

Xenon Light Source 300W Monochromatic Light with Filters

MAX-303

Desired wavelength irradiation for photochemical research without IR heat.

CE marked

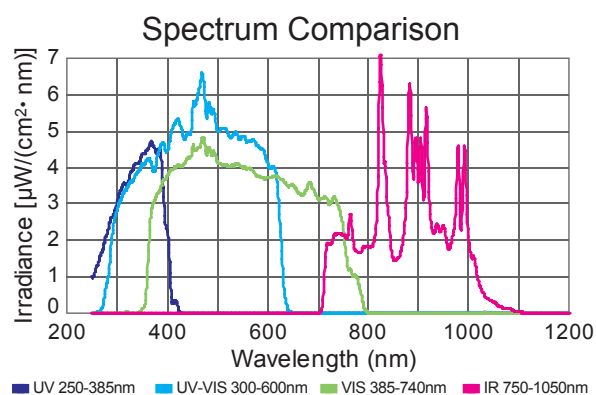


Features

- Xenon 300W lamp
- Selectable wavelength
- IR heat blocking
- Adjustable light intensity
- Flexibility of light direction by fiber output
- RS232C remote control

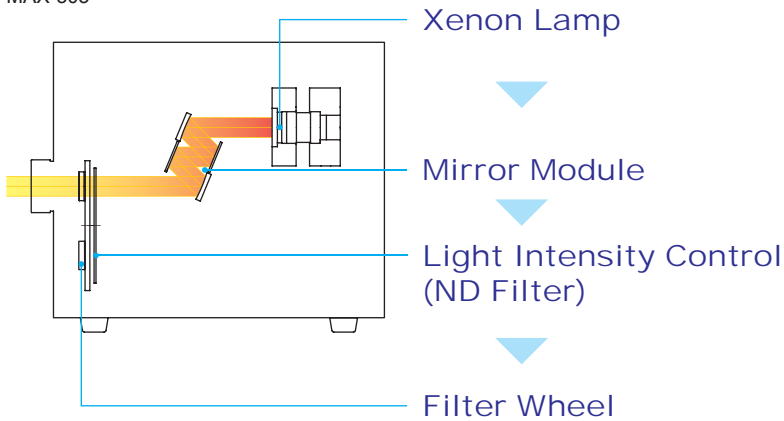
Applications

- Photocatalyst
- Photochromism
- Chemical analysis
- Spectroscopy etc...



Features

MAX-303

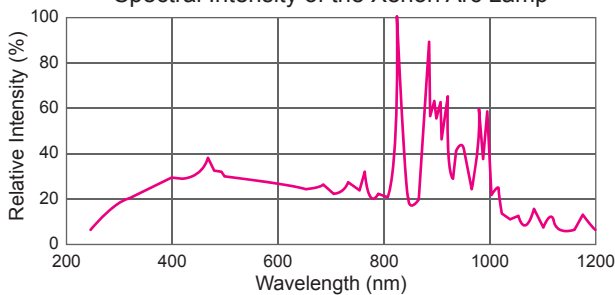


CERMAX Xenon Arc Lamp



300W Xenon arc lamp is built into the lamp unit. The lamp efficiency is enhanced by a parabolic reactor, and it achieves a high intensity output with a color temperature of 5600 Kelvin. The heatsink is also equipped on the unit. The lamp replacement is easy and precision system alignment is not required.

Spectral Intensity of the Xenon Arc Lamp

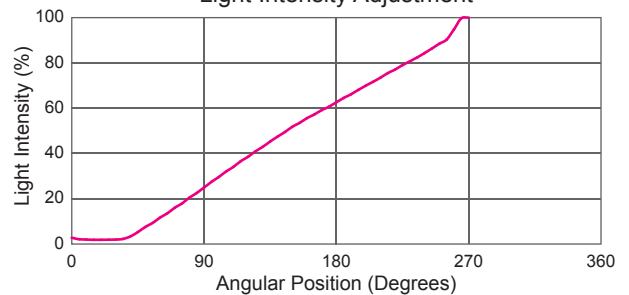


Light Intensity Control (ND Filter)



Built-in variable ND filter allows precise control of lamp intensity by 1 step within the range of 5 to 100 steps continuously as shown in the graph below.

