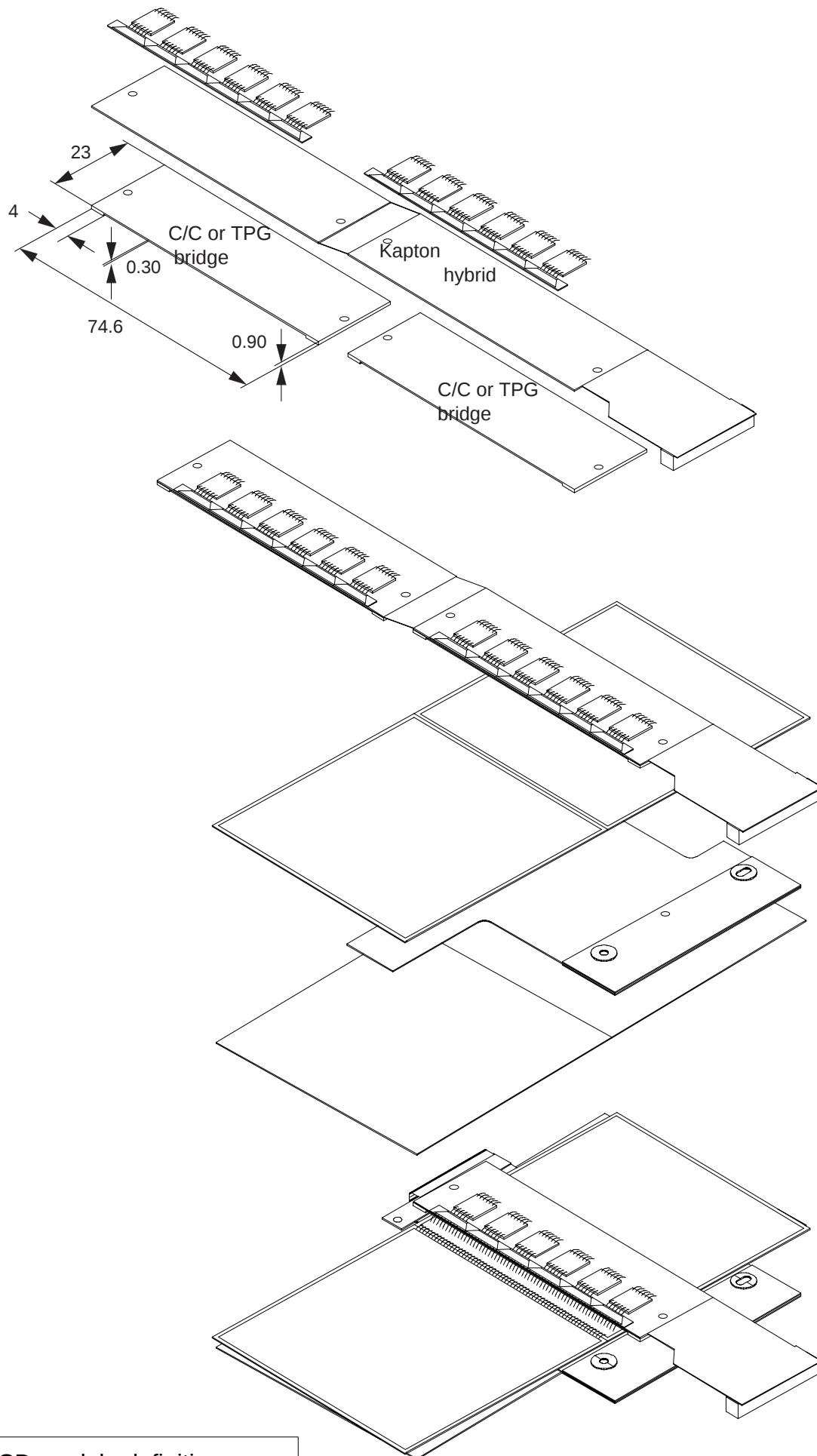
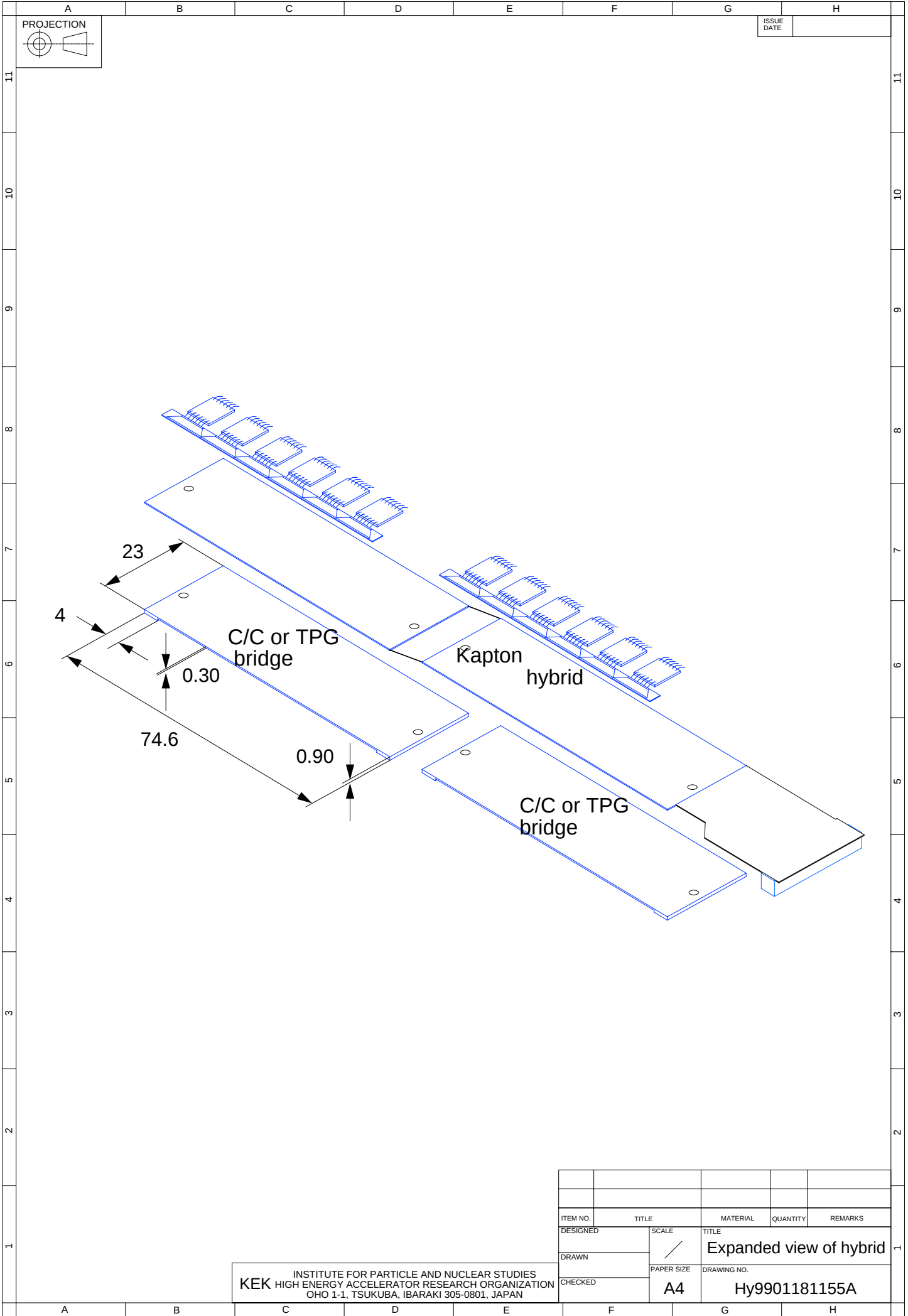




