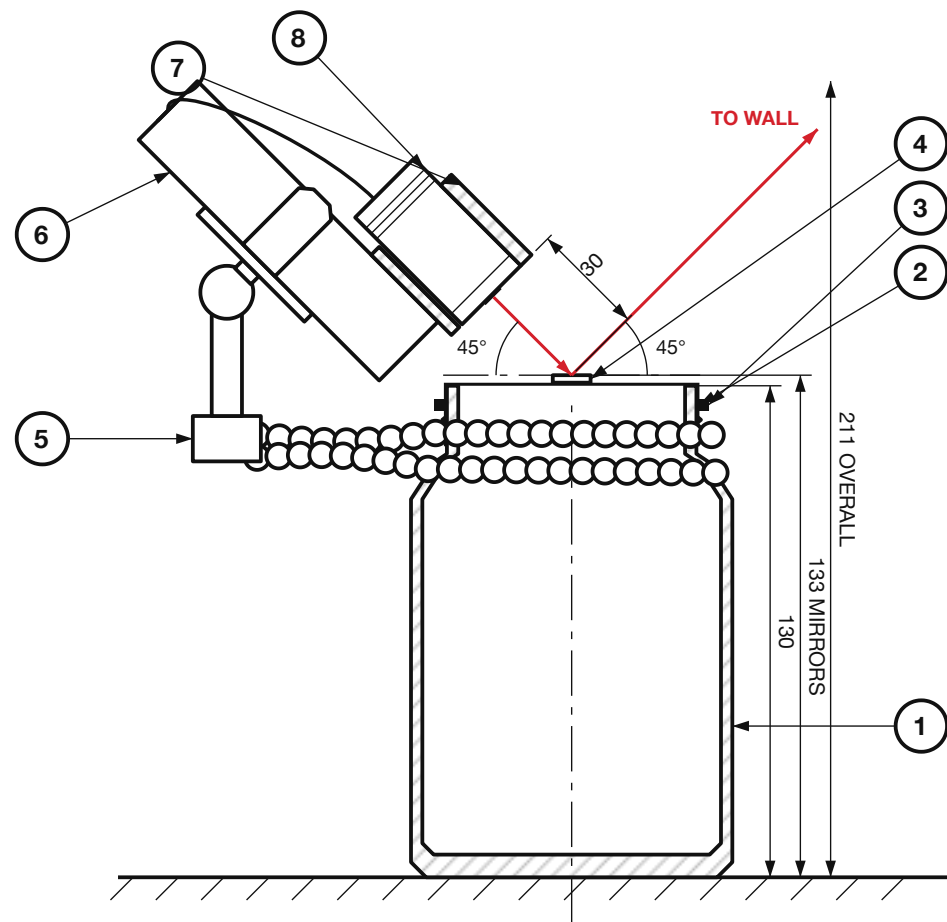




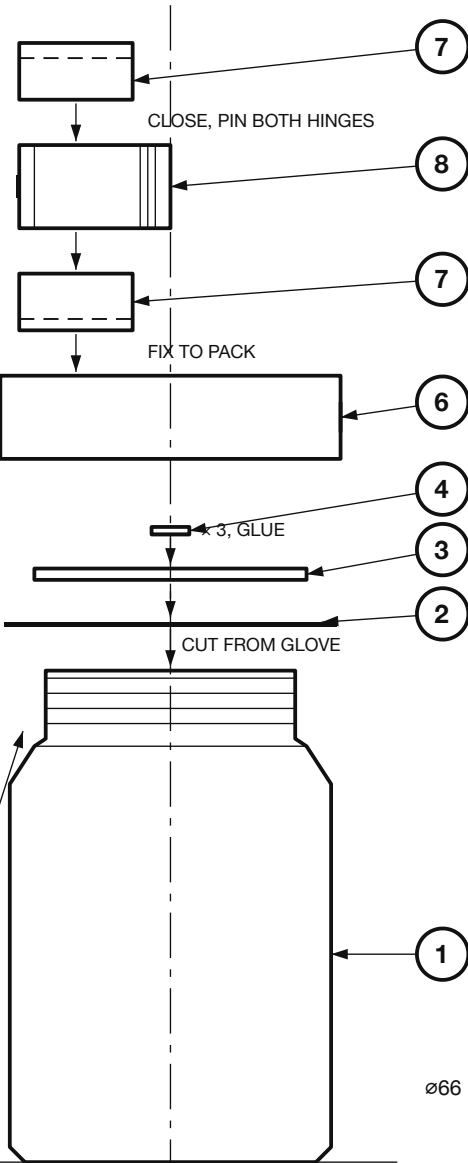
GENERAL ARRANGEMENT

JAR SECTIONED ON ITS AXIS, BRACKET THROUGH A BORE scale 1:2

NOTES

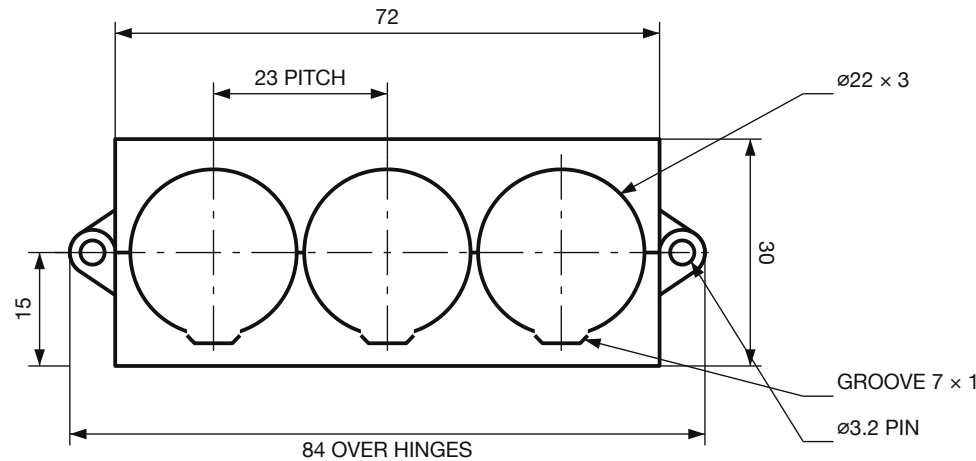
1. Balloons refer to the PARTS LIST. Arrangement and exploded views 1:2, Views A and B 1:1. Bracket figures are read from laser_bracket.scad at draw time. Jar, glove, tripod, pack and lasers are bought parts drawn indicatively, not measured.
2. Cut a flat piece from a nitrile glove, stretch it drum-tight over the jar mouth and hold the skirt below the lip. Even tension gives an even wibble.
3. Glue the 3 mirrors in a row across the centre, 23 apart to match the bracket, with the row square to the tripod. Use a small dab: glue stiffens the glove.
4. Wrap the tripod legs round the jar neck below the lip. The clamp takes the pack; the ball head tilts it so the bores point 45° down at the mirrors.
5. Lay the lasers in the bottom half with their leads in the grooves, close the top, pin both hinges. The bores are 30 deep, so a 40 laser stands 10 proud at the back. How the bracket fixes to the pack is not drawn.
6. Beams land at 45° and leave at 45° on the far side, 30 from laser face to mirror. When the glove moves, a mirror tilted θ turns its beam 2θ , so the spots on the wall dance (Detail C).
7. Never look along a beam or its reflection. Aim the reflected beams at a wall away from eye height.