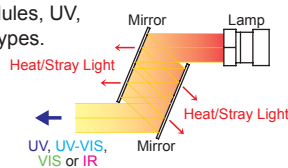
Light Intensity Adjustment



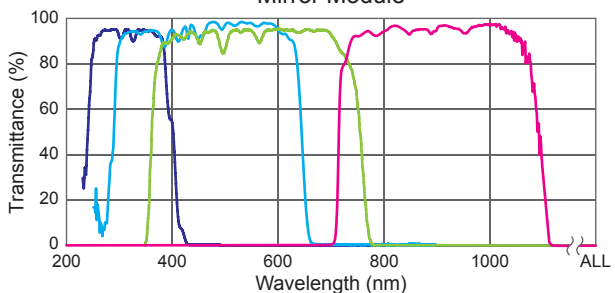
Mirror Module



This sophisticated optical unit consists of several multi-coated filters to block unwanted energy from xenon lamp and only desired wavelength range is obtainable. The MAX-303 offers 4 types of mirror modules, UV, UV-VIS, VIS and IR types.



Mirror Module



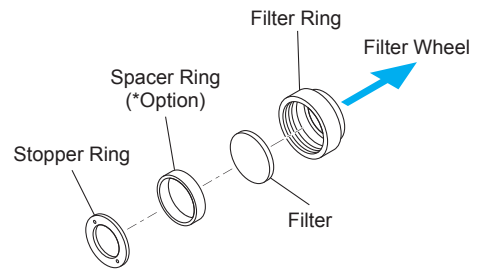
■ UV 250-385nm ■ UV-VIS 300-600nm ■ VIS 385-740nm ■ IR 750-1050nm

Filter Wheel



The filter wheel can be mounted to the maximum of 8 filters (25mm dia.). To obtain a desirable spectral output, wide varieties of optical filters, shortpass, longpass, and bandpass are available.

How to set a filter



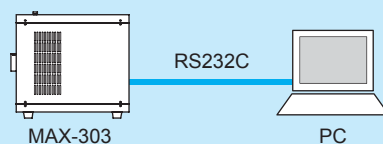
- Usable filter size: 25mm dia., thickness 1.0 - 6.0mm
- Filter rings and stopper rings are supplied.
- Filters are optional.

Panel Controls

User friendly menu and comprehensive display for easy operation.



1. Exposure time set 0.5-99999.9sec
2. Shutter activation Open/Close
3. Filter channel control
4. Light intensity adjustment

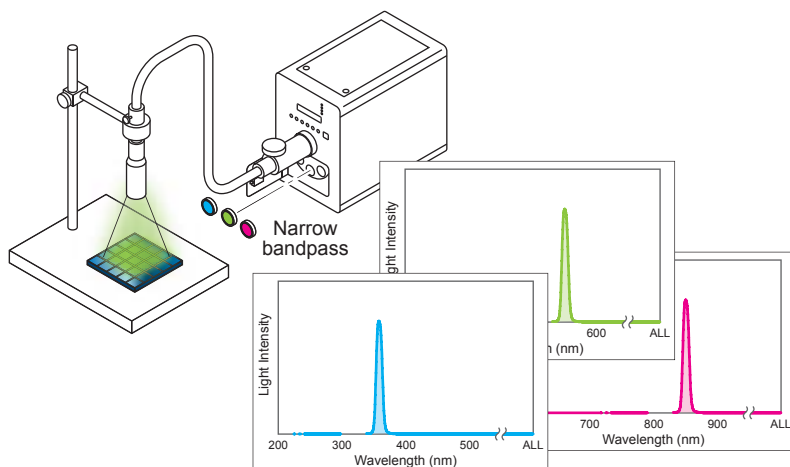


*All of those features can be controlled remotely via RS232C.

Usage Example

Monochromatic Light with Optical Filters

Monochromatic light output by optical filter



Bright monochromatic light
Instead of multiple wavelength laser
Output beam is brighter than a monochromator
Selectable various wavelength by optical filters
Unwanted IR heat and stray light are removed by a mirror module

■ Narrow bandpass filter *Option

A wide variety of narrow bandpass filters from UV wavelength range to IR wavelength range.

