# IUV-25CP Spectral irradiation system for photoresist



This is the system that multiple monochromatic lights in a wavelength band (approx. 240 nm)is irradiated to photosensitive material such as photoresist agent for arbitrary time. Two types of light source are equipped as standard. One is the Deep UV lamp which can irradiate strong line spectrum light and another is Xe lamp which can irradiate continuous spectrum light. The sample can be moved stepwise on the automatic stage, and it can be irradiated while changing irradiation time.

- Testing the spectral sensitivity (wavelength characteristics) of photoresist agents can be performed.
- The travel distance and the number of steps can be set to  $5 \text{ mm} \times 13$  stpes at maximum (2mm is required between irradiation areas)
- The irradiation time and position can be set and controlled with the notebook PC and software.
- The Deep UV lamp can be changed to an ultrahigh pressure mercury lamp as an option



Image of Irradiation

The sample stage moves according to the set time.



This is a photoregist evaluation photo in 5 steps in total from 1/250 seconds to 1/15 seconds. It is understood that the reaction (sensitivity) varies with different wavelengths.

## Holder (2 types)



< Sample holder > The sample can be set by fitting the glass substrate into this holder.



< Reference detector > The sample irradiation light intensity can be measured with silicon photodiode.



### Specifications

Irradiation Wavelength range	Wavelength band irradiated at once : about 240 nm		
Irradiation area	Long distance travel type, Height direction : $89mm$ (5×13 steo, space		
	btween irradiation : 2mm) WL direction : approx. 80mm ( approx. 240nm)		
Irradiation time	0.01 ~ 1200sec		
Min. setting time	0.01sec		
Irradiation step	1 ~ 13 steps		
Direction fo division of irradiation	Select either Linear or log		
Light source	DeepUV lamp 500W • Xe lamp 500W		
Lamp swithcing	Manural switching with the mirror		
Sample holder	$\Box$ 100mm, $\Box$ 127mm, for glass plate ( exchange type )		

# Standard Configurations



- Deep UV lamp 500W
- Deep UV lamp holder ( air cooling type)
- Deep UV lamp power supply
- •Xe lamp 500W
- lacksquare Xe lamp holder ( air cooling type )
- •Xe lamp power supply
- ●Light condensing optical system(manual switching of 2 light paths
- Auto shutter mechanism
- ●M25-CP Monochromator
- •Grating: 1200 lines /300nm Blaze (MgF2 coating)
- •Sample chamber( auto stage )
- Sample holder for glass sample, 100 x 100mm
- •Sample holder for glass sample, 127 x 127mm
- $\blacksquare Referebce detector ( silicon photo diode with certificate )$
- •Ammeter for signal of reference detector(Electro meter)
- Stage controller
- Shutter controller
- Note PC
- Dedicated software
- Instruction Manual





- $\boldsymbol{\cdot}$  Start (Condition): Enter the first seconds of irradiation time (0.01 to 1200)
- ${\boldsymbol \cdot}$  End: Enter the last seconds of irradiation time (0.01 to 1200)
- $\cdot$  Number of divisions: Enter the number of division between start and end (2 to 13)
- $\boldsymbol{\cdot}$  Division method: Select from Linear or Log
- $\boldsymbol{\cdot}$  Calculation: Set the irradiation time (seconds) under specified conditions and display it in the list
- $\boldsymbol{\cdot}$  Close: Close the irradiation condition screen and returns to the main menu
- ${\boldsymbol{\cdot}}$  Manual : Set shutter state and stage position arbitrarily
- $\boldsymbol{\cdot}$  Start (whole): Start Irradiation under the set conditions

Outer dimensions

Mainunit : approx. W1000×D650×H470mm
\*Excluding lamp power supply, electro-meter

•Specifications and appearance are subject to change without prior notice

< IUV-25CP-1710039N >

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