ITEM	PART	SOURCE	QTY	REMARKS
1	JAR, GLASS	bought	1	indicative: $\varnothing 85$ body, $\varnothing 66$ threaded neck, 130 tall
2	DIAPHRAGM, NITRILE GLOVE	cut from a glove	1	a flat piece stretched drum-tight over the mouth, skirt down the neck
3	RETAINING BAND	bought	1	assumed: elastic band or tape holding the skirt below the lip
4	MIRROR, SMALL	bought	3	indicative $\varnothing 10 \times 2$, glued to the glove on 23 pitch
5	TRIPOD, BENDY PHONE	bought	1	legs wrapped round the jar neck; ball head and phone clamp
6	BATTERY PACK	bought	1	indicative $90 \times 45 \times 22$, held in the clamp, feeds the lasers
7	LASER BRACKET, TOP + BOTTOM	laser_bracket.scad	1 + 1	printed; $72 \times 30 \times 30$, hinged both ends, 2 printed pins $\varnothing 2.8$
8	LASER MODULE	bought	3	$\varnothing 22$; length 40 drawn, not measured; leads run in the grooves



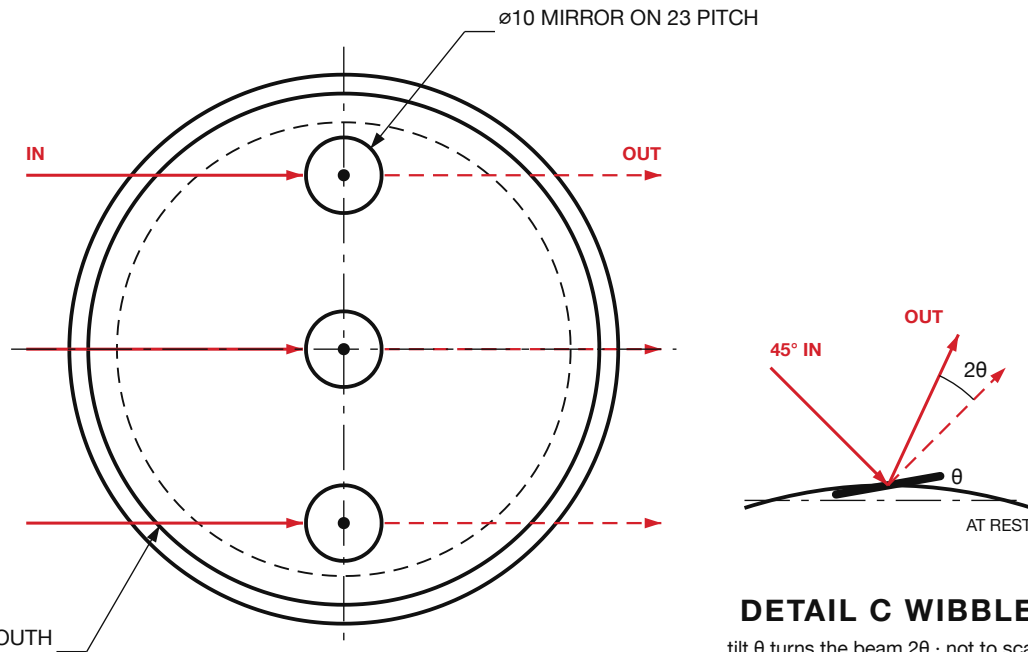
EXPLODED

ORDER OF ASSEMBLY, BOTTOM UP scale 1:2



VIEW A LASER BRACKET, DOWN THE BORES

item 7 · split on the bore axis · bores 30 deep · 5 knuckles a side · scale 1:1



VIEW B MEMBRANE, PLAN

mirrors in a row on the bracket pitch · rim under the glove dashed · scale 1:1

DETAIL C WIBBLE

tilt θ turns the beam 2θ · not to scale

WIBBLER

GA-001

GENERAL ARRANGEMENT

jar + glove diaphragm · 3 lasers at 45° onto 3 mirrors

SCALE	1:2 / 1:1 ON A3
UNITS	MILLIMETRES
MATERIAL	BRACKET PLA, FDM 0.2 mm
PRINTER	ULTIMAKER 3

DRAWN	O. BALLINGER
DATE	2026-09-17
SOURCE	laser_bracket.scad
REV	A