

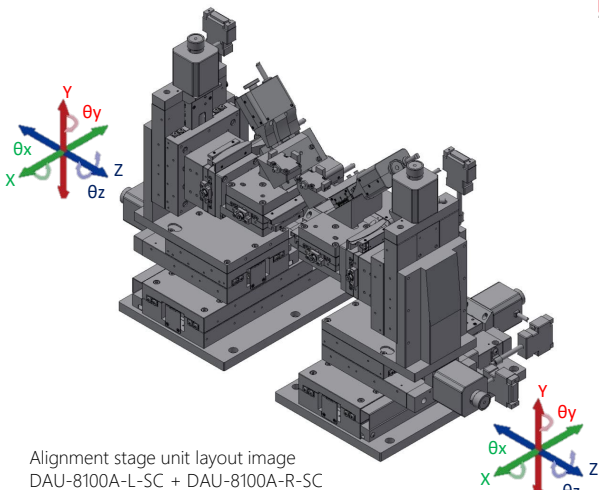
Motorized 6-axis Optical Fiber Alignment Stage Unit

DAU-8100A-SC

RoHS

This is a stage unit for 6-axis automatic alignment combining $\theta_x\theta_y\theta_z$ axes with linear motion XYZ axes. Symmetrical L type and R type are available.

- Use of high-resolution stages enables alignment with high rigidity and high efficiency.
- Compared with the conventional automatic alignment unit (DAU-080A type), it is more rigid and allows longer travel.
- The magnetic mounting method and the positioning mechanism used in the holders ensure positional repeatability.
- A variety of compatible holders enables application extension associated with device change.



Alignment stage unit layout image
DAU-8100A-L-SC + DAU-8100A-R-SC

Guide

- ▶ We offer an NFP Observation Kit (NFP-KIT) that can be used in combination with this core alignment unit.
- ▶ Special holders are available for the DAU-8100A series alignment unit.
 - Fiber Holders (FHM series)
 - Fiber Rotation Holders (FHRM series)
 - Automatic Rotating Fiber Holder (FHRA/FHRAW series)
 - Rotating Fiber Holder (with adsorption function) (FHRMW series)
 - Fiber Array Holders (ARH series)
- ▶ If you are considering a fiber alignment unit with the DAU-8100A as its main axis, please contact our sales department.

Attention

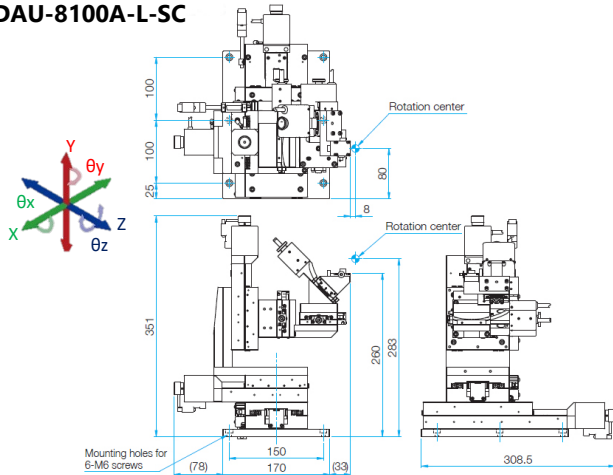
- ▶ Motorized alignment stage unit may interfere when traveling full stroke depending on the condition.

Part Number	Axis	X axis Travel
DAU-8100A-L-SC	6 axes	100mm
DAU-8100A-R-SC	6 axes	100mm

