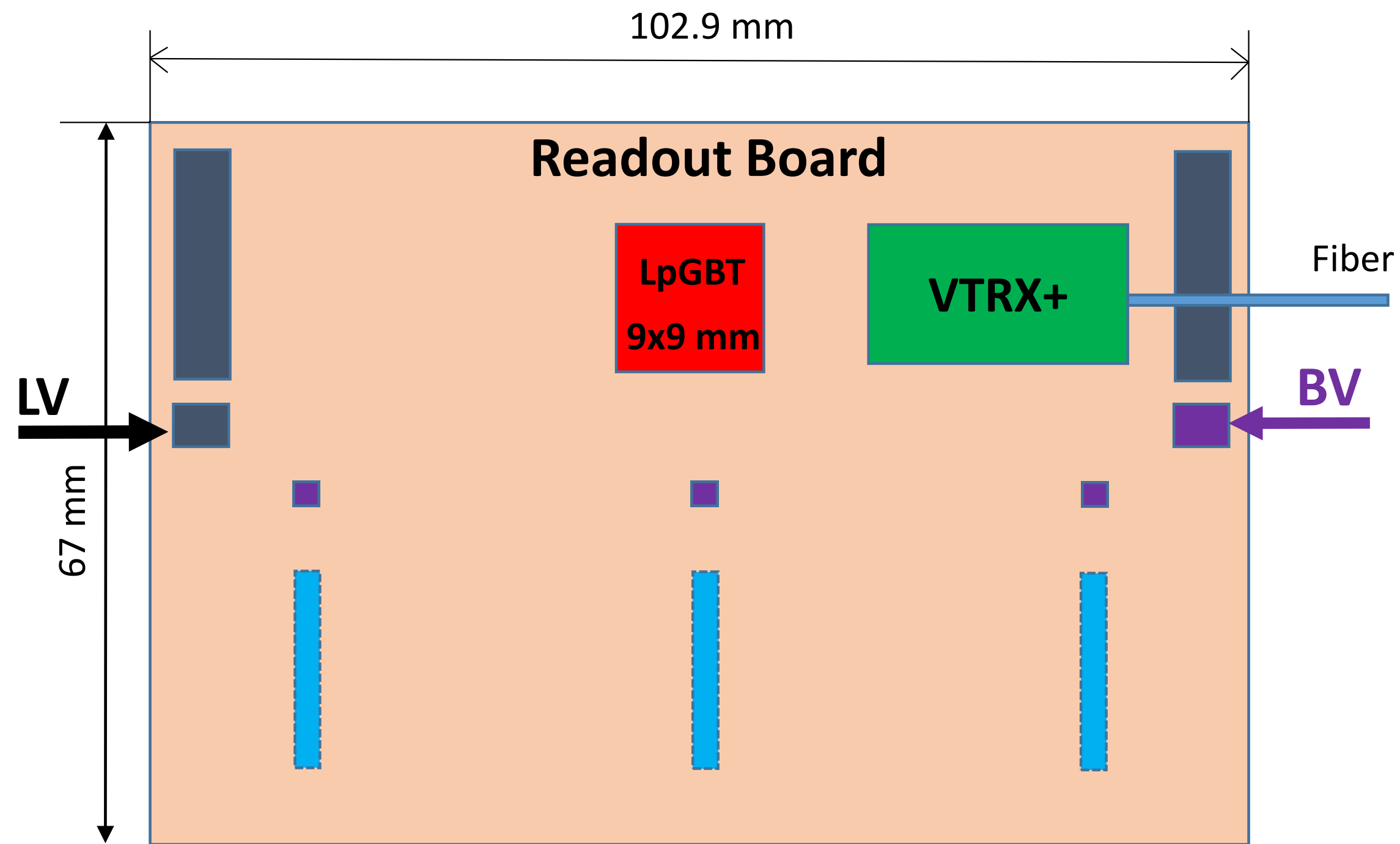
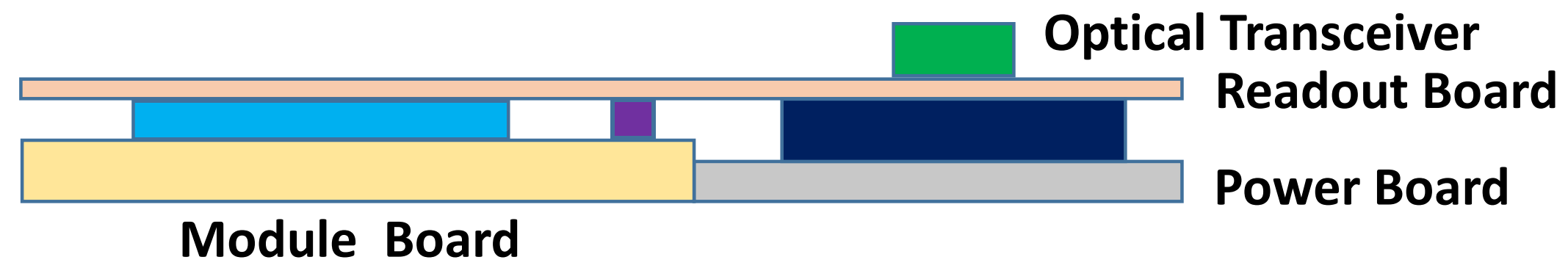