Kapton ABCD module definition

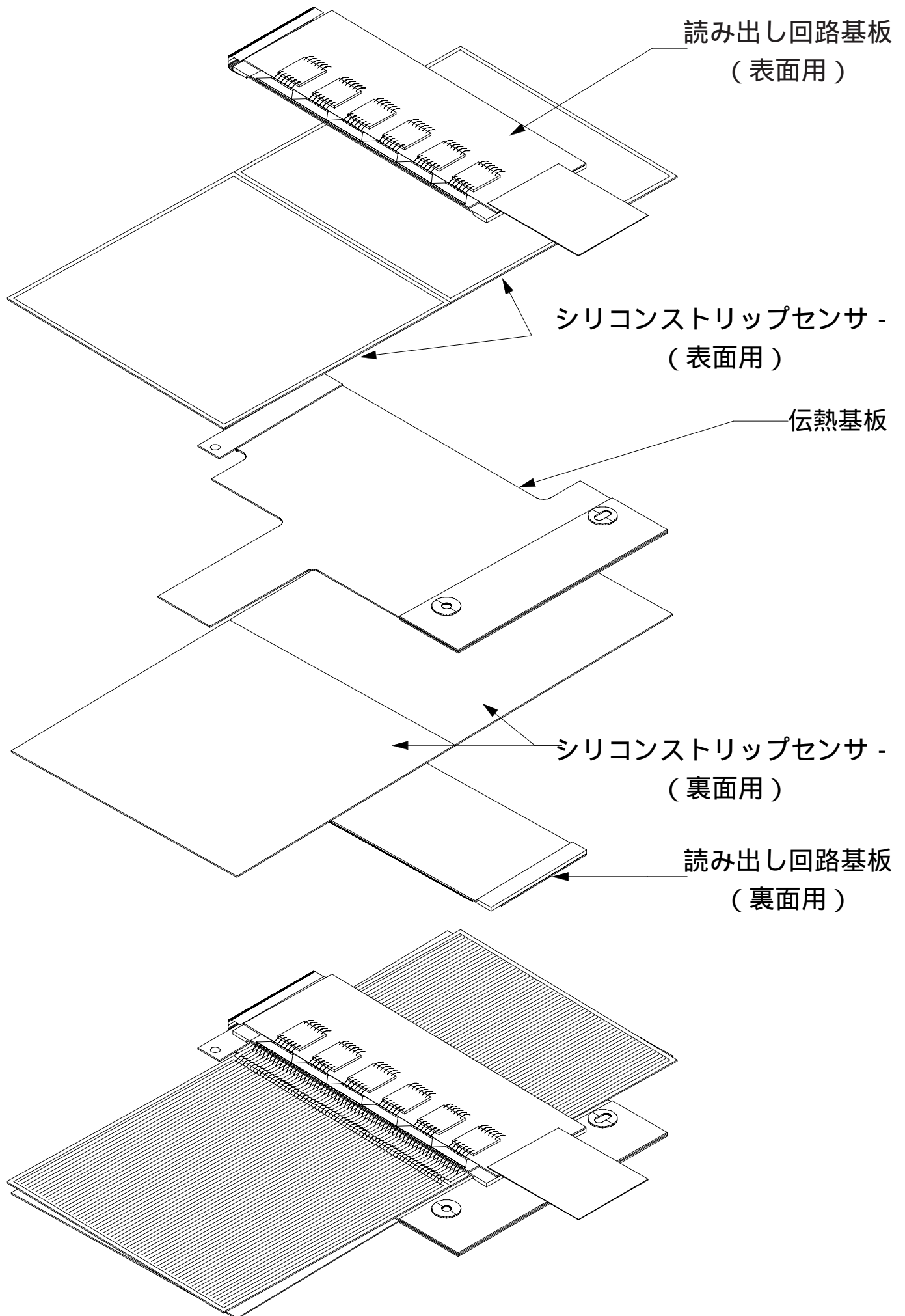
980902KEK

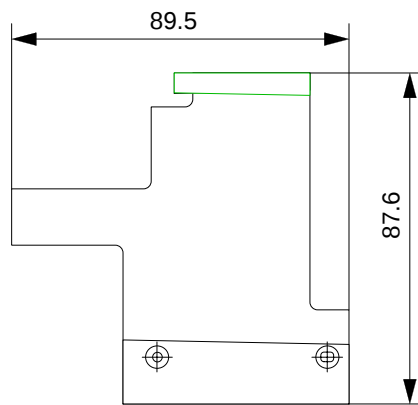


ITEM NO.	TITLE	MATERIAL	QUANTITY	REMARKS
DESIGNED	SCALE ／ PAPER SIZE A4	TITLE Expanded view of hybrid		
DRAWN		DRAWING NO.		
CHECKED		Hy9901181155A		

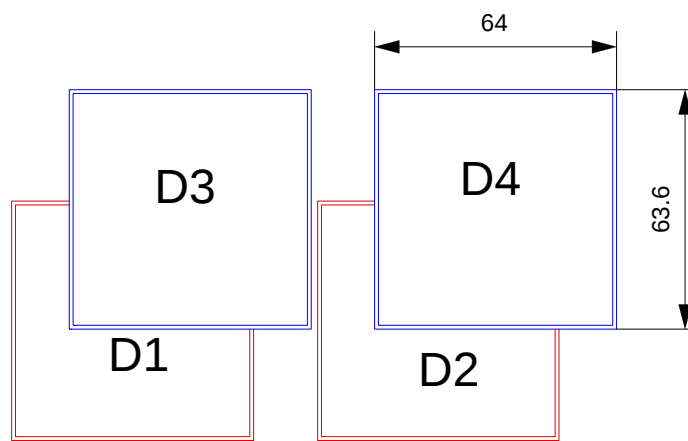
INSTITUTE FOR PARTICLE AND NUCLEAR STUDIES
KEK HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION
OHO 1-1, TSUKUBA, IBARAKI 305-0801, JAPAN