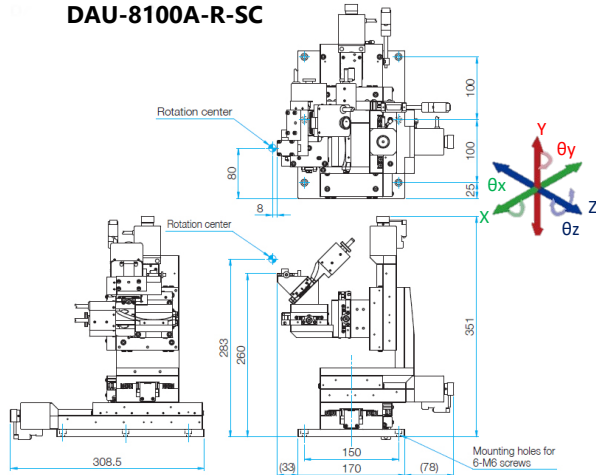
Outline Drawing

(in: mm)

DAU-8100A-L-SC

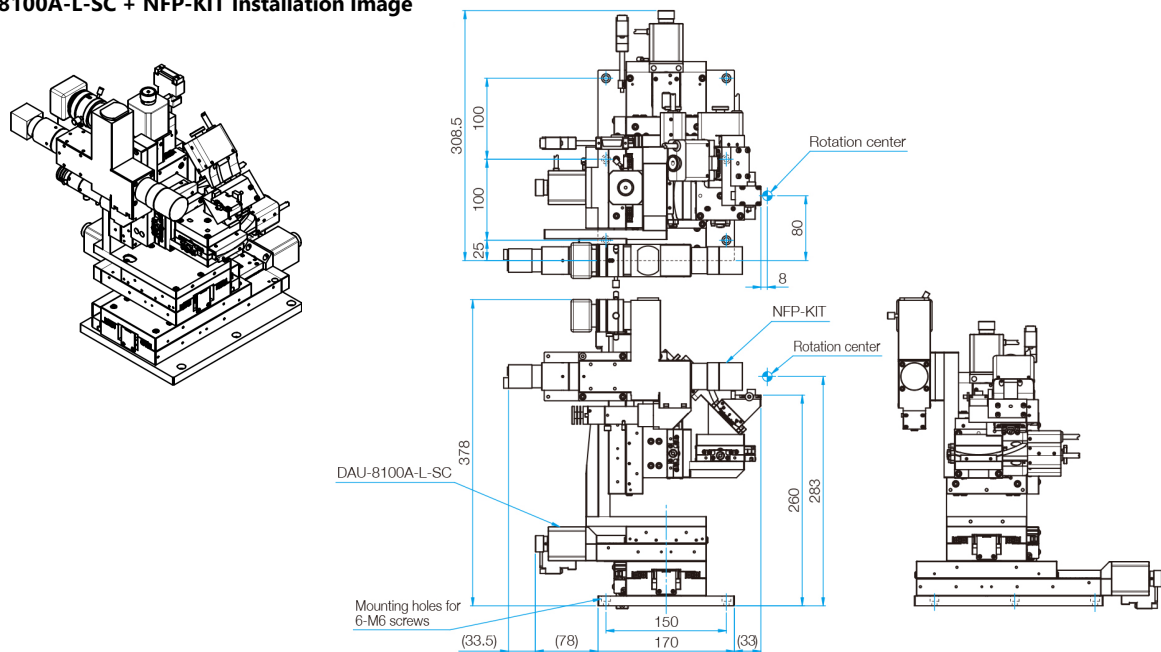


DAU-8100A-R-SC

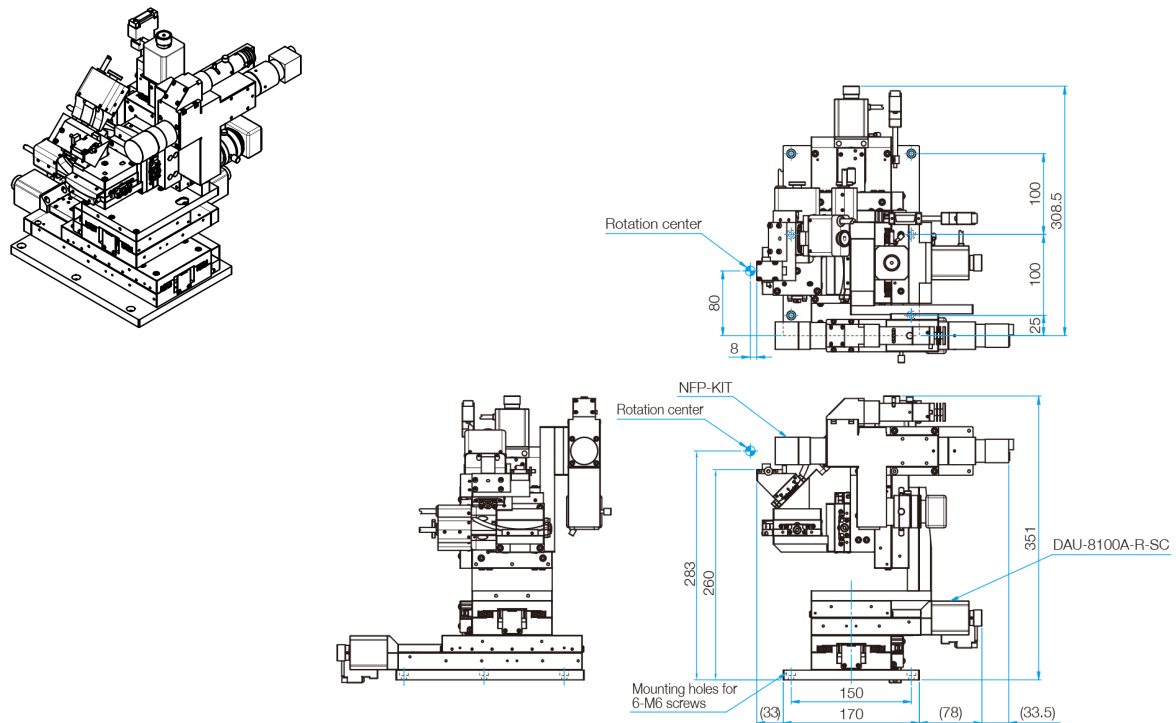


Part Number	Axis	X	Y	Z	θ_x	θ_y	θ_z
DAU-8100A-L-SC	Part Number	TAMM100-100C	TAMM100-50CR	TAMM100-50CR	OSMS-40A60R	OSMS-60A10S	OSMS-60A85R
	Travel	100mm	50mm	50mm	$\pm 5^\circ$	$\pm 7^\circ$	$\pm 9^\circ$
	Resolution (Full)	2 μ m	2 μ m	2 μ m	$\approx 0.00217^\circ$	$\approx 0.00189^\circ$	$\approx 0.00229^\circ$
	Resolution (Half)	1 μ m	1 μ m	1 μ m	$\approx 0.00108^\circ$	$\approx 0.00095^\circ$	$\approx 0.00115^\circ$
	Positioning Accuracy	<10 μ m	<6 μ m	<6 μ m	-	-	-
	Positional Repeatability	<1 μ m	<1 μ m	<1 μ m	< $\pm 0.004^\circ$	< $\pm 0.004^\circ$	< $\pm 0.004^\circ$