FTOF service hybrids, module and layout design

Wei Li (Rice University)

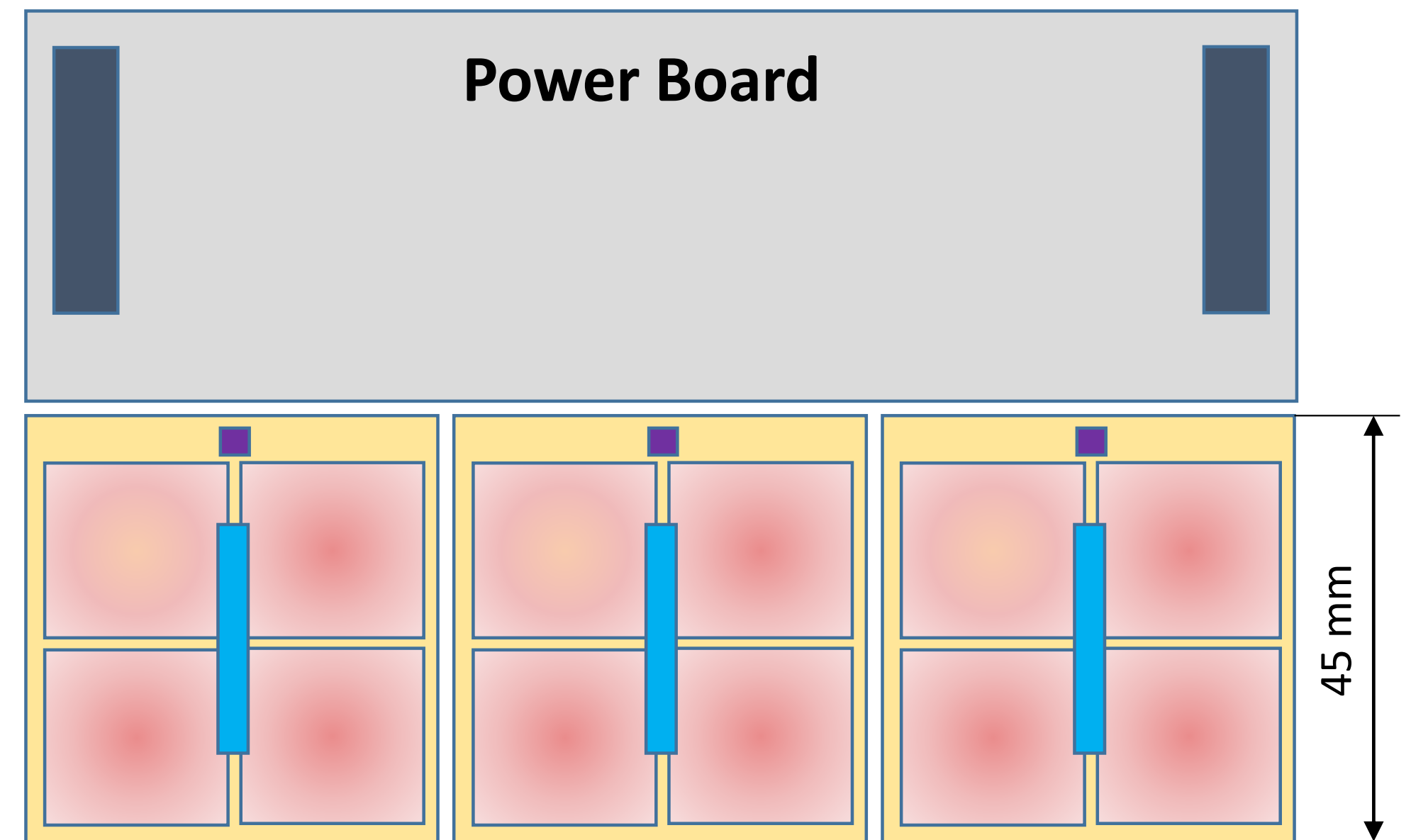
ePIC TOF WP2 working meeting
Sep 27, 2024