ATLAS Module97/ABCD

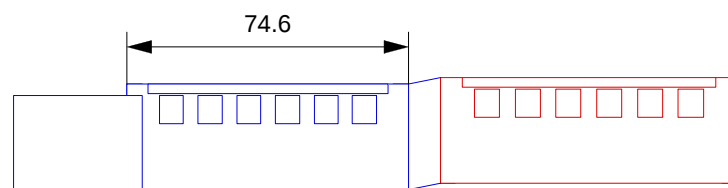




Baseboard

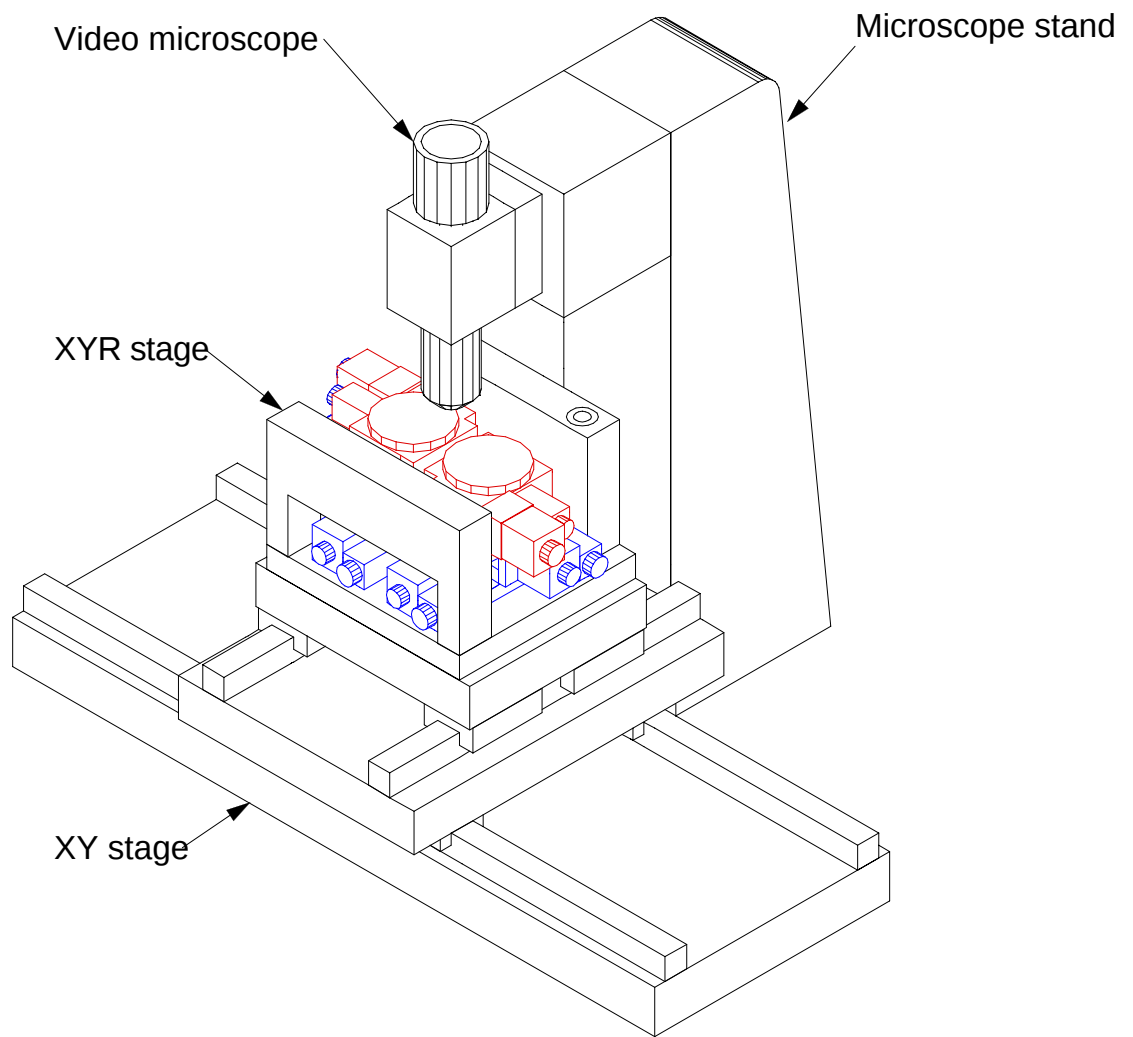


Detector

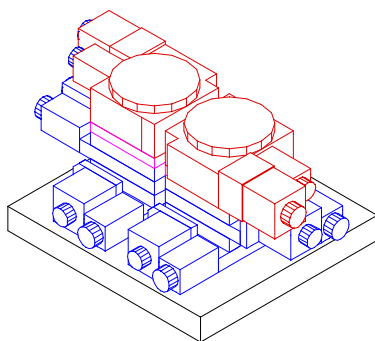


Hybrid(Upper)

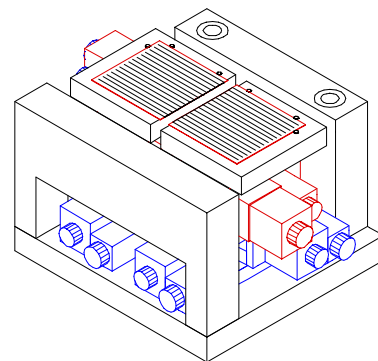
Hybrid(Lower)



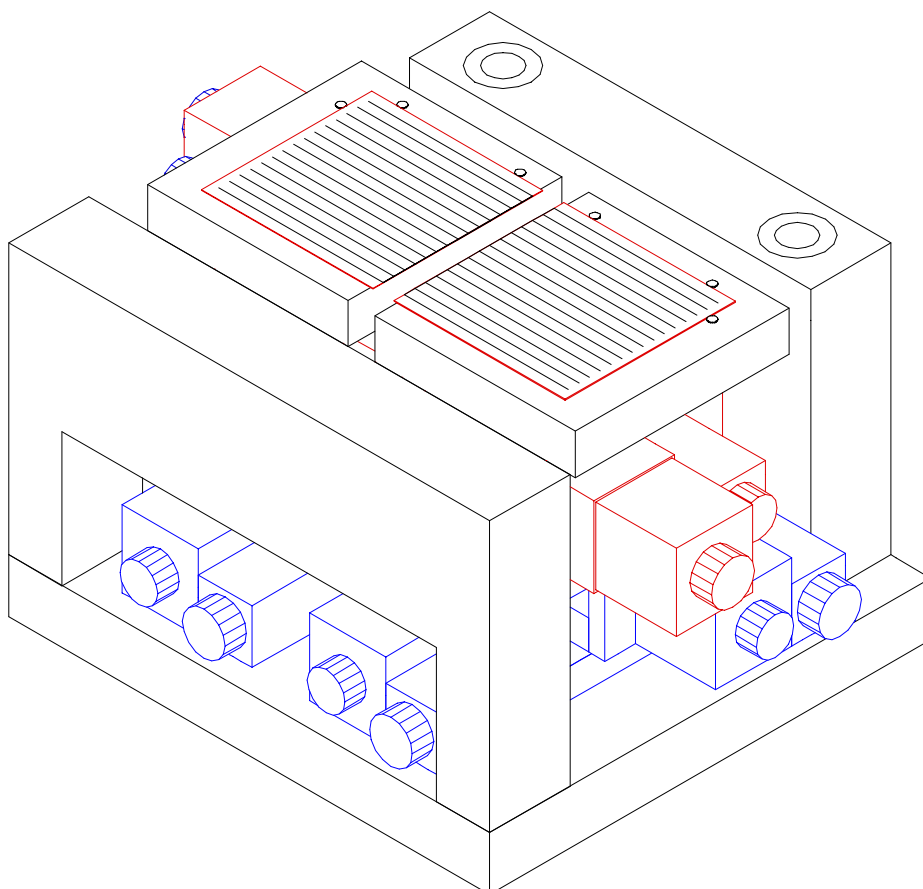
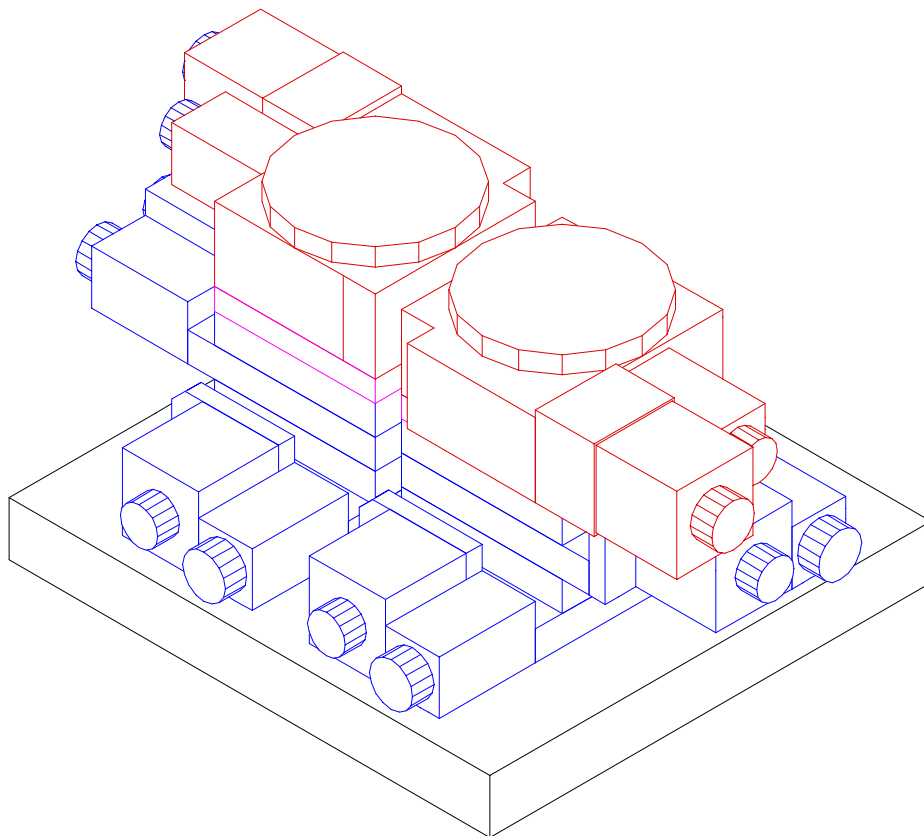
XYR stage, stands and XY stage

