105</b>	<b>17</b>
Conventional (Acid colloid type)	190	30

**Low Pd concentration, eco-friendly process**

### Excellent in fine pattern performance



**Great fine pattern ability of Ni/Au plating because of low Pd adsorption amount**