Claims:

1. A method of fabricating optical modules, the method comprising:

attaching, over a substrate that is transparent to light of a particular wavelength or range of wavelengths, a wafer stack that includes a plurality of lens systems adjacent one another, the wafer stack including a plurality of wafers separated from one another by a first spacer, the wafer stack including a surface of one of the plurality of wafers farthest from the substrate;

forming openings in portions of the wafer stack that separate the lens systems from one another, the openings being formed in a direction perpendicular to a plane of the substrate, each particular one of the openings extending from a plane that is flush with the surface of the wafer farthest from the substrate, the openings extending at least partially into a second spacer that separates the substrate from the plurality of wafers;

injecting a material into the openings, wherein the material is non-transparent to light of the particular wavelength or range of wavelengths, wherein the non-transparent material injected into the openings substantially fills the openings at least up to the surface of the wafer farthest from the substrate;

adjusting a thickness of one or more regions of the substrate to provide focal length correction for a respective one or more of the lens systems; and

separating the substrate into a plurality of optical modules, each of which includes one or more of the lens systems mounted over a respective portion of the substrate.

2. The method of claim 1 wherein at least one of the first spacer or the second spacer is non-transparent to light of the particular wavelength or range of wavelengths, optical elements being disposed on the plurality of wafers to form the lens systems, wherein each optical module of the plurality of optical modules includes lateral sides of sections of wafers, on which the lenses are disposed, covered by the material that is non-transparent to light of the particular wavelength or range of wavelengths.

3. The method of claim 1 wherein the openings are trenches.

4. The method of claim 3 including forming the trenches so as to extend through an entire thickness of the plurality of wafers.

5. The method of claim 3 including forming the trenches so as to extend to an upper surface of the substrate.

6. The method of claim 1 wherein the non-transparent material is injected into the openings in the stack by vacuum injection.

7. The method of claim 1 wherein the non-transparent material is injected into the openings in the stack using a vacuum injection PDMS tool.

8. The method of claim 1 wherein the non-transparent material injected into the openings comprises a UV-curing polymer.

9. The method of claim 1 wherein the non-transparent material injected into the openings comprises a thermally-curing polymer.

10. The method of claim 1 wherein the non-transparent material injected into the openings comprises a polymer containing a dark pigment, an inorganic filler or a dye.

11. The method of claim 1 wherein the non-transparent material injected into the openings provides a surface that is substantially flush with the surface of the wafer farthest from the substrate.

12. The method of claim 1 wherein the non-transparent material injected into the openings is composed of a same material as at least one of the first spacer or the second spacer.

13. The method of claim 1 wherein adjusting a thickness of one or more regions of the substrate to provide focal length correction includes removing selected portions of the substrate.

14. The method of claim 1 wherein adjusting a thickness of one or more regions of the substrate to provide focal length correction includes adding one or more layers on the substrate.

15. A method of fabricating optical modules, the method comprising:

providing a wafer/spacer stack attached to a flange focal length correction substrate, wherein the wafer/spacer stack includes a plurality of wafers separated from one another by a first spacer, the wafer/spacer stack being separated from the flange focal length correction substrate by a second spacer, the first and second spacers being composed of a material that is non-transparent to light of a particular wavelength or range of wavelengths, and optical elements being disposed on the plurality of wafers to form lens systems, and the wafer/spacer stack including a surface of one of the plurality of wafers farthest from the flange focal length correction substrate;

forming trenches in respective portions of the wafer/spacer stack, the trenches separating the lens systems from one another, each particular one of the trenches extending from a plane that is flush with the surface of the wafer farthest from the substrate, the trenches extending at least partially into the second spacer that separates the substrate from the wafer/spacer stack;

injecting a material into the trenches, wherein the injected material is non-transparent to light of the particular wavelength or range of wavelengths, wherein the non-transparent material injected into the trenches substantially fills the trenches at least up to the surface of the wafer farthest from the flange focal length correction substrate; and

adjusting a thickness of one or more regions of the flange focal length correction substrate to provide focal length correction for a respective one or more of the lens systems.

16. The method of claim 15 including forming the trenches so as to extend through an entire thickness of the plurality of wafers.

17. The method of claim 15 wherein the non-transparent material injected into the trenches is injected by a vacuum injection technique.

18. The method of claim 15 wherein the non-transparent material injected into the trenches comprises at least one of a UV-curing polymer or a thermally-curing polymer.