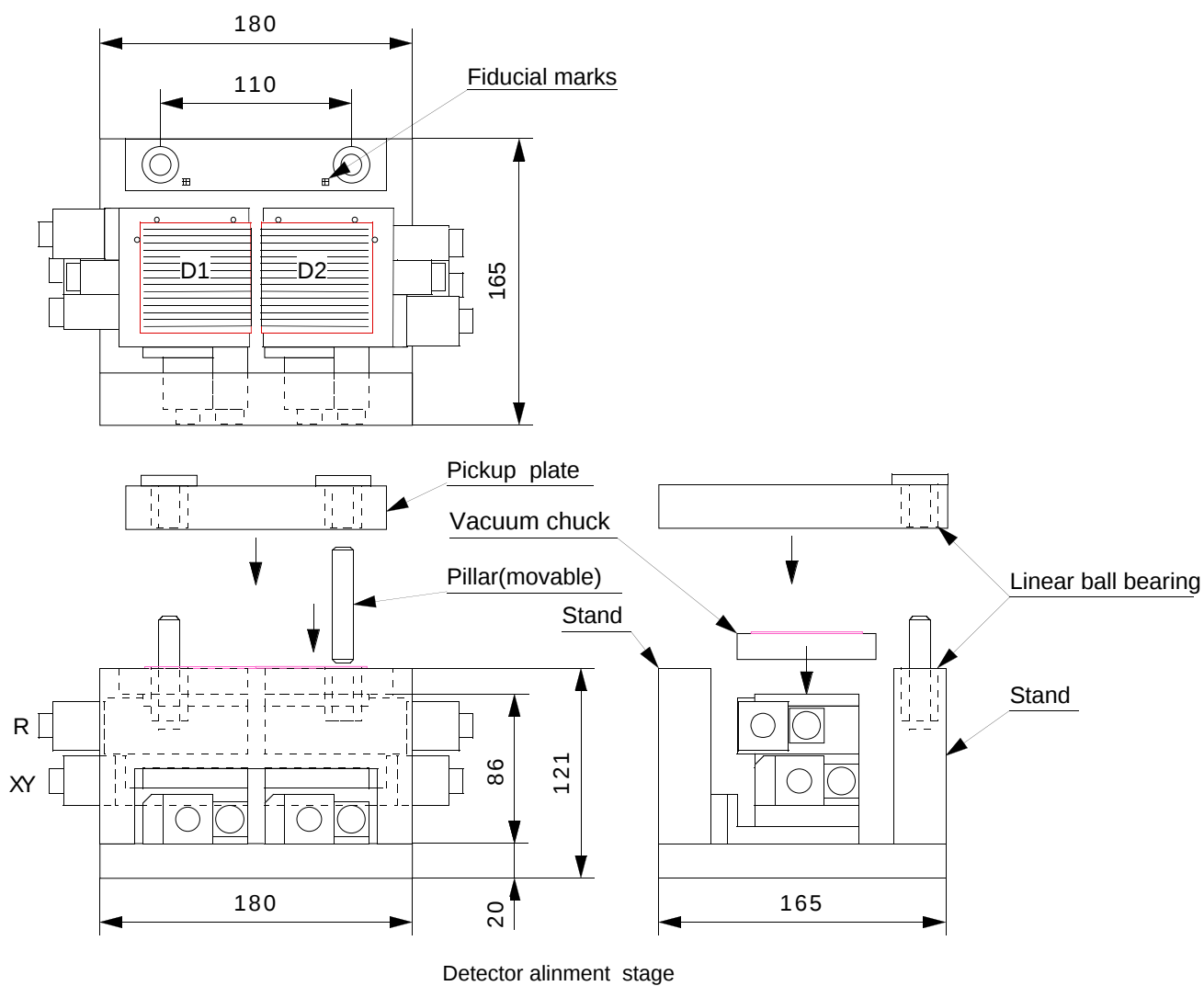
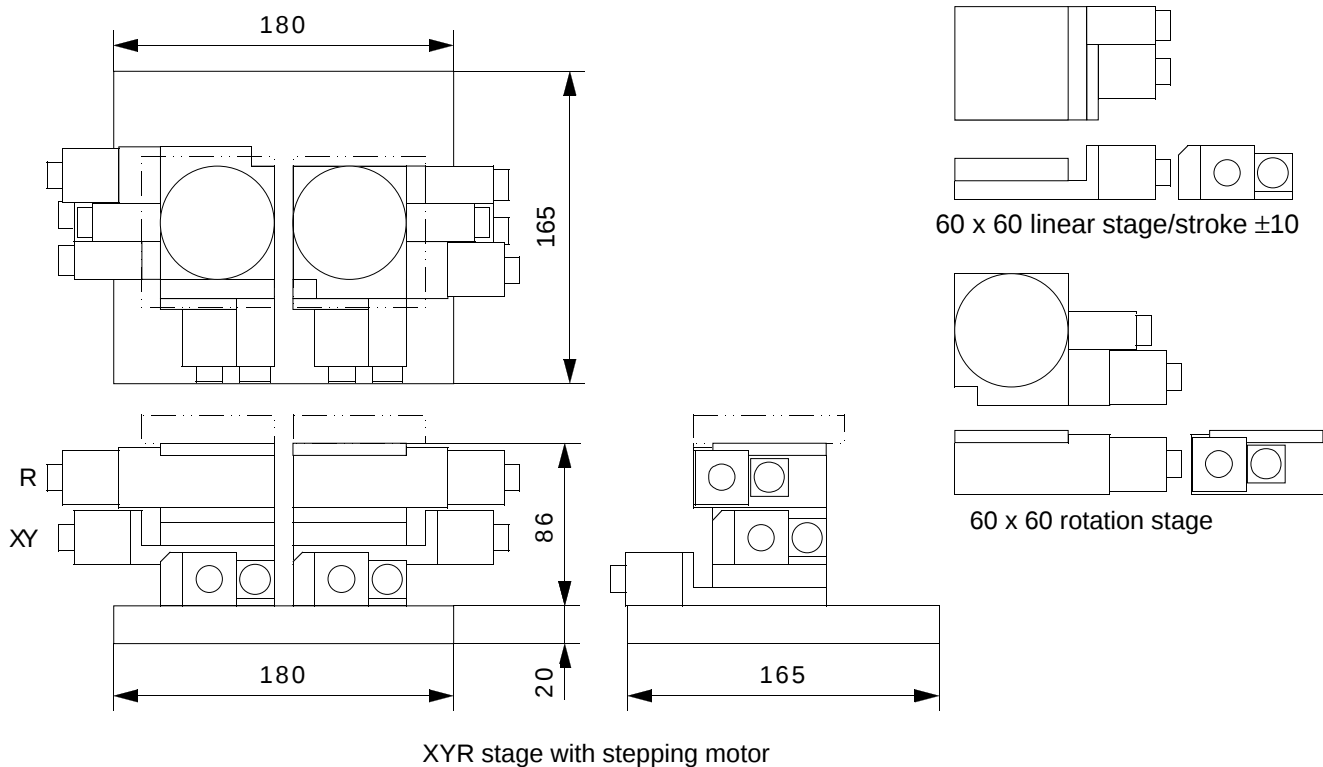