Electron-Ion Collider



3 Data and LV Connectors to Module Boards on the back side

3 HV Connectors to Module Boards on the back side

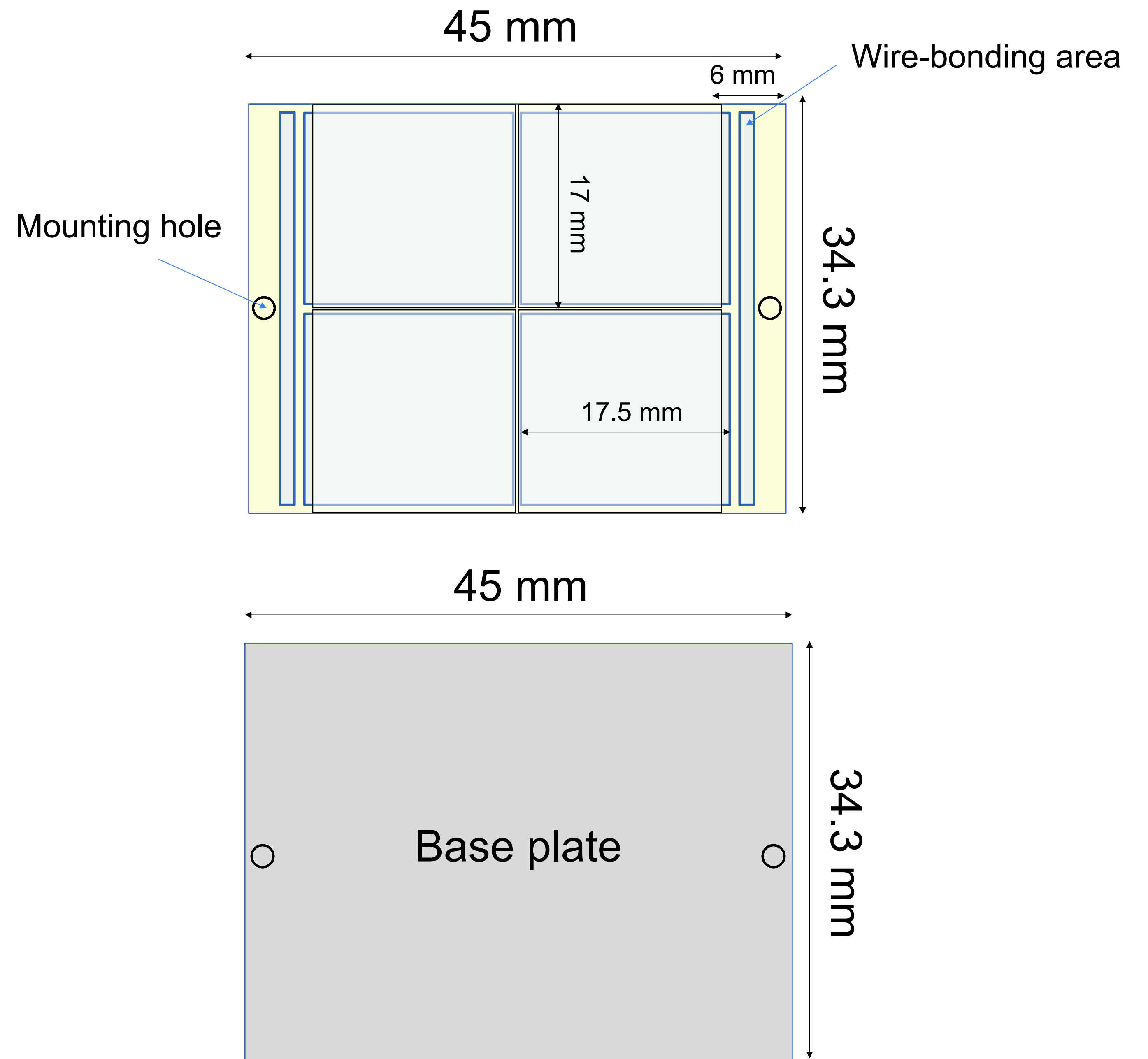
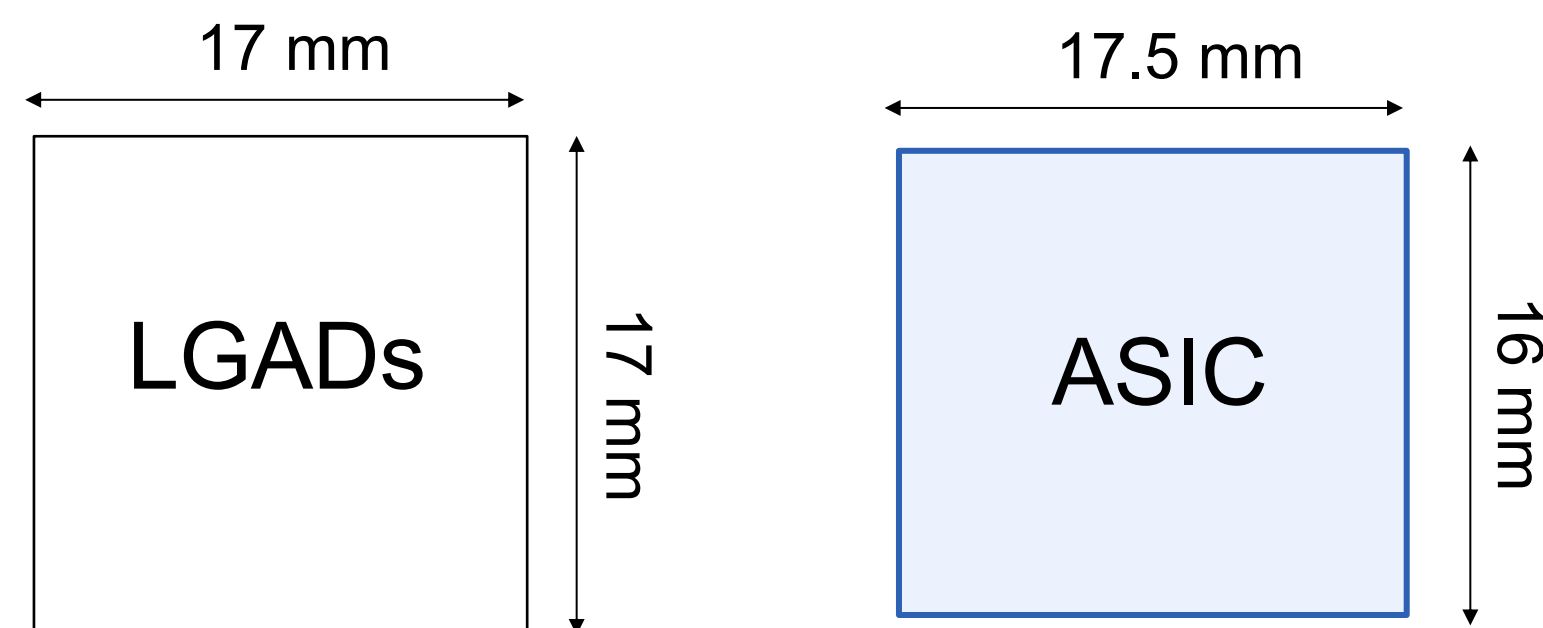
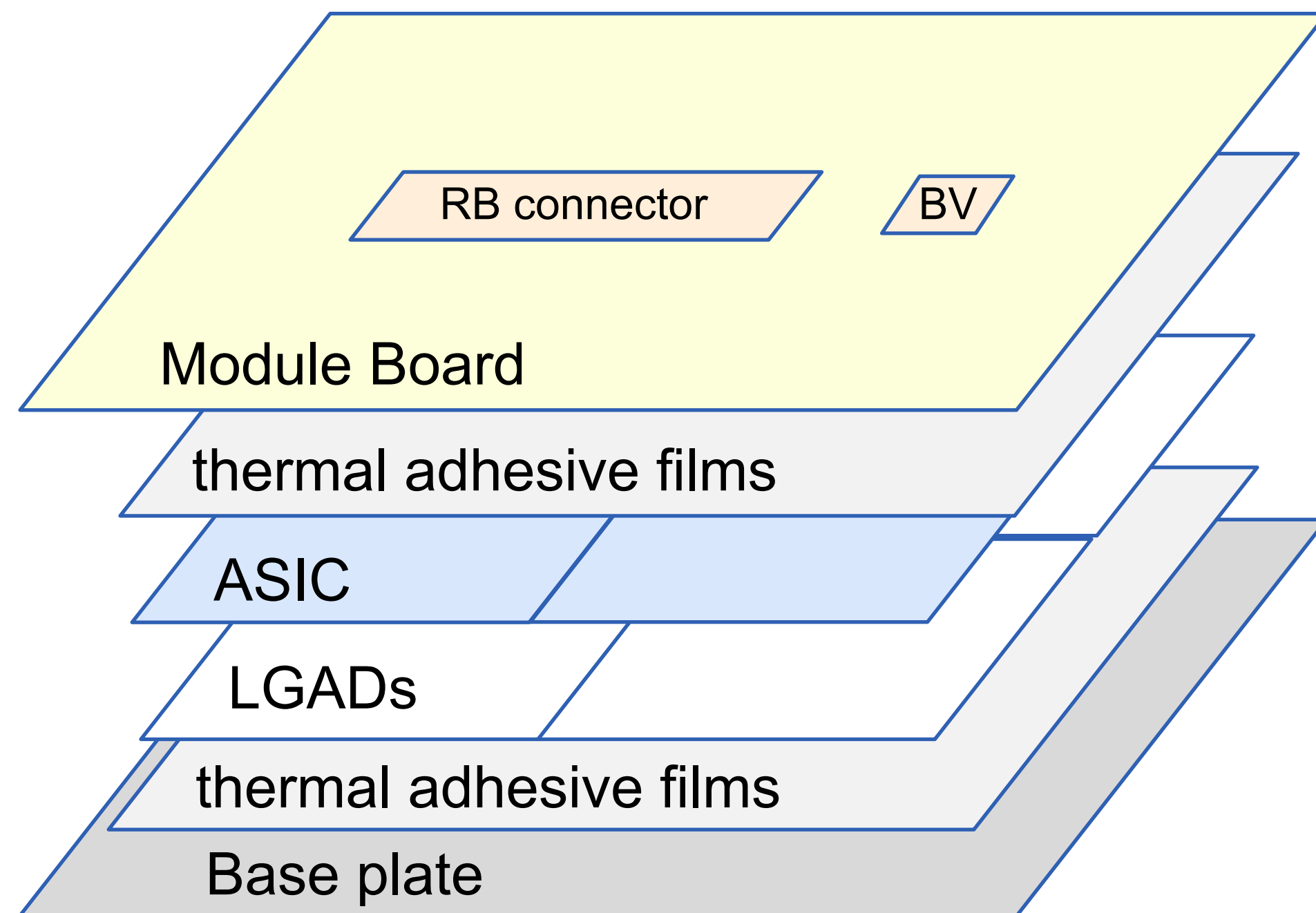


