What is claimed is:

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

mounting a plurality of singulated lens systems over a substrate, wherein the plurality of singulated lens systems are physically unattached from one another at least at a time just prior to mounting them over the substrate;

adjusting a thickness of the substrate below at least some of the lens systems to provide respective focal length corrections for the lens systems, wherein the substrate is composed of a plurality of layers of different materials from one another, and wherein adjusting the thickness includes removing part of the substrate such that the substrate has a total thickness that varies from one area of the substrate to another area of the substrate; and

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

2. The method of claim 1 wherein adjusting a thickness of the substrate includes using micro-machining to remove material below at least some of the lens systems so as to correct for variations in the focal lengths of the lens systems.

3. The method of claim 1 wherein each of the lens systems includes a lens stack.

4. The method of claim 1 wherein the substrate includes a plurality of layers of different materials.

5. The method of claim 4 wherein adjusting a thickness of the substrate includes forming respective holes in a layer of the substrate that is furthest from the lens systems.

6. The method of claim 1 including fabricating the lens systems in a wafer-level process and separating a wafer-stack to form the plurality of singulated lens systems before mounting the singulated lens systems on the substrate.

7. The method of claim 1 wherein the substrate comprises a material that is substantially transparent to light of a predetermined wavelength or range of wavelengths.

8. The method of claim 7 wherein the substrate is composed of one or more glass or polymer materials.

9. The method of claim 1 wherein a surface of the substrate includes one or more optical filter layers, the method including mounting the lens systems at positions where the one or more optical filter layers are located.

10. An optical module comprising:

a substrate composed of a material that is transparent to light of a particular wavelength or range of wavelengths;

a plurality of lens systems attached at a first side of the substrate, wherein each lens system has a respective optical axis that intersects the substrate and corresponds to a respective optical channel in the module;

a plurality of optical filter layers each of which intersects a respective one of the optical axes;

a spacer disposed over the substrate, wherein the spacer is substantially non-transparent to light of the particular wavelength or range of wavelengths;

a channel FFL correction layer, wherein the channel FFL correction layer is composed of a plurality of sublayers of different materials from one another, and wherein the channel FFL correction layer has a total thickness that varies from one region to another region; and

an image sensor attached at a second side of the substrate.

11. The optical module of claim 10 wherein the channel FFL correction layer comprises a glass or polymer material.

12. The optical module of claim 10 wherein the optical axes of a plurality of the lens systems intersect the channel FFL correction layer, and wherein respective portions of the channel FFL correction layer intersected by the optical axes have different thicknesses from one another.

13. The optical module of claim 10 wherein the channel FFL correction layer is disposed over the second side of the substrate.

14. The optical module of claim 10 wherein the channel FFL correction layer is disposed over the first side of the substrate.

15. The optical module of claim 10 including an IR filter layer over the first side of the substrate.

16. The optical module of claim 15 including a plurality of color filter layers disposed on the IR filter layer.

17. The optical module of claim 10 comprising first and second color filter layers each of which allows different wavelength or range of wavelengths to pass through, wherein the optical

axis of a first one of the lens systems intersects the first color filter layer and the optical axis of a second one of the lens systems intersects the second color filter layer.

18. The optical module of claim 10 further including a coating on the second side of the substrate, wherein the coating is substantially non-transparent to light of the particular wavelength or range of wavelengths and is disposed between a pair of the optical channels.

19. The optical module of claim 10 further including spacers separating the second side of the substrate from the image sensor.

20. The optical module of claim 10 wherein the optical filter layers include an IR filter layer.

21. The optical module of claim 10 wherein the plurality of optical filter layers includes a color filter layer.

22. The optical module of claim 10 wherein the plurality of optical filter layers includes a plurality of color filter layers for different colors.

23. The optical module of claim 10 wherein the plurality of optical filter layers includes IR filter layers and color filter layers.