

Parylene Coating System

# LAVIDA-110H

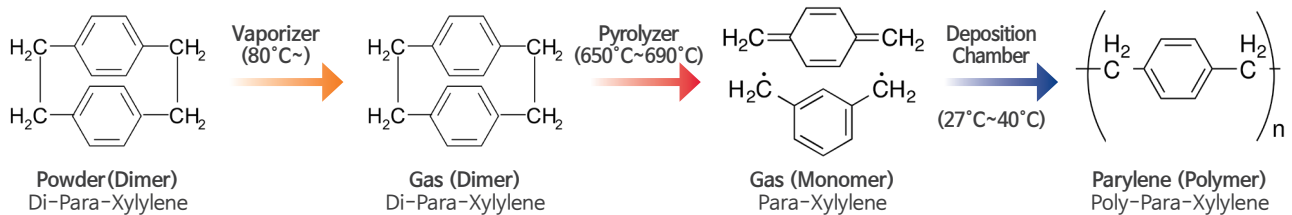


# Specification



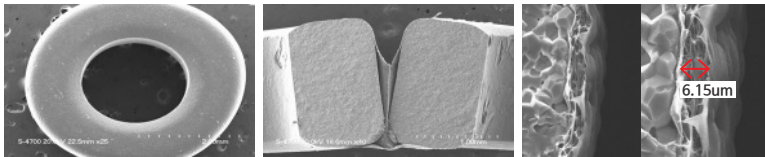
<b>Vaporizer</b>	<ul style="list-style-type: none"> <li>• Dimer loading capacity : Max. 100g</li> <li>• Heater : Max. 200°C</li> <li>• Vaporizing temp. Setting : Up to 10 step (Temp &amp; Time)</li> </ul>
<b>Pyrolyzer</b>	<ul style="list-style-type: none"> <li>• Tube Material : Quartz</li> <li>• Tube Size : I.D. 36mm x Length 790mm (for Quartz)</li> <li>• Heater : Max. 800°C</li> </ul>
<b>Deposition Chamber</b>	<ul style="list-style-type: none"> <li>• Horizontal chamber</li> <li>• Deposition Region : I.D. 200mm x Length 420mm</li> </ul>
<b>Operation</b>	Manual & Automatic
<b>Geometry</b>	W.1,600 x D.800 x H.1,300 (mm) (Sizes may vary according to the customer's requirements and product upgrades)

# Parylene Coating Process

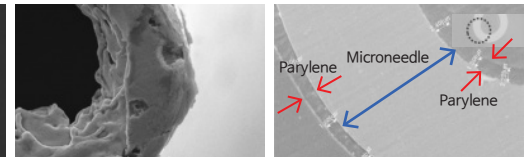


# Applications

## Parylene Coated Ring Magnet

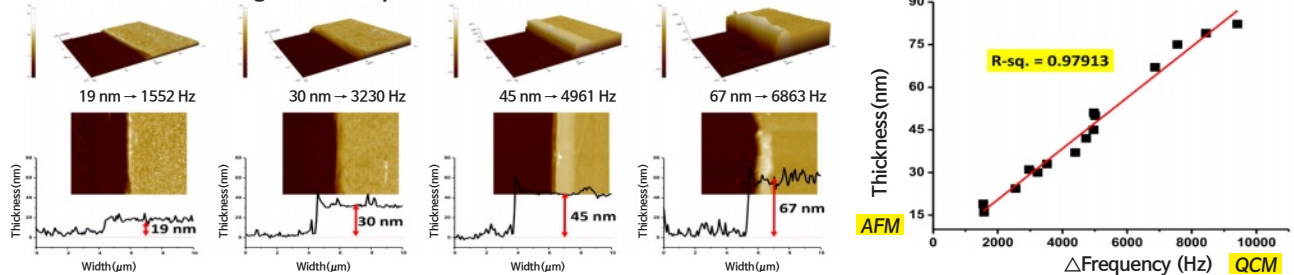


## Microneedle Coating



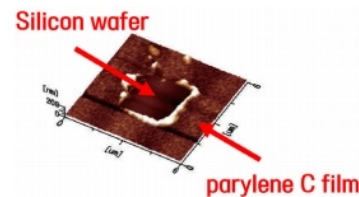
Avg. of thickness (Total) =  $2 \mu\text{m} \pm 0.28$  (n=6)  
 Avg. of thickness (I.D.) =  $2.14 \mu\text{m} \pm 0.30$  (n=3)  
 Avg. of thickness (O.D.) =  $1.86 \mu\text{m} \pm 0.21$  (n=3)

## Correlation of QCM signal ( $\Delta\text{Freq.}$ ) to Film Thickness (AFM)



## QCM Frequency Shifts, Thickness and RMS roughness of the Parylene C Film after Deposition

Amount of Parylene C dimer [mg]	Average frequency change $-\Delta F / \text{cycle}$ (Hz)	Film thickness [nm] <sup>a</sup>	RMS roughness [nm] <sup>b</sup>
20	49 ± 2	1 ± 0.1	0.2
50	494 ± 16	12 ± 0.4	4.3
75	954 ± 41	24 ± 1.0	5.3
107	2237 ± 164	56 ± 4.0	3.6
152	3440 ± 108	85 ± 3.0	6.8
206	5331 ± 111	132 ± 2.8	5.1
518	15596 ± 275	387 ± 7	67.8



※ 경기도 지역협력연구센터(GRRC) 사업비를 지원받아 제작

<sup>a</sup> The density of parylene c film,  $1.1 \text{g/cm}^3$ , was used for the calculation of the film thickness.  
<sup>b</sup> Root-mean-square (RMS) roughness from AFM images.



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