

## MAX-303 application

## Xenon light source for Photocatalytic study

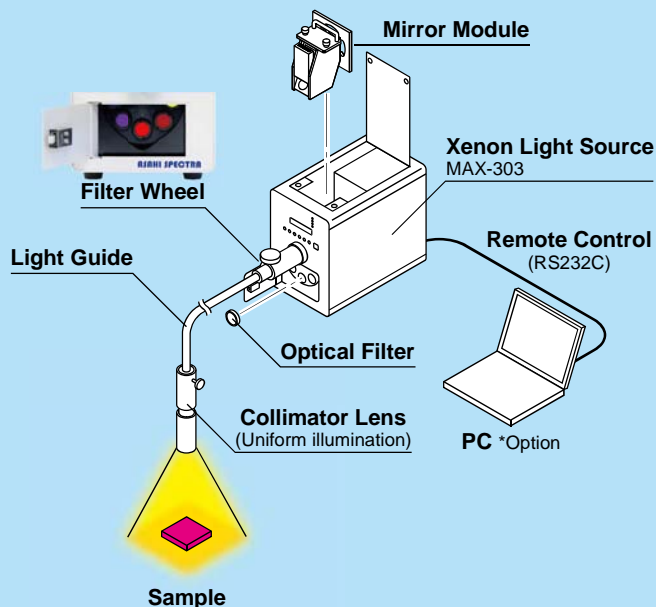
High power monochromatic light makes an evaluation of wavelength response in both UV and VIS more efficiently

- IR heat blocking by mirror module
- Embedded filter wheel enables to select desirable wavelengths
- Continuous light control from 5 to 100 (Steps)
- Uniform irradiation
- High power monochromatic light by bandpass filters
- RS232C remote control

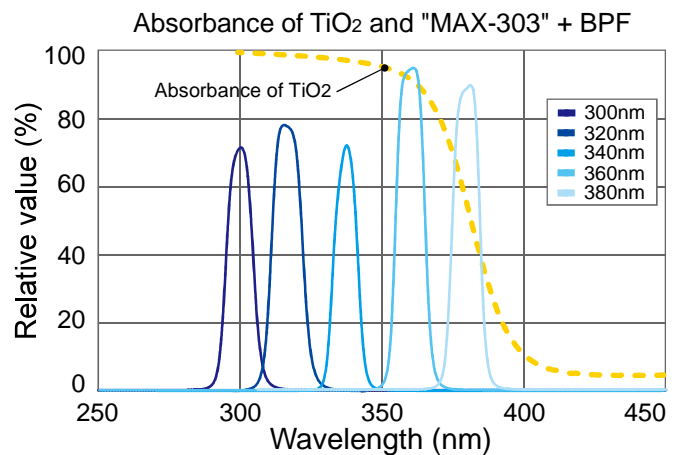
This system can analyze the photocatalytic reaction precisely by illuminating monochromatic light with desirable wavelength. Thanks to its heat blocking design and a mirror module, the sample is prevented from IR thermal damage.



### System Configuration Example



### Usage Example



### Light Intensity (Reference value)

Wavelength (nm)	Light intensity (mW/cm <sup>2</sup> )	Mirror module
320	7.9	UV
380	8.9	
400	12.7	VIS
550	16.4	
700	13.7	

**[Measuring condition]**  
Illuminated area : 20x20mm  
FWHM : 10-12nm

### Application Field

- Photocatalysis
- Artificial photosynthesis
- Organic synthesis
- Chemical analysis

etc.

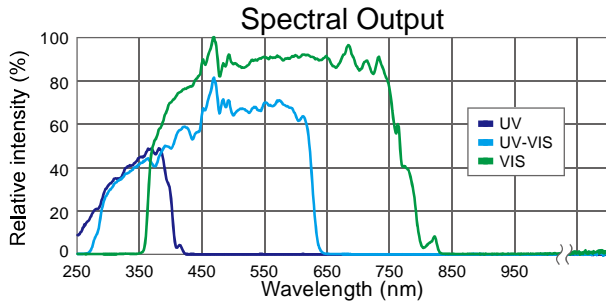
# Accessories

## Mirror Module



Please use UV type mirror module in case you use titanium dioxide in UV activation, and please use VIS type or UV-VIS type in case you use in VIS activation.

