Omicron

Designed by David Mitchell

Omicron is a series of hexoids which appear to be made from six boxes linked together to form a corner-less cube.

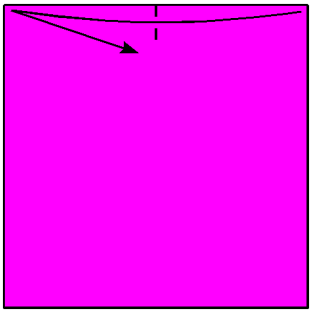
Omicron was first made in 1991 from modules representing 2x4x1 boxes as pictured here. The range of designs was extended in 1994 after Rick Beech wondered if it was possible to combine modules representing boxes of other proportions. It may well be possible to extend this range still further.

These diagrams show you how to make a 2x4x1 proportioned Omicron design.

You will need six squares of paper, preferably two in each of three contrasting but complementary colours, for each Omicron design.

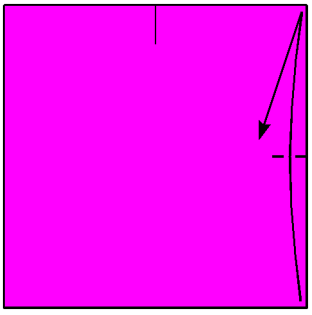
If you are using irogami begin with you paper arranged coloured side up.

1



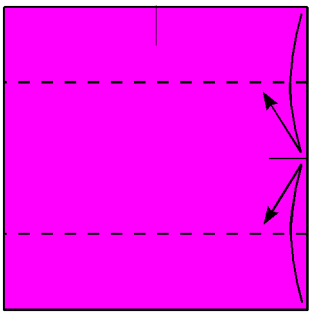
1. Make a tiny crease to mark the centre of the top edge.

2



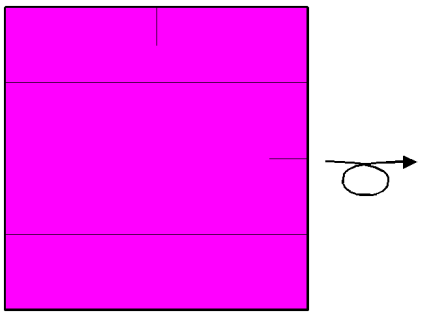
2. Make a second tiny crease to mark the centre of the right edge.

3



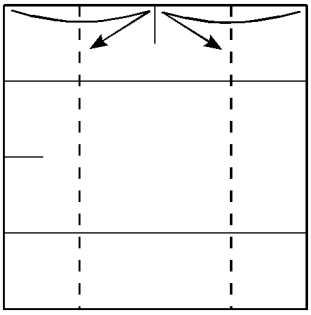
3. Fold the top and bottom edges into the centre, then unfold.

4



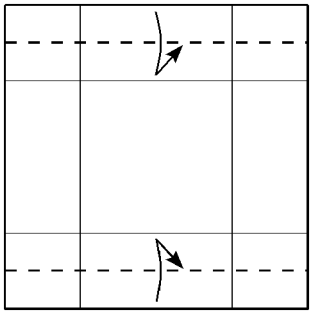
4. Turn over sideways.

5



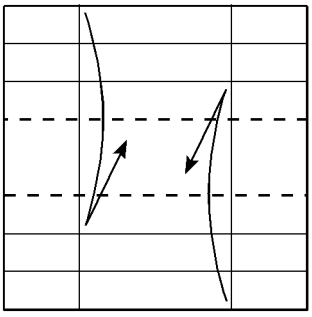
5. Fold the left and right edges into the centre, then unfold.

6



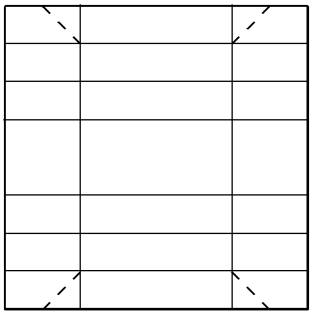
6. Fold the top and bottom edges onto the quarter-way creases, then unfold.

7



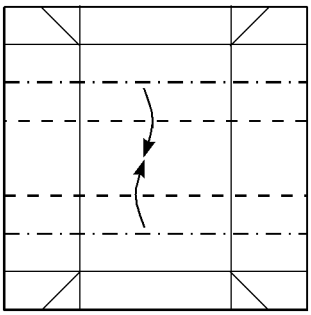
7. Fold the top and bottom edges onto the three-quarter-way creases, then unfold.