DAU-8100A-R-SC	Part Number	TAMM100-100CR	TAMM100-50C	TAMM100-50C	OSMS-40A60	OSMS-60A10SR	OSMS-60A85
	Travel	100mm	50mm	50mm	$\pm 5^\circ$	$\pm 7^\circ$	$\pm 9^\circ$
	Resolution (Full)	2 μ m	2 μ m	2 μ m	$\approx 0.00217^\circ$	$\approx 0.00189^\circ$	$\approx 0.00229^\circ$
	Resolution (Half)	1 μ m	1 μ m	1 μ m	$\approx 0.00108^\circ$	$\approx 0.00095^\circ$	$\approx 0.00115^\circ$
	Positioning Accuracy	<10 μ m	<6 μ m	<6 μ m	-	-	-
	Positional Repeatability	<1 μ m	<1 μ m	<1 μ m	< $\pm 0.004^\circ$	< $\pm 0.004^\circ$	< $\pm 0.004^\circ$

DAU-8100A-L-SC + NFP-KIT Installation Image



DAU-8100A-R-SC + NFP-KIT Installation Image



Fiber Holders

Special holders are available for the DAU-8100A series alignment unit.
There are three jacket diameters available: 250µm, 400µm, and 900µm, all with a cladding diameter of 125µm.