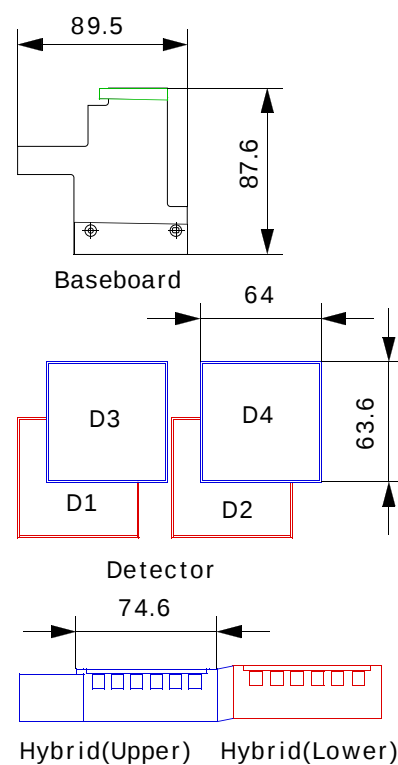
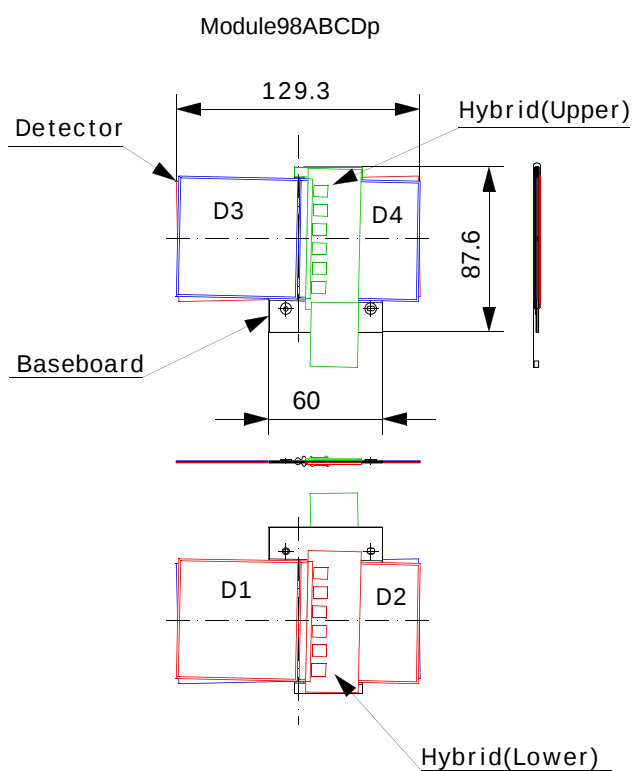
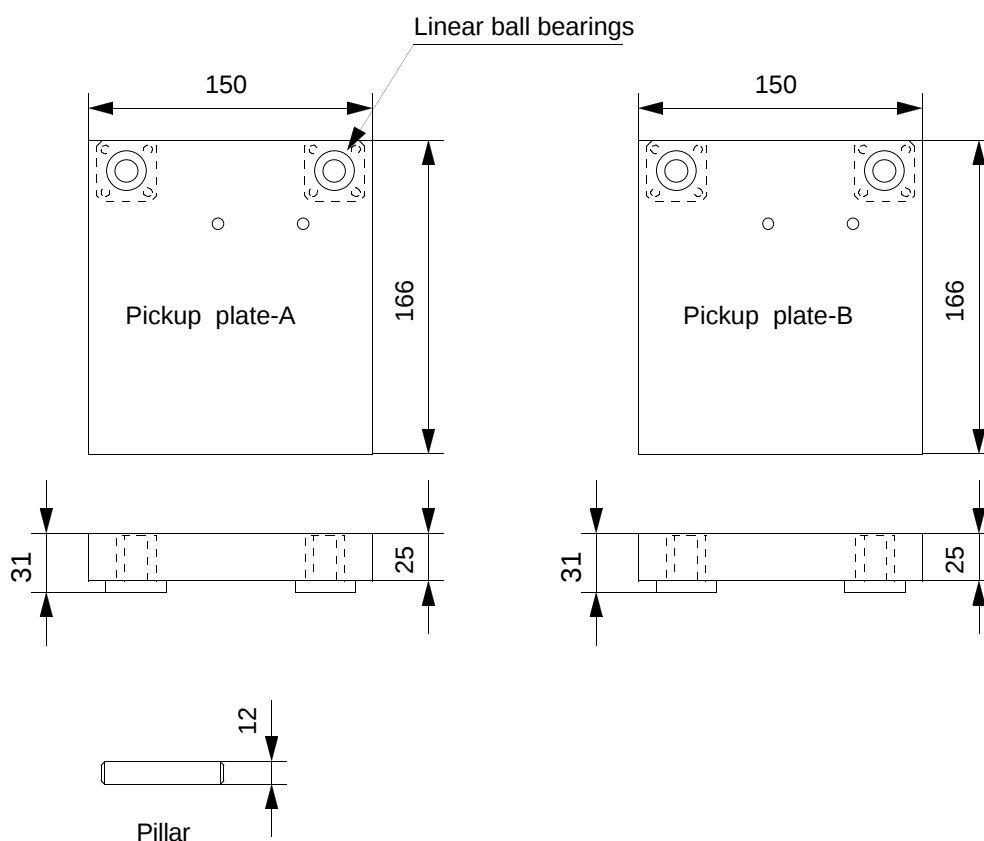
XYR stage



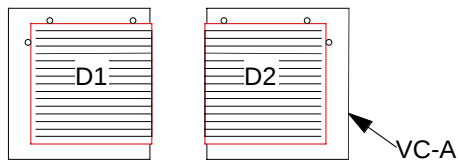
XYR stage and stands





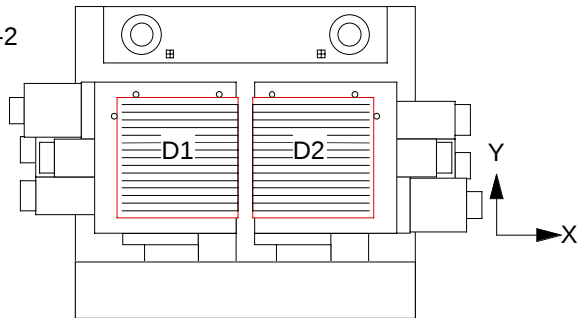


step-1



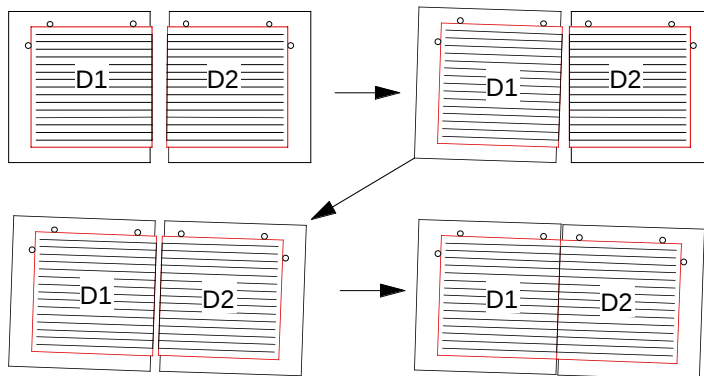
- Place detector onto VC-A(Vacuum chuck-A) using guide pins and turn on vacuum.

step-2



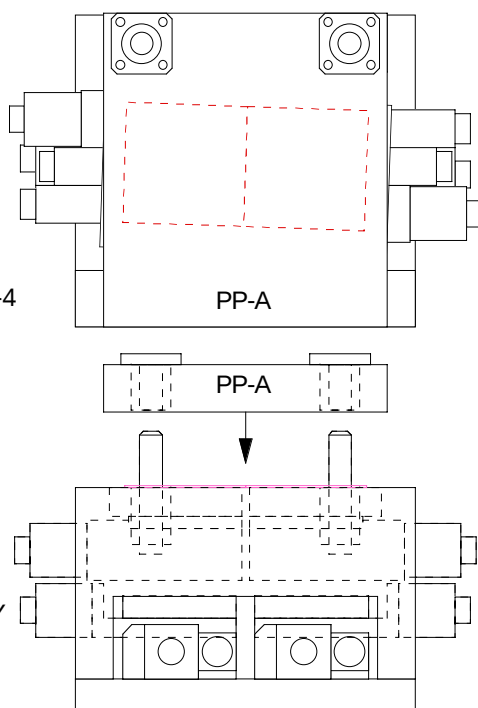
- Place the VC-A onto the XYR stage and turn on vacuum.