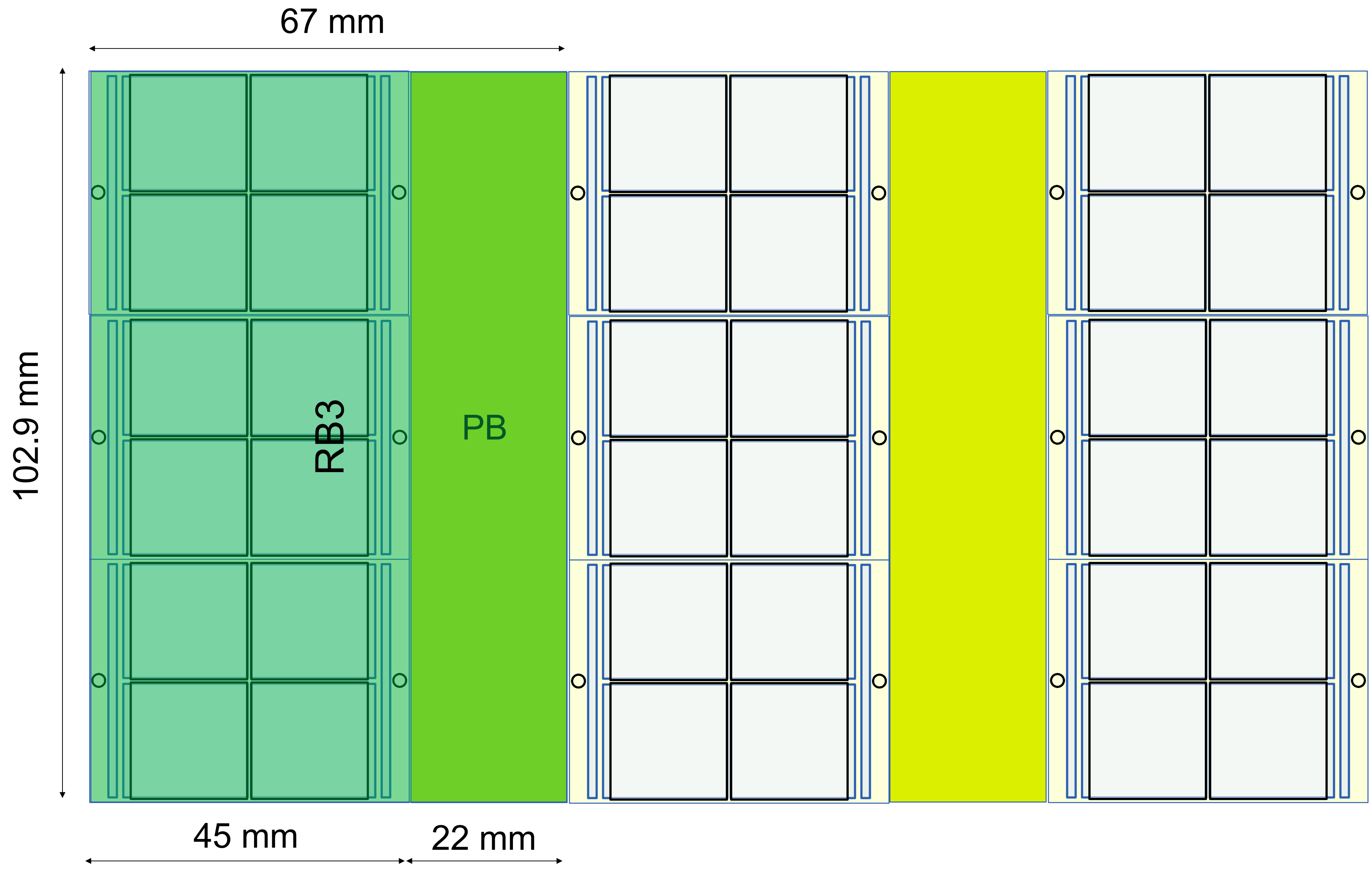
Module Board,
4 ASICs

Module Board,
4 ASICs

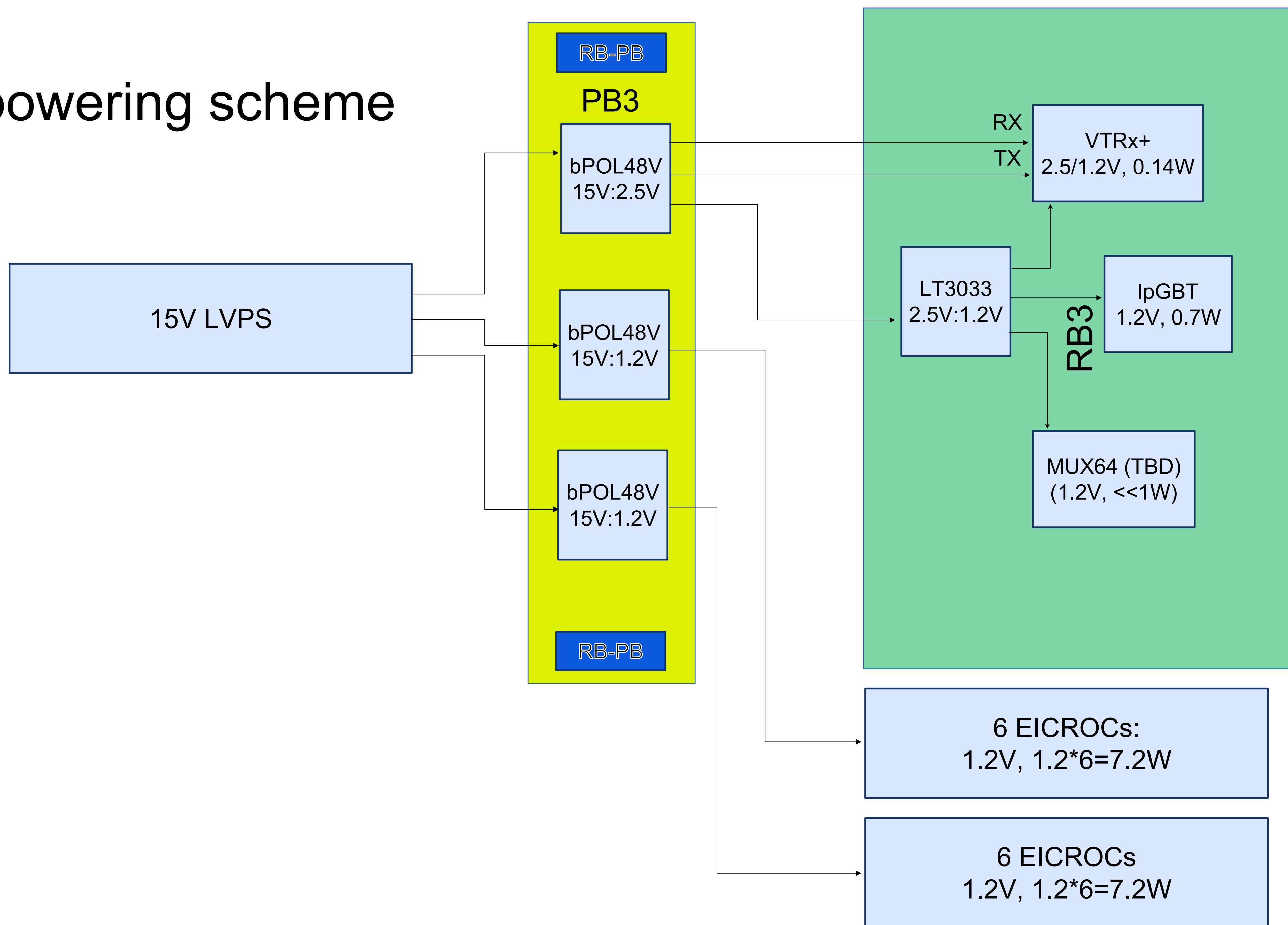
Module Board,
4 ASICs

FTOF module

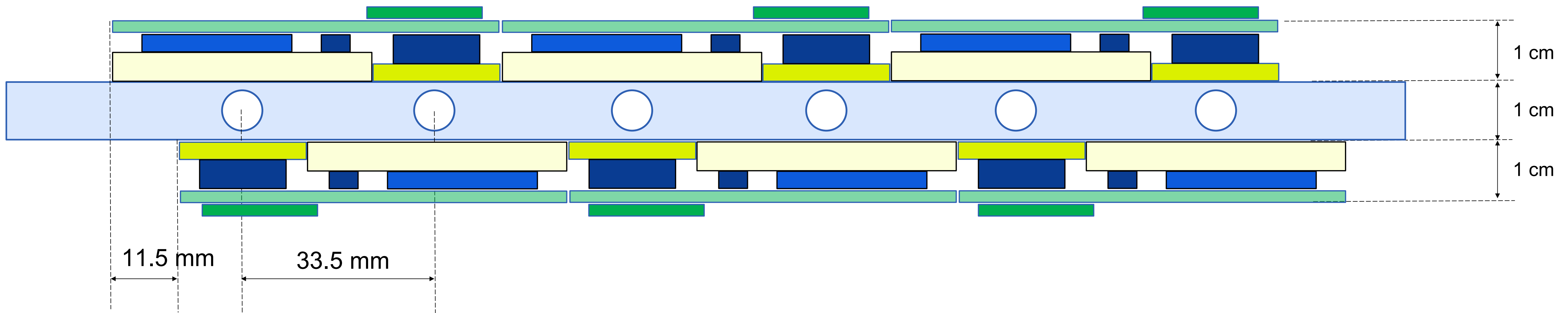




