

**Series of printed optical diffraction images and masks referenced as
"Optical diffr. from masks increasing number of units"**

Contributors

Fuller, Watson, 1935-

Publication/Creation

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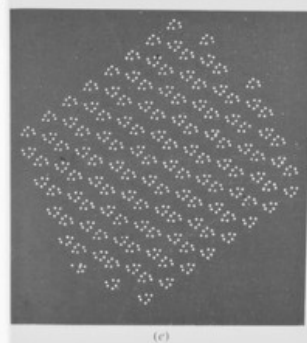
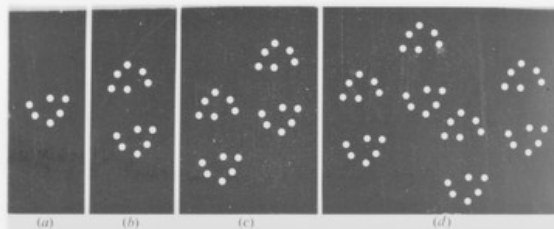
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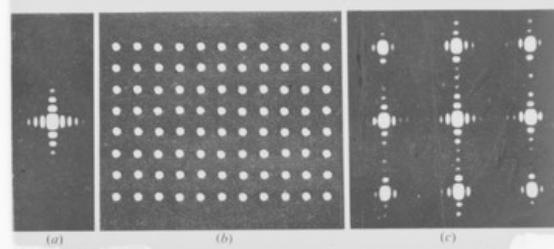


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7 Masks used for the optical transforms of the preceding pages

- (a) Mask for 1
- (b) Mask for 2
- (c) Mask for 4
- (d) Mask for 5
- (e) Mask for 6



8 (a) Optical diffraction pattern of a rectangular aperture. (b) Mask representing the product of a lattice function with a function representing the aperture of 7a. (c) Optical diffraction pattern of mask shown in 8b

APPENDIX

SOME RELATIONSHIPS BETWEEN CALCULATED TRANSFORMS AND THE MAIN TEXT OF THE OPTICAL TRANSFORM

units used for figs. 67, 68 and 69. Calculated transforms in Appendix 1 are from the centre of symmetry of the object. The placement of origin number 2 for fig. 67(i) should compare with fig. 66(i) for convenience in comparison and 67(ii) should be compared with fig. 66(ii) for convenience in comparison of various figures in the Appendix. The effect of the choice of origin is shown by comparing figs. 60, 61, 62 and 63. Bright fringes (section 2.9) are shown by figs. 66(ii) and 67(ii). The evolution of the reciprocal lattice transform on one unit cell (section 2.8 and 69). Bright fringes which could give rise to coincident with certain reciprocal lattice points are shown in fig. 68(ii). The theorem that the transform of the product of two functions is the product of their separate transforms (section 2.9) is shown by comparing figs. 68(i) and 69(ii). The transform of structure and 69(ii) is the transform of structure with a regular lattice (section 2.9). The theorem that the transform of the convolution of two functions is the product of their separate transforms (section 2.9) is shown by fig. 70(ii) (Chapter 4). The change in the 'texture' of a transform of the object in real space can be seen by comparing figs. 67, 68 and 69. The effect of the shape of a small element (section 7.3.1). The differences in intensity distribution between centrosymmetrical and non-centrosymmetrical structures can be seen by comparing fig. 66(i) with 67(i).