Lineup of 10nm interval from 260nm to 900nm

260nm, 270nm, 280nm, ..., 880nm, 890nm, 900nm

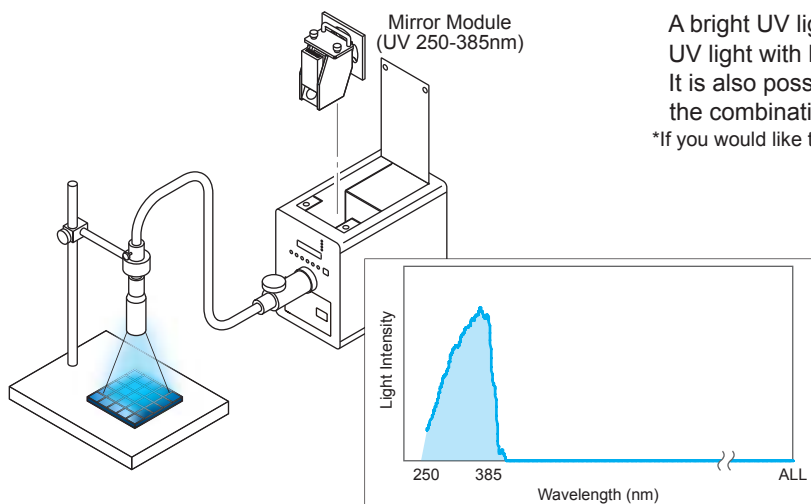
Lineup of the wavelength for mercury emission line

254nm, 313nm, 365nm, 405nm, 436nm



UV Light Source

UV light output without IR heat



A bright UV light with desirable wavelength range
UV light with blocking IR heat
It is also possible to obtain a desirable UV wavelength range with the combination of a mirror module and optical filters.
*If you would like to know about a combination of filters, please contact us.

Applications

- Photocatalyst
- Spectroscopy
- Inspection lighting
- Photochromism
- Fluorescent observation
- UV light disinfection
- Chemical analysis
- Lithographic exposure for semiconductor
- Curing

...and for other Research & Development

Options

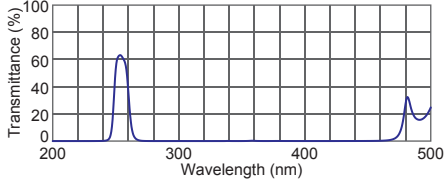
Optical Filters



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.

Usage Example : UV filter XHQA254



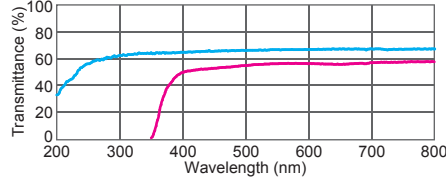
FWHM tolerance: 10±2nm
Min.transmission:60%
Size:25 dia.mm

Light Guide



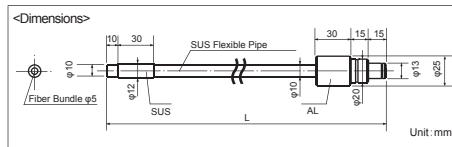
The illuminating light from the MAX-303 is delivered to the point of use by the light guide efficiently. We carry single legged light guides as well as multi-legged types for your different needs.

Spectral Performance - Light Guide



Fused Silica Guide
- Length(L):1m, 2m
- Core dia:200µm dia.
- Numerical aperture:0.22
- Operating temp:<500 deg C

Hybrid Guide
- Length(L):1m, 2m
- Core dia:50µm dia.
- Numerical aperture:0.57
- Operating temp:<350 deg C



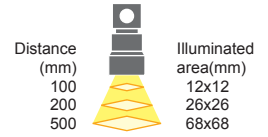
Collimator Lens



Collimator lens reduces the divergence of light from the light guide and provide uniform light output. It is suitable for directional backlighting which requires clear silhouette of an object.

