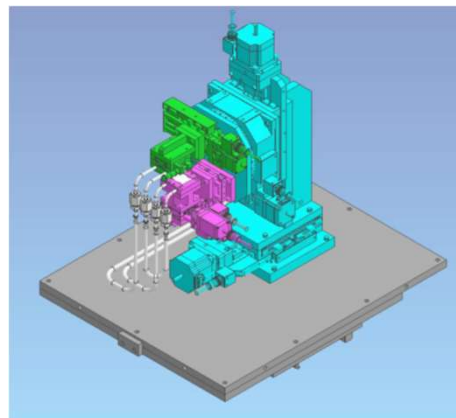
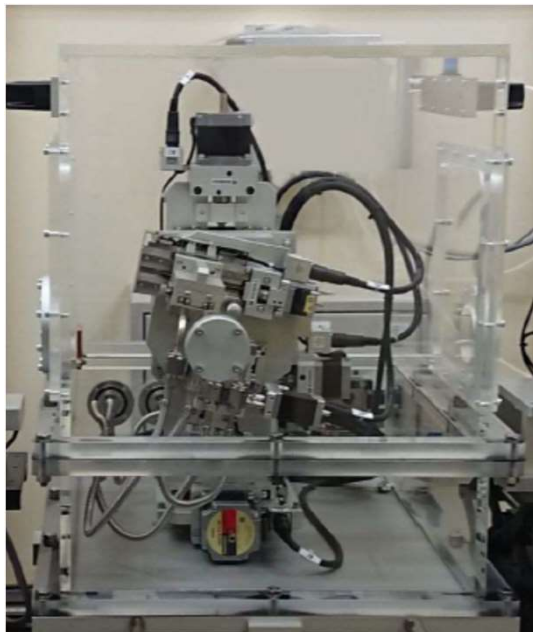




Compact Germanium Monochromator <XFCY-003>

This compact Germanium monochromator was designed for high throughput of micro-CT experiments. Germanium crystals are applied as monochromator crystals for higher flux.

This monochromator is located inside an acrylic chamber filling with Helium.



by courtesy of A.Yoneyama (SAGA Light Source)

Features

- ◆ Monochromator crystal :
Germanium(111)
- ◆ Energy range:
6 ~ 20 keV
- ◆ Compact Dimension:
W550xL460xH545 mm
- ◆ Self weight: 52kg
- ◆ Crystal size:
30 x 35 mm

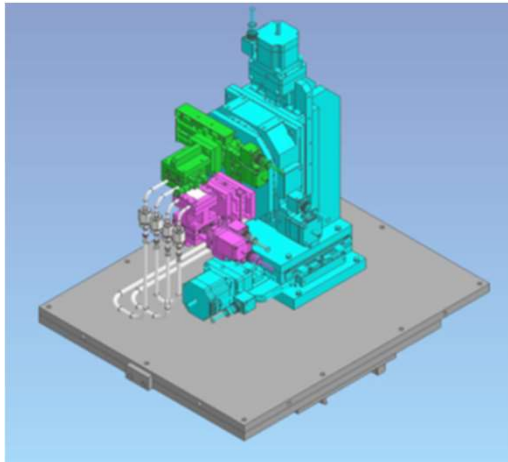
Specifications

Model	XFCY-003
Energy range Bragg angle	7 ~20 keV 5 ~18.5 degree
Monochromator crystal	Germanium Ge(111)
Crystal cooling	Indirect water cooling
Crystal size	30 x 35 mm,
Incident beam size	20mm(H) x 5mm(V)
Self weight	52 kg
Dimension	550x 460 x 545 (W x L x H : mm)



Compact Germanium Monochromator <XFCY-003>

Axis Specifications

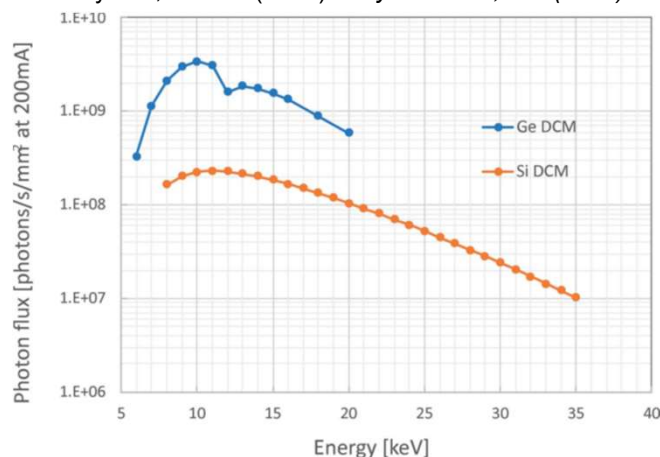


Axis	Travel range	Resolution (Halfstep)
Main theta θ_m	20 degree	0.002 degree
X axis X	± 15 mm	1 μ m
Z axis Z	-10 mm ~ 25 mm	1 μ m
Delta theta 1 $\Delta\theta 1$	± 3 degree	0.00078 degree
Z1 axis Z1	-7.5 mm ~ 3 mm	0.25 μ m
Y2 axis Y2	± 25 mm	0.25 μ m
$\chi 2$ axis $\chi 2$	± 3 degree	0.0097 degree (manual)

Result of photon flux

This compact Germanium monochromator makes the photon flux 15 times higher than normal Silicon monochromators at BL07, Saga Light Source.

(reference Yoneyama, A. et al (2021) *J.Synchrotron,Rad.*(2021).28)



Features

- ◆ Monochromator crystal : Germanium(111)
- ◆ Energy range: 6 ~ 20 keV
- ◆ Compact Dimension: W550xL460xH545 mm
- ◆ Self weight: 52kg
- ◆ Crystal size: 30 x 35 mm