FTOF powering scheme



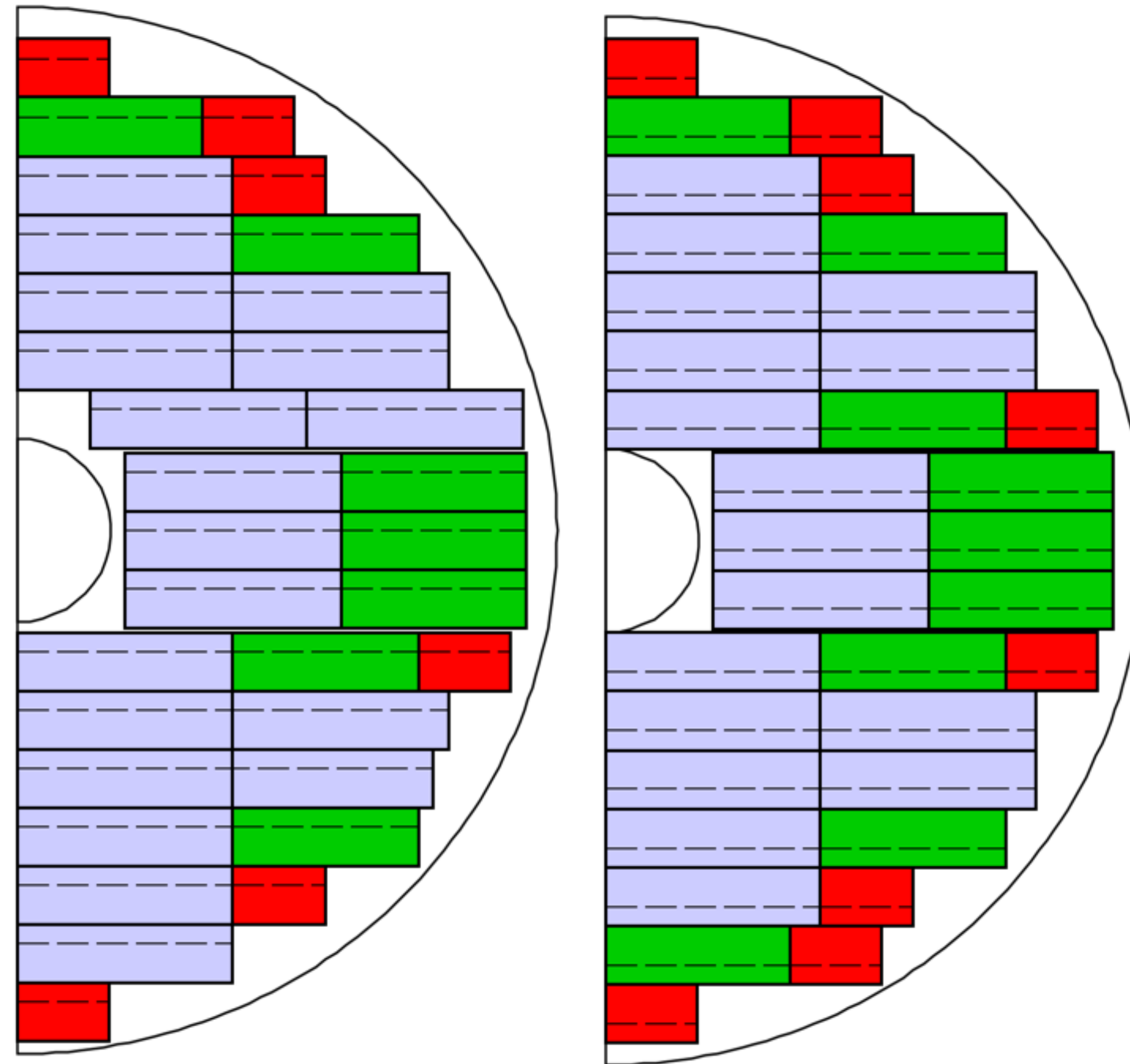
FTOF layout (cross section view)



Z envelope: 8 cm

FTOF Layout (x-y view): v09272024

Row	modules	RB3	RB6	RB7	All RBs
1	3	1	0	0	1
2	9	1	1	0	2
3	10	1	0	1	2
4	13	0	1	1	2
5	14	0	0	2	2
6	14	0	0	2	2
7	14	0	1	1	2
8	13	0	1	1	2
9	13	0	1	1	2
10	13	0	1	1	2
11	16	1	1	1	3
12	14	0	0	2	2
13	14	0	0	2	2
14	13	0	1	1	2
15	10	1	0	1	2
16	7	0	0	1	1
17	3	1	0	0	1
Sum	193	6	8	18	32