8



8. Make these four small diagonal creases as accurately as possible.

9

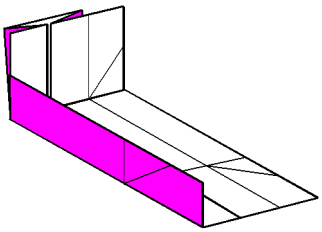


9. Pleat the paper as shown.

10

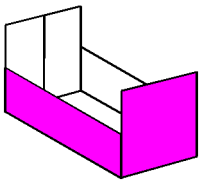
10. Lift up the left edge at right angles then tuck the shaded portion of the paper into the pocket behind it being careful not to make any new creases. The design will become three-dimensional as you do this.

11



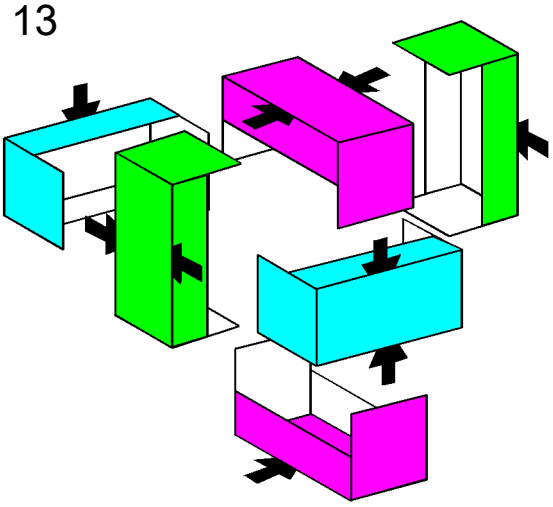
11. The result will look like this. Repeat step 10 on the other four corners.

12



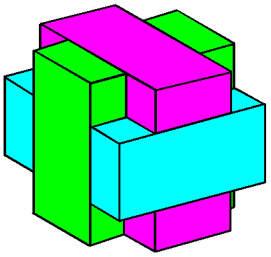
12. The finished module will look like this. Make all six.

13



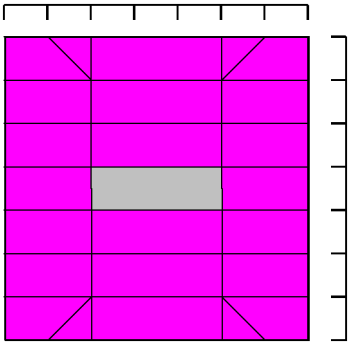
13. The modules go together like this.

14

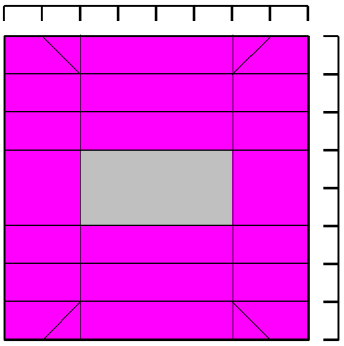


14. The 2x4x1 version of Omicron is finished.

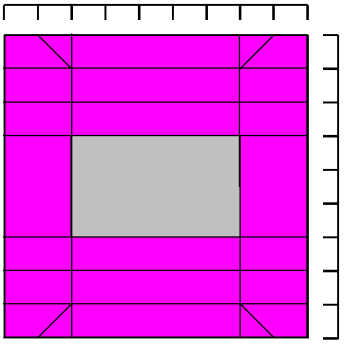
Here are crease patterns for the first three versions of Omicron. The grey shading indicates the area of the paper that will form the largest side of the boxes.



This is the crease pattern for Omicron 1x3x1 which is based on a 7x7 grid. If you fold this pattern into a module you will find that the pleats overlap each other in the centre.



This is the crease pattern for Omicron 2x4x1 which is based on an 8x8 grid. The folding instructions in this pdf show you how to fold this design.



This is the crease pattern for Omicron 3x5x1 which is based on a 9x9 grid. In theory the Omicron series can be extended ad infinitum through the 4x6x1 version based on a 10x10 grid, the 5x7x1 version based on an 11x11 grid, the 10x12x1 version based on a 16x16 grid etc. I have not experimented to find out how well designs based on large grids will work in practice.