step-3

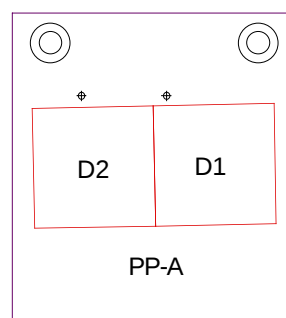


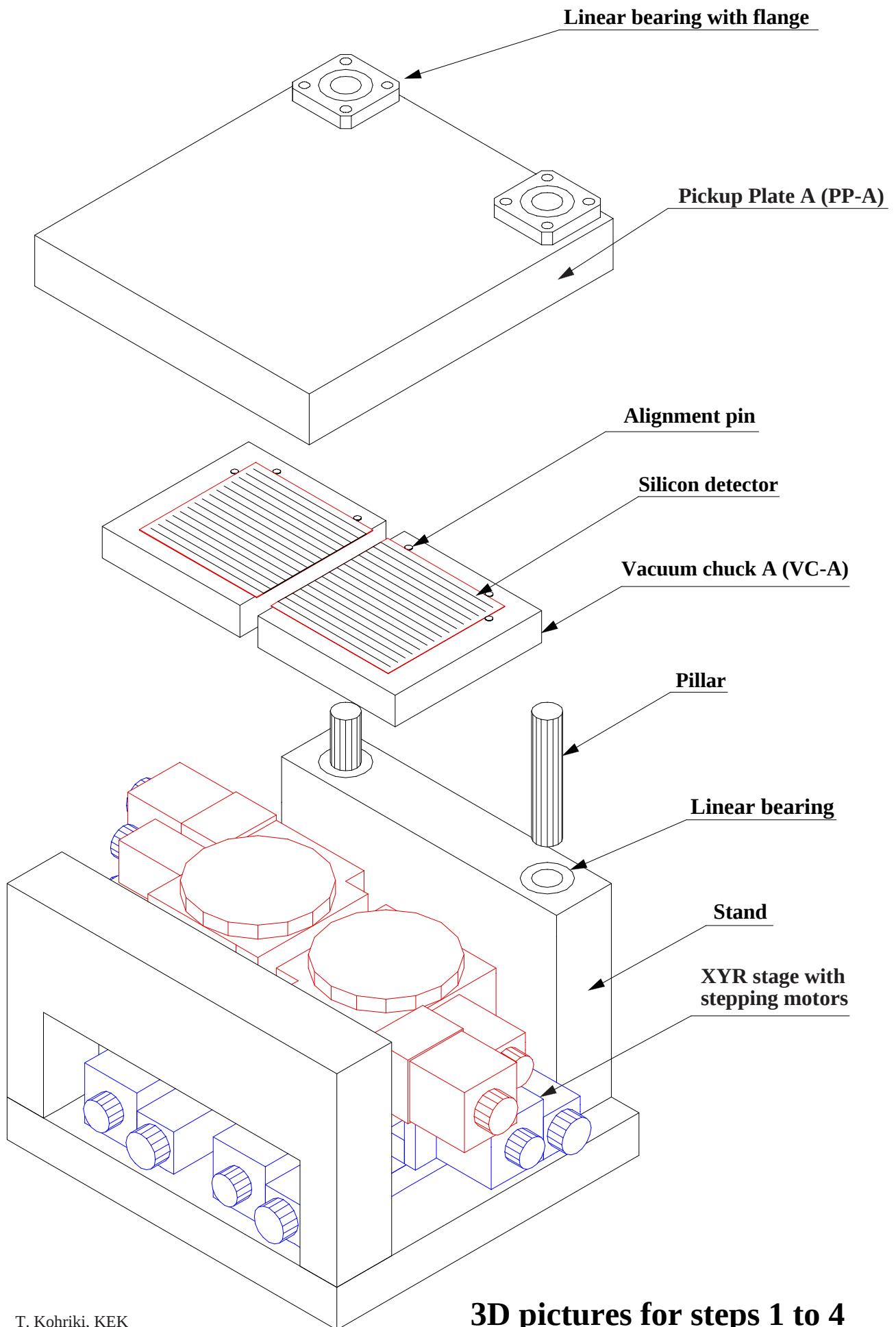
- Place and align the detector D1 first.
- Place and align the detector D2 with 4 mm offset
- Move D2 to the final location and do final alignment.

step-4

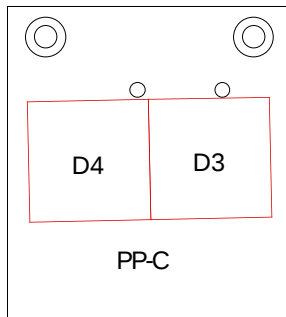


- Place the pillars into the linear ball bearings.
- Place PP-A(Pickup plate-A) and turn on its vacuum.
- Turn off VC-A vacuum and remove PP-A from the stage.



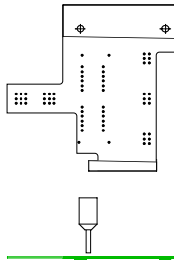


step-5



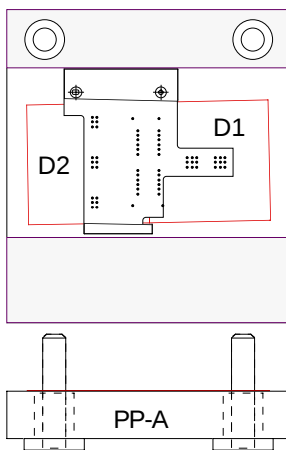
- Place detectors onto VC-A.
- Repeat steps-1 to 3 and place detectors on PP-C.

step-6



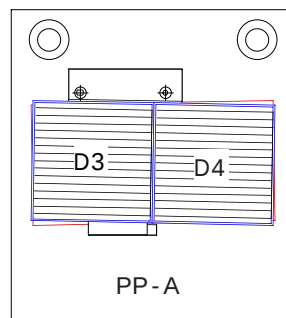
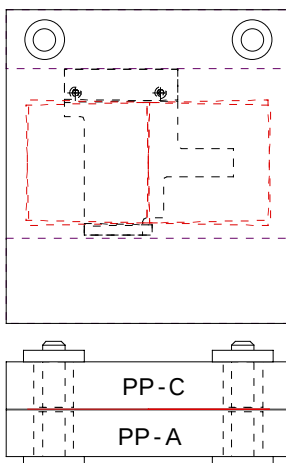
- Apply adhesive onto baseboard.
- Both sides.

step-7



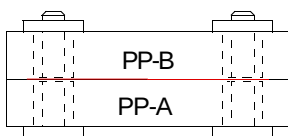
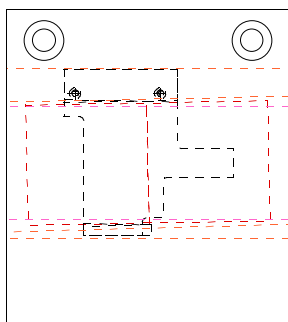
Spacer1.170

- Set baseboard with dowel pins on PP-A.
- Attach spacers of 1.170 mm onto PP-A.
- Mount pillars.
- Place PP-C onto PP-A.
- Cure adhesive at room temperature.
- Place modules onto PP-A with vacuum.



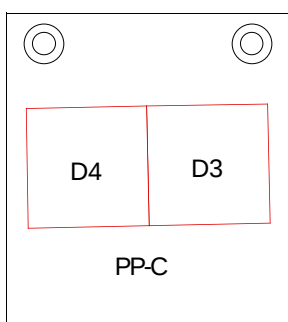
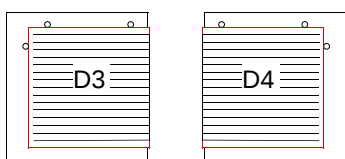
- Hybrid gluing
- Wire-bonding
- Post cure 50°C/12hours.
- Burn-in.
- Electrical check.

step-8

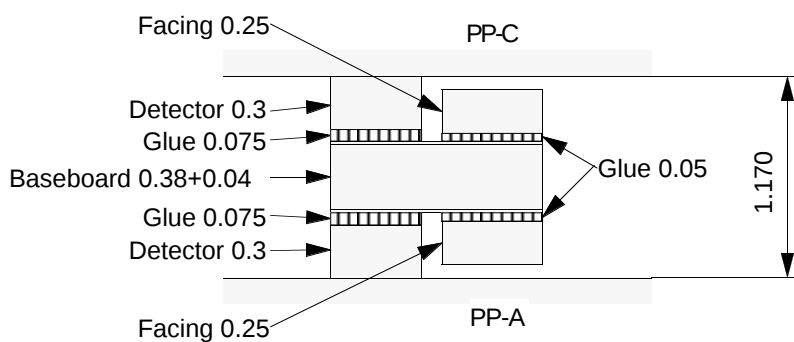


- Place PP-B onto PP-A.
- Cure adhesive at room temperature.