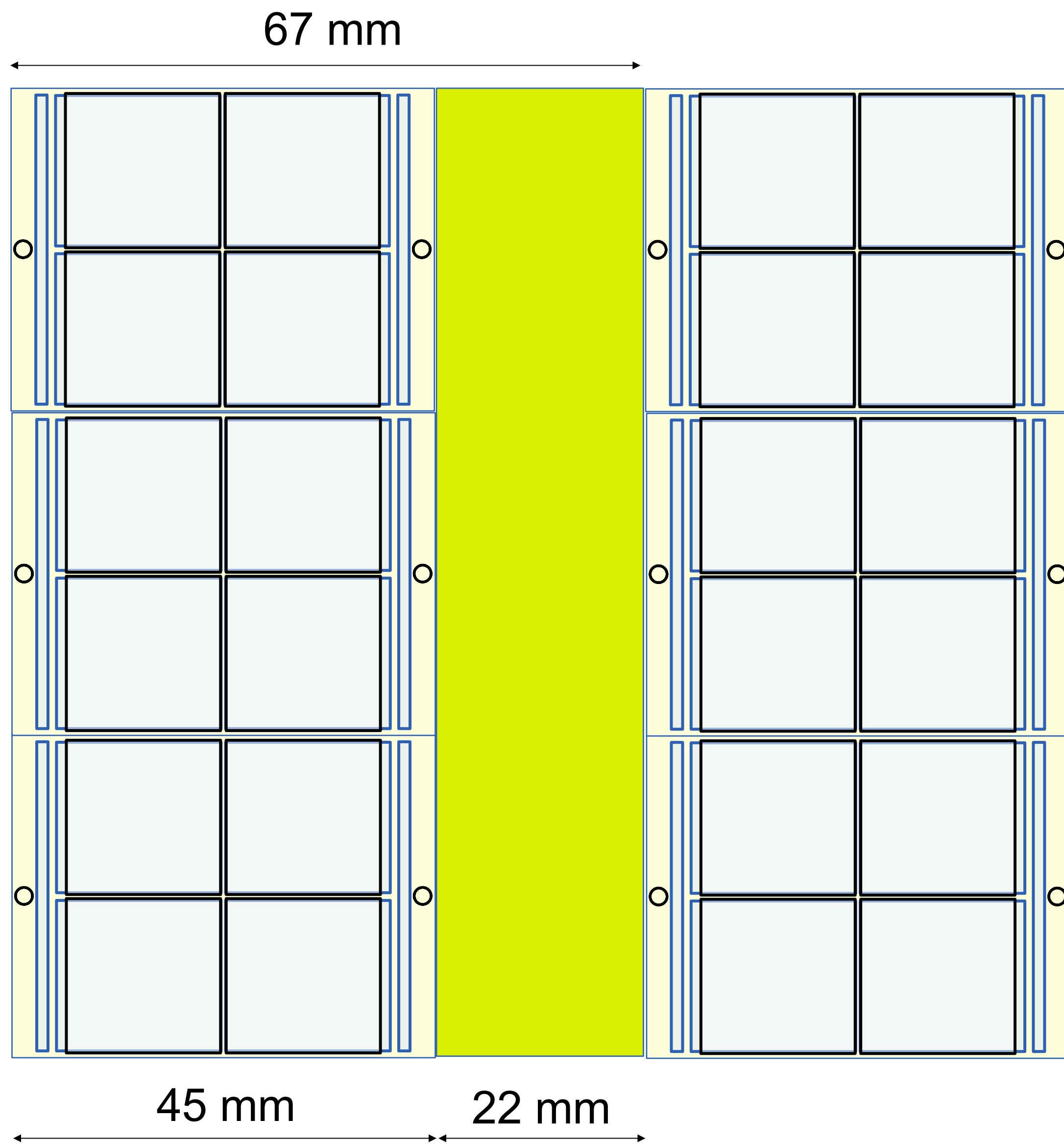


Row	modules	RB3	RB6	RB7	All RBs
1	3	1	0	0	1
2	9	1	1	0	2
3	10	1	0	1	2
4	13	0	1	1	2
5	14	0	0	2	2
6	14	0	0	2	2
7	16	1	1	1	3
8	13	0	1	1	2
9	13	0	1	1	2
10	13	0	1	1	2
11	16	1	1	1	3
12	14	0	0	2	2
13	14	0	0	2	2
14	13	0	1	1	2
15	10	1	0	1	2
16	9	1	1	0	2
17	3	1	0	0	1
Sum	197	8	9	17	34

Total number of modules: $(193+197)*2 = 780$

Total number of service hybrids: $(32+34)*2 = 132$

Option 1



Option 2