FHMF series
Fiber Holders



FHRM series
Rotating Fiber Holder



FHRA series
Automatic
Rotating Fiber Holder
(without suction function,
magnetic clamp)



FHRAW series
Automatic
Rotating Fiber Holder
(with suction function, vacuum
suction + magnetic clamp)



FHRMW series
Rotating Fiber Holder
(with adsorption function)



ARH series
Fiber Array Holders

When attaching an automatic rotating fiber holder to the DAU-8100A series, a fixed plate FHRA-BP is required.

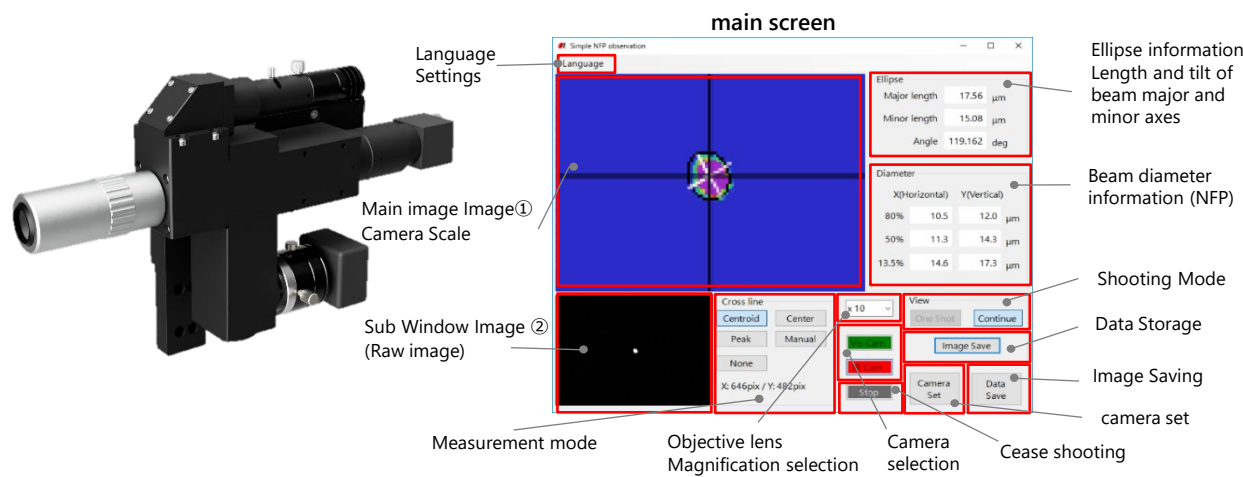


NFP Observation Unit

NFP-KIT

A set of observation system and control software for easy observation of the beam diameter (NFP) to be measured.

- By combining the automatic alignment unit with this product, adjustments can be made with reference to the luminance values in the image field of view.
- The ability to observe and acquire the beam diameter (NFP), elliptical information, and center-of-gravity point of the measurement object allows for simple evaluation and experimentation of optical fibers and optical waveguides.



Guide

- Automatic Alignment Unit is used in combination with DAU-8100A-*-SC series. For other configurations of the auto alignment unit or changes in observation magnification, please contact our sales department.

Attention

- Control software cannot be sold as a stand-alone product.

Specifications		
Part number		NFP-KIT
JP Yen [¥]		1,700,000
name of product		NFP Observation Unit
Magnification		x10
Camera field of view	Visible	0.570mm * 0.427mm
	NIR	0.486mm * 0.362mm
Wavelength	NIR	1550nm
NFP information display accuracy	NIR	±1.5μm (4 pixel)

NFP observation unit configuration image (Unit: mm)