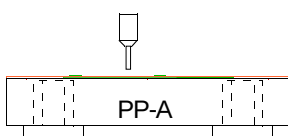
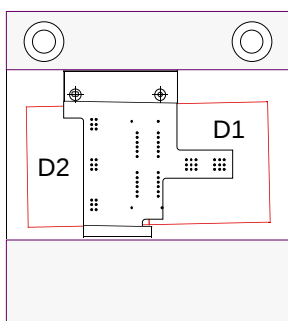
step-9



- Place detectors onto VC-A.
- Repeat steps-1 to 3 and place detectors on PP-C.



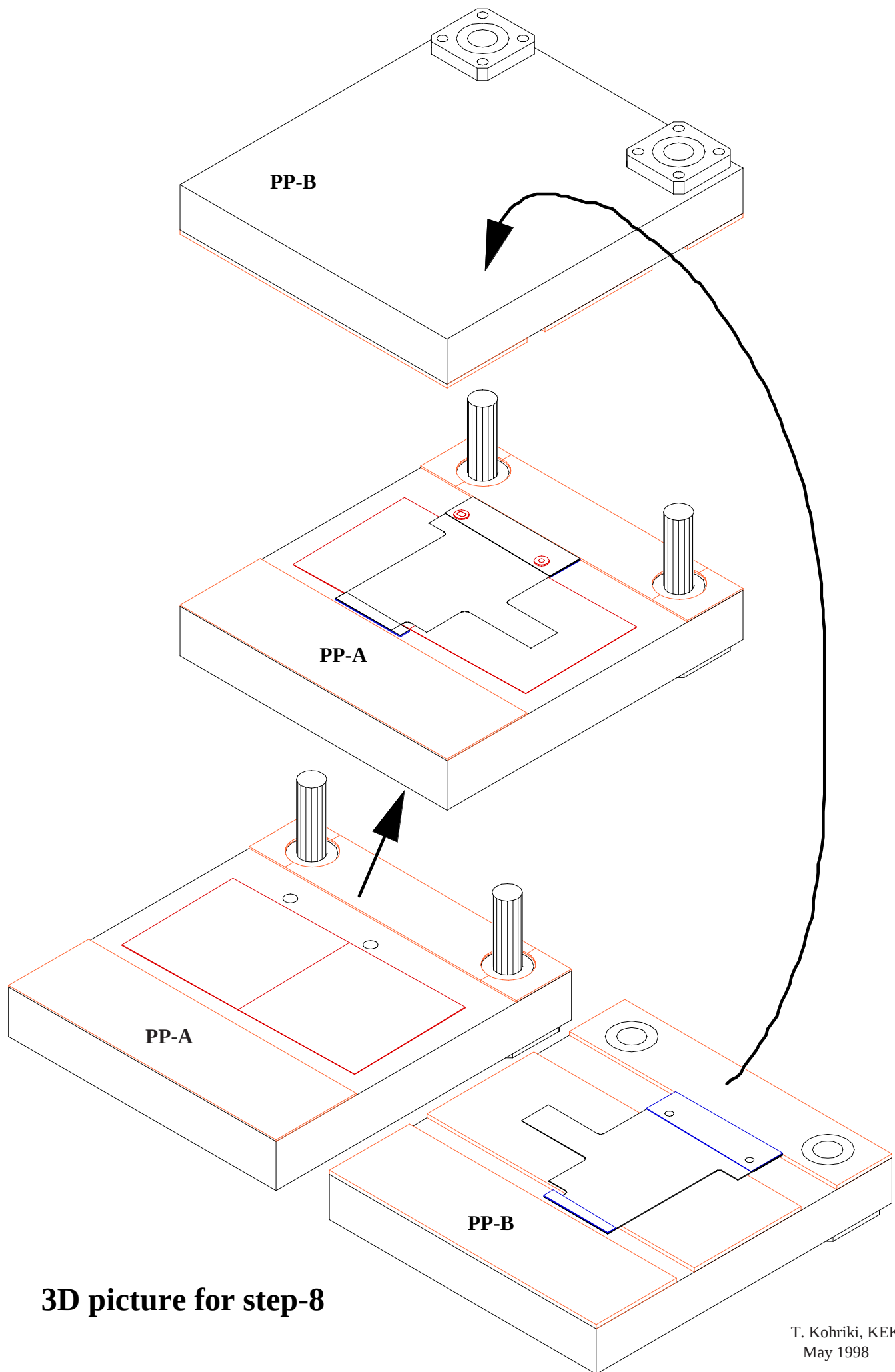
step-10



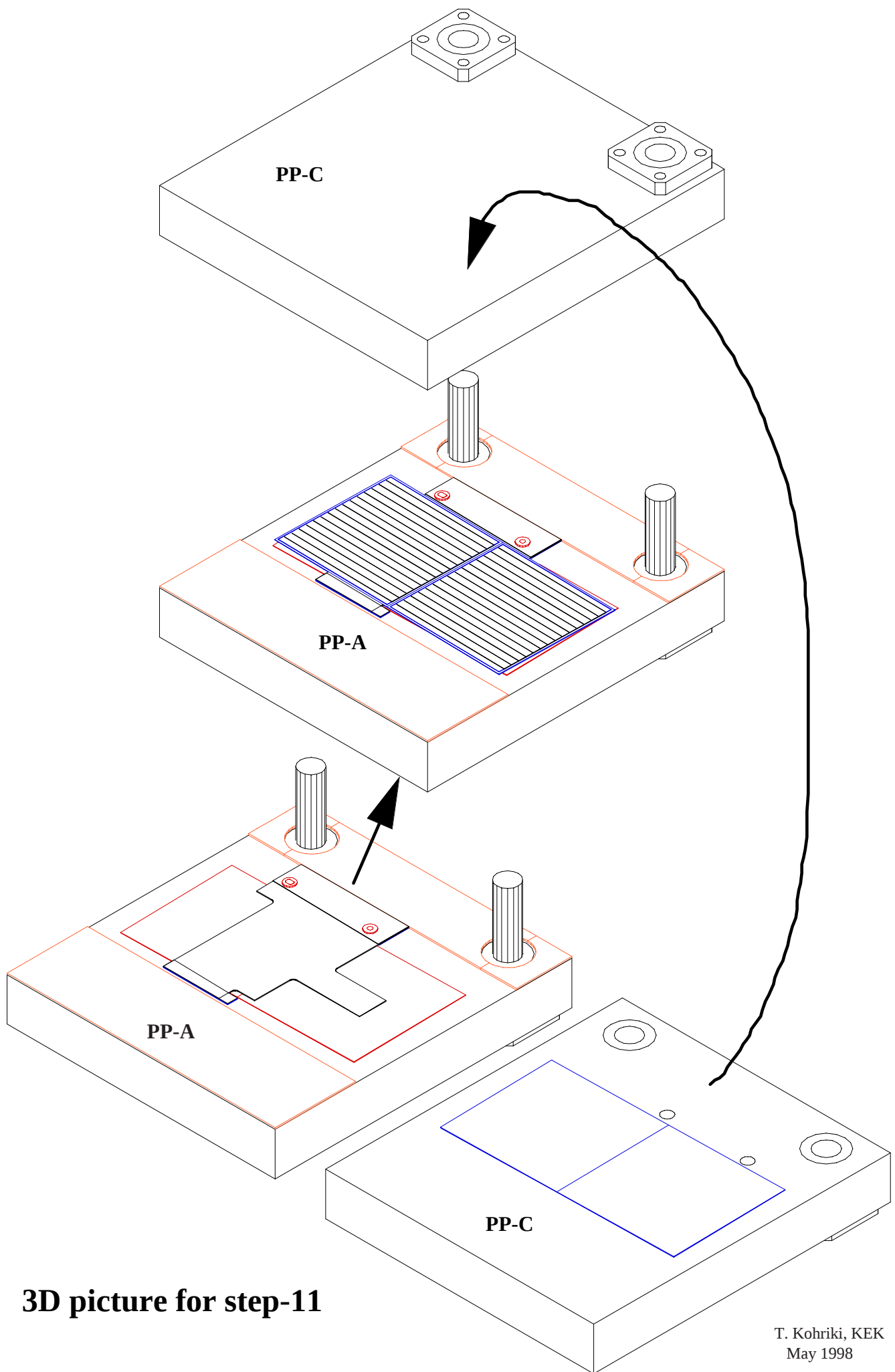
Spacer1.170

Spacer1.170

- Remove PP-B in the step-8.
- Attach spacers of 1.170 mm onto PP-A.
- Apply adhesive onto Baseboard.