Type	Wavelength
UV	250 - 385nm
VIS	385 - 740nm
UV-VIS	300 - 600nm

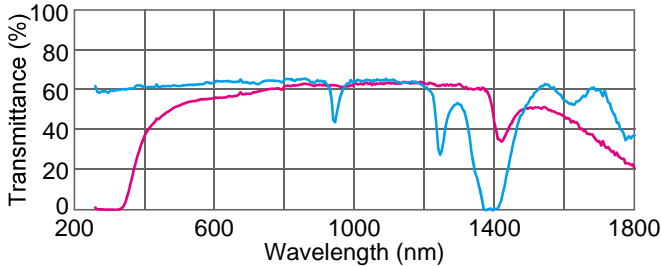


## Light Guide



The illuminating light from the MAX-303 is delivered to the point of use by the light guide efficiently.

### Spectral Performance - Light Guide



- Quartz Light Guide**
  - Length(L):1m, 2m
  - Core dia:200µm dia.
  - Numerical aperture:0.22
  - Heatproof temp:<300 deg C (Incident end face)
- Hybrid Light Guide**
  - Length(L):1m, 2m
  - Core dia:50µm dia.
  - Numerical aperture:0.57
  - Heatproof temp:<150 deg C (Incident end face)

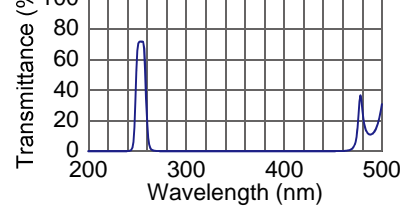
## Optical Filters



Asahi Spectra produces varieties of precise optical filters to help modification of spectral output from the MAX-303.

Our bandpass filter series allow users to obtain the desirable spectral throughput to suit wide variety of applications more precisely while eliminating unwanted energy.

### UV Filter Example : XHQA254



FWHM tolerance: 10±2nm  
Min.transmission: 60%  
Size: 25 mm dia.

Wavelength (nm)	Item #	Mirror Module
248	XHQA248	UV <sup>1</sup>
254 - 290	XHQA254 - XHQA290	UV <sup>2</sup>
300 - 390	XHQA300 - XHQA390	
400 - 600	XHQA400 - XHQA450	UV-VIS <sup>3</sup>
	XBPA460 - XBPA600	
610 - 740	XBPA610 - XBPA740	VIS

\*1 The OUV lamp is required.

\*2 The mirror module transmittance is decreased when XHQA390 is used.

\*3 The new version of XHQA300 - 390 are only available.

\*Contact us for information about a filter which is not listed above.

## Collimator Lens



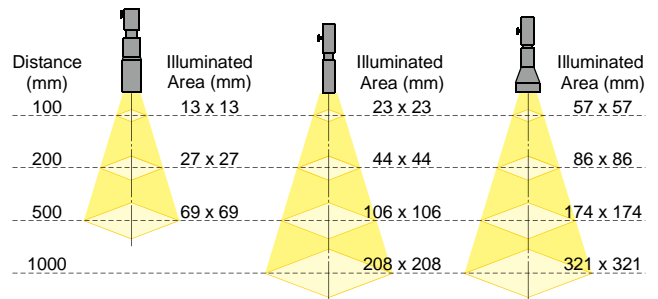
Collimator lens reduces the divergence of light from the light guide and provide uniform light output to a sample. Focus is adjustable in each working distance.

### x0.5 Type RLQL80-05

### x1.0 (STD) Type RLQL80-1

### x2.0 Type RLQL80-2

Size: 43mm dia. x 245mm    28mm dia. x 192mm    55mm dia. x 217mm  
Material: Quartz    Quartz    Quartz



\*Product specifications are subject to change without notice.