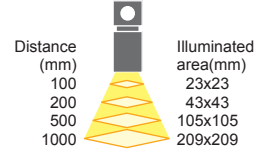
x 0.5

Size : 43mm dia. x 210mm
Substrate : Fused silica



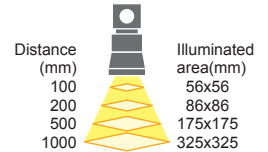
x 1.0

Size : 28mm dia. x 177mm
Substrate : Fused silica



x 2.0

Size : 55mm dia. x 206mm
Substrate : Fused silica



Scope of Delivery

- Lamp x 1 *Choose OUV, UV or VIS
- Mirror module x 1 *Choose UV, VIS, UV-VIS or IR
- Light guide adapter x 1
- AC Cable x 1
- Filter wheel x 8
- Filter fitting tool x 1
- Instruction manual x 1
- IR filter and holder for IR mirror module (It comes with the IR mirror module.)



caution OUV lamp generates a lot of ozone which is harmful on a human body. When you use it, you must prepare an exhaust system to evacuate ozone to outside.

Lamp and Mirror Module Combinations

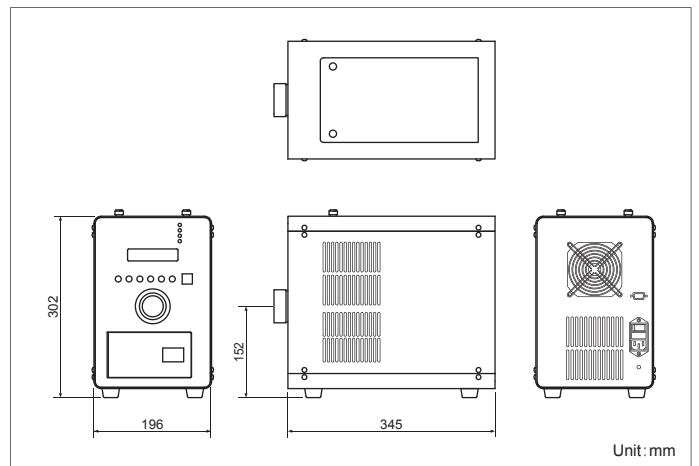
	Lamp	Mirror module	Light guide fitting device	Spectral output
MAX-303	OUV	UV	UV	235** - 385nm
		VIS	VIS	385 - 740nm
		IR*	VIS	750 - 1050nm
	UV	UV	UV	250 - 385nm
		UV-VIS	UV	300 - 600nm
		VIS	VIS	385 - 740nm
VIS	VIS	VIS	385 - 740nm	
	IR*	VIS	750 - 1050nm	

*Use IR filter **Design value

General Specifications

- Model :MAX-303
Output wavelength :235* - 1050nm *Design value
(It depends on the lamps and the mirror modules.)
Circuit method :Switching power supply
Input voltage :AC100 - 240V 50/60Hz
(Input range : AC100 - 240V)
Apparent power :Less than 530VA (AC100V/50Hz)
Less than 520VA (AC240V/50Hz)
Lamp type :Compact xenon lamp 300W
Lamp life :500h (Average)
*When the light intensity has decreased by 50% from the initial value.
Cooling method :Forced air cooling
Shutter :Pulsed motor drive
Exposure time set :0.5 - 99999.9sec
Mirror module :UV Type(250-385nm), UV-VIS Type(300-600nm),
VIS Type(385-740nm), IR Type(750-1050nm),
Light intensity control :100 - 5 (Steps)
Continuously variable
Filter wheel :8 channels *25mm dia/ t=6mm filter is usable
Emitting method :Bundled light guide
Controller :Built-in
Remote control :RS232C *The cable must be less than 3m.
Safety mechanism :Xenon lamp problem, Top door is open,
Lamp usage exceeds 500 hours,
Cooling fan problem, Temperature anomaly
Recommended environment :Temperature 10 - 35 deg C
Humidity 20 - 80% *Avoid condensation
Dimensions :196(W) x 345(D) x 302(H)mm
Weight :12.9kg

Dimensions



*Product specifications are subject to change without notice.



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