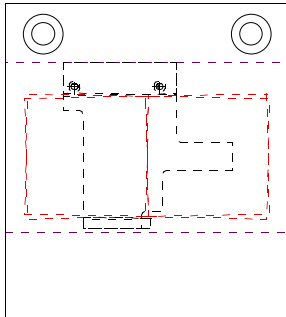


3D picture for step-8

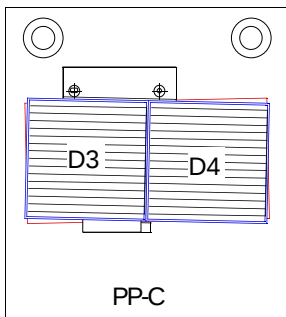
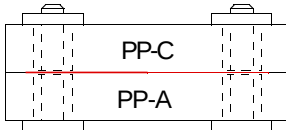


3D picture for step-11

step-11



- Attach pillares into PP-A and then place PP-C onto PP-A.
- Cure adhesive at room temperature.
- Place modules onto PP-C with vacuum.



step-12

Hybrid gluing

step-13

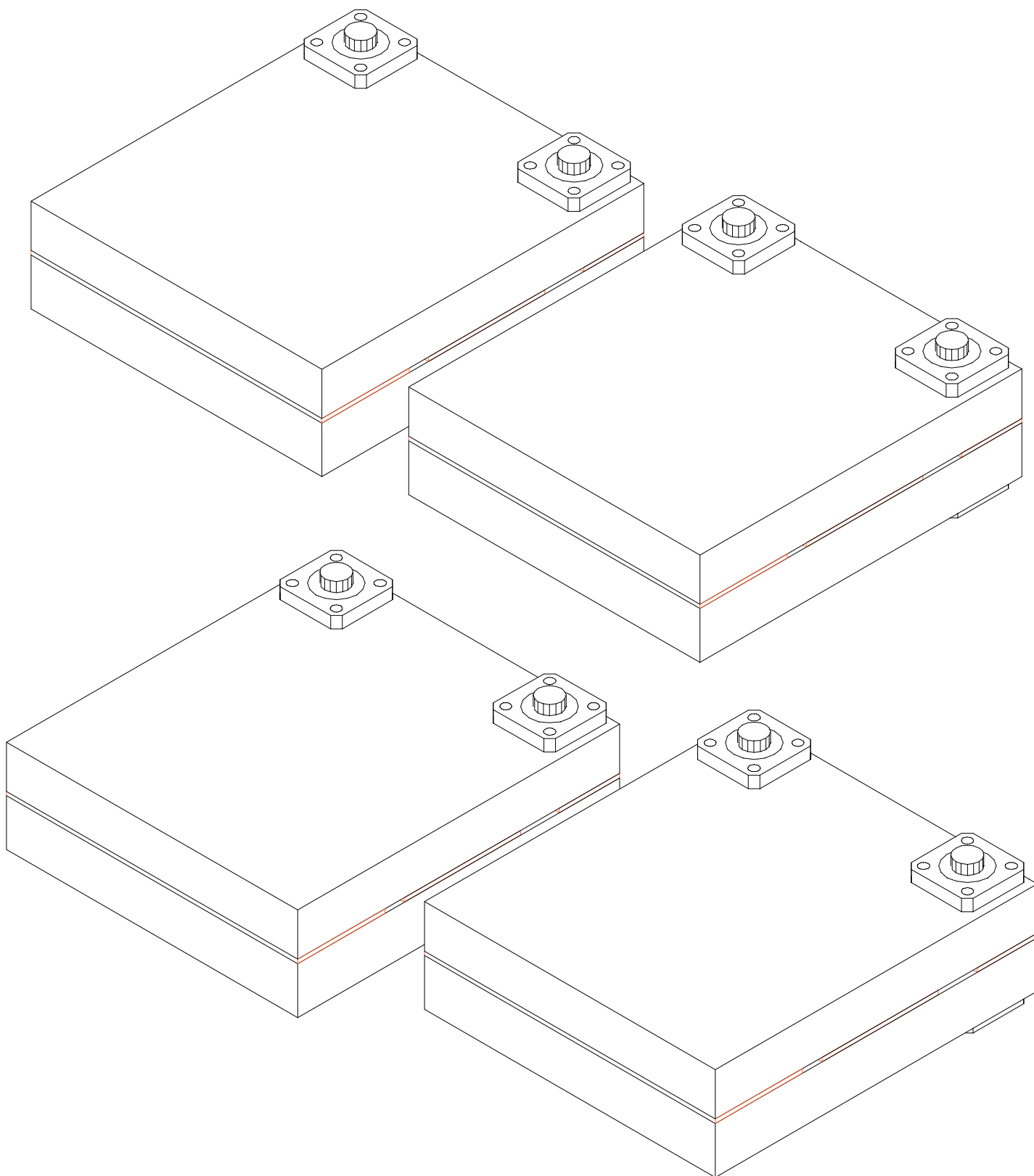
Wire-bonding

step-14

Post cure 50°C~12hours.

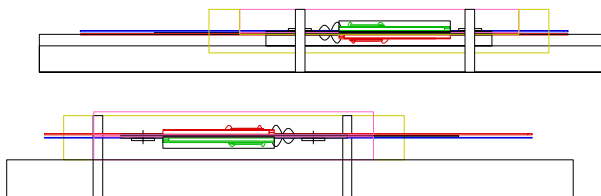
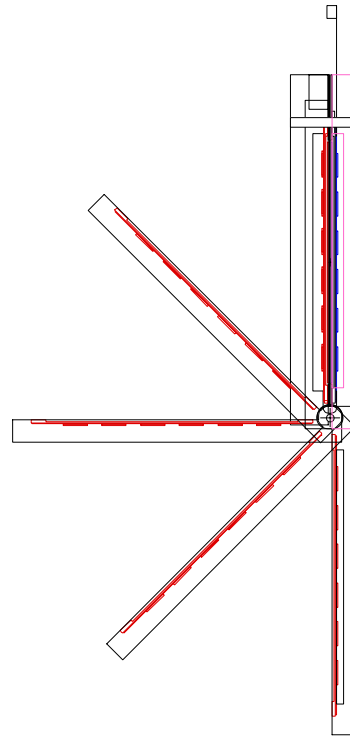
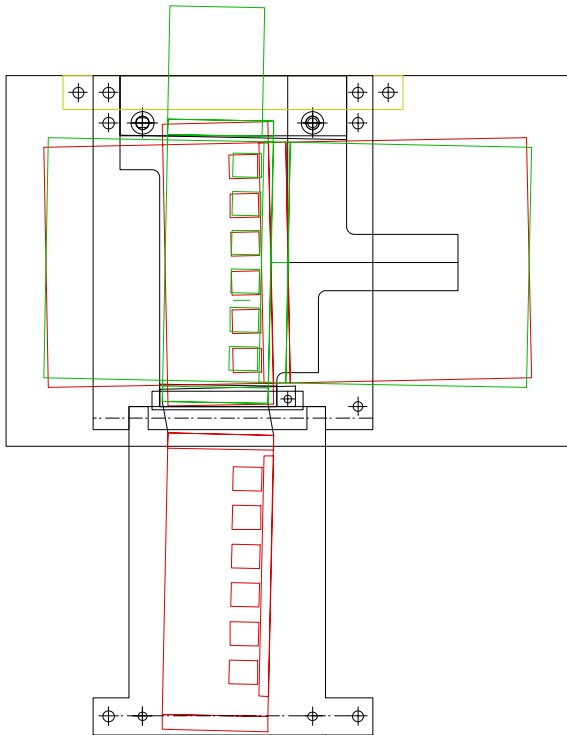
step-15

Burn-in.
Electrical check.



T. Kohriki, KEK
May 1998

3D pictures for steps 8 and 11



Gluing hybrid