CLAIMS

1. An imprint apparatus configured to form a pattern of an imprint material in a shot area of a substrate using a mold, the apparatus comprising:

a heating mechanism configured to heat the substrate by irradiating the shot area with light,

wherein the heating mechanism includes a plurality of optical modulators each of which includes an array of mirrors configured to reflect the light, and mutually different areas of the shot area are irradiated with light beams from the plurality of optical modulators arranged with a predetermined gap therebetween.

2. The apparatus according to claim 1, further comprising a projection optical system configured to guide the light from the heating mechanism to the substrate,

wherein the shot area is irradiated with each of the light beams from the plurality of optical modulators via the projection optical system.

3. The apparatus according to claim 2, wherein the heating mechanism decenters an optical axis along which the light from the optical modulator enters the projection optical system with respect to an optical axis of the projection optical system.

4. The apparatus according to claim 2, wherein the heating mechanism tilts an optical axis along which the light from the optical modulator enters the projection optical system with respect to an optical axis of the projection optical system.

5. The apparatus according to claim 1, wherein the heating

mechanism separately irradiates each of a plurality of areas of the shot area with light.

6. The apparatus according to claim 4,

wherein each of the optical modulators includes a plurality of operating micro-mirrors, and

wherein the optical axis along which the light from the optical modulator enters the projection optical system is decentered from the optical axis of the projection optical system by changing an operating area of the plurality of micro-mirrors included in the optical modulator.

7. The apparatus according to claim 1, further comprising a combining unit configured to combine the light beams from the plurality of optical modulators,

wherein the combined light beams illuminate the shot area.

8. The apparatus according to claim 7,

wherein the heating mechanism includes a light source configured to irradiate the plurality of optical modulators with light beams of different wavelengths, and

wherein the combining unit is a beam splitter configured to combine the light beams of different wavelengths from the plurality of optical modulators.

9. The apparatus according to claim 7,

wherein the heating mechanism includes a light source configured to irradiate the plurality of optical modulators with light beams of different polarization directions, and

wherein the combining unit is a beam splitter configured to combine the light beams of different polarization

directions from the plurality of optical modulators.

10. The apparatus according to claim 1, wherein the projection optical system creates a conjugate relationship between each of the plurality of optical modulators and the substrate.

11. The apparatus according to claim 1, wherein the heating mechanism includes:

a heating light source configured to irradiate the plurality of optical modulators with light;

an optical element configured to split the light from the heating light source such that the plurality of optical modulators is irradiated with the light; and

an irradiation optical system configured to irradiate the plurality of optical modulators with the light after being split.

12. The apparatus according to claim 1, wherein the heating mechanism includes:

a plurality of heating light sources configured to irradiate the shot area with light beams; and

a plurality of irradiation optical systems configured to irradiate the plurality of optical modulators with the respective light beams from the plurality of heating light sources.

13. An imprint apparatus configured to form a pattern of an imprint material in a shot area of a substrate using a mold, the apparatus comprising:

a heating mechanism configured to heat the substrate by irradiating the shot area with light,

wherein the heating mechanism includes a plurality of optical modulators each of which includes an array of mirrors configured to reflect the light, and the same area of the shot area is irradiated with light beams from the plurality of optical modulators arranged with a predetermined gap therebetween.

14. An imprint method for forming a pattern of an imprint material in a shot area of a substrate using a mold, the method comprising:

heating the substrate by separately irradiating each of a plurality of areas of the shot area with light,

wherein the heating includes separately irradiating the plurality of areas of the shot area with light beams from a plurality of optical modulators each including an array of mirrors configured to reflect the light and arranged with a predetermined gap therebetween.

15. The method according to claim 14, wherein each of the optical modulators includes a plurality of operating micro-mirrors.

16. The method according to claim 14, further comprising creating a conjugate relationship between each of the plurality of optical modulators and the substrate.

17. A method for manufacturing an article, comprising:

forming a pattern of an imprint material on a substrate using an apparatus according to any one of claims 1 to 13; and

processing the substrate on which the pattern has been

formed.

18. An apparatus used in an exposure apparatus configured to illuminate a pattern formed on an original to expose a substrate to light from the original, the apparatus comprising:

a plurality of optical modulators configured to illuminate, using an array of mirrors configured to reflect the light, the pattern formed on the original such that the light from a light source has a distribution,

wherein light beams from the plurality of optical modulators illuminate mutually different areas of the pattern formed on the original.

19. The apparatus according to claim 18, further comprising a combining unit configured to combine the light beams from the plurality of optical modulators.

20. The apparatus according to claim 19, wherein the combining unit is a beam splitter configured to combine the light beams of different wavelengths from the plurality of optical modulators.