What is claimed is:

1. An automated method of testing an optical device, the method comprising:

placing the optical device on or in close proximity to a transparent sheet;

causing the optical device to emit light through the transparent sheet;

analyzing, in a processing unit, a response of the optical device after it emits the light; and

determining in the processing unit whether or not the optical device passes a test based at least in part on analyzing the response of the optical device.

2. The method of claim 1 wherein determining whether or not the optical device passes a test includes determining whether or not the optical device meets a particular one or more specifications indicating whether the optical device will perform satisfactorily when integrated into an end-product or system.

3. The method of any one of the previous claims including:

analyzing a first amount of light detected by the optical device when a first surface intersects an optical axis of the optical device; and

analyzing a second amount of light detected by the optical device when a second surface intersects the optical axis of the optical device,

wherein the first and second surfaces have different reflectivities from one another and are located on a side of the transparent sheet opposite that of optical device.

4. The method of claim 3 including moving the first or second surface from a position where it does not intersect the optical axis of the optical device to a position where it does intersect the optical axis of the optical device.

5. The method of claim 3 wherein the first surface absorbs substantially all light impinging on it, and wherein the second surface is at least partially reflective.

6. The method of claim 3 wherein the first surface is composed of a black reference card.

7. The method of claim 3 wherein the second surface is composed of a grey reference card.

8. The method of claim 3 including:

using the first surface for measuring leakage between a light emitting element and light detecting element in the optical device; and

using the second surface for measuring the optical response of the optical device against a surface with well-defined reflectance properties.

9. The method of any one of the previous claims including detecting an amount of optical cross-talk in the optical device when the first surface intersects an optical axis of the optical device or when the second surface intersects the optical axis of the optical device.

10. The method of claim 3 including using a processing unit to coordinate timing of measurements to be performed by a testing electronics module coupled to the optical device with positioning of the first or second surfaces.

11. The method of claim 10 wherein with the second surface in a first position, the processing unit causes the testing electronics module to measure a response of the optical device when light is emitted toward the first surface.

12. The method of claim 11 wherein, after the processing unit receives test results from the testing electronics module, the processing unit causes the second surface to be moved to a position such that the second surface intersects the optical axis of the optical device, and wherein the processing unit then causes the testing electronics module to measure a response of the optical device when light is emitted toward the second surface.

13. An automated method of testing an optical device that is on or in close proximity to a transparent sheet, the method comprising:

causing the optical device to emit light that is transmitted through the transparent sheet into a region that has a back wall having a first reflectivity, and analyzing a first response of the optical device;

causing a second surface to be moved into the region such that the second surface intersects an optical axis of the optical device, wherein the second surface has a reflectivity different from the back wall;

subsequently causing the optical device to emit light that is transmitted through the transparent sheet into the region, and analyzing a second response of the optical device; and

using a processing system to determine whether or not the optical device passes a test based at least in part on analyzing the responses of the optical device.

14. The method of claim 13 wherein the transparent sheet simulates a cover of an end-product or system into which the optical device is to be integrated.

15. The method of claim 13 wherein the optical device is a proximity sensor and wherein the transparent cover has optical features that simulate optical features of a transparent cover of a cell phone into which the optical device is to be integrated.

16. A testing unit for testing an optical device, the testing unit comprising:

a device holder to hold the optical device;

a testing electronics module adjacent the device holder, the testing electronics module including electrical contacts for connection to electrical contacts of the optical device and including electronics to measure a response of the optical device;

a transparent cover adjacent the device holder;

a wall located on a side of the transparent cover opposite that of the device holder, the wall having a first reflectivity;

a movable partition that is slidable in and out of the region, wherein the partition has a reflectivity different from the wall; and

a processing unit configured to:

generate a control signal to cause the optical device to emit light that is transmitted through the transparent cover toward the wall;

analyze a first response of the optical device;

generate a control signal to cause the movable partition to be moved between the wall and the transparent cover;

generate a control signal to cause the optical device to emit light that is transmitted through the transparent cover toward the movable partition;

analyze a second response of the optical device; and

determine whether or not the optical device passes a test based at least in part on analyzing the responses of the optical device.

17. The testing unit of claim 16 wherein the wall is substantially perpendicular to the transparent cover and is composed of a material that absorbs substantially all light from the optical device that impinges on the wall.

18. The testing unit of any one of claims 16 or 17 wherein the partition is at least partially reflective.

19. The testing unit of any one of claims 16, 17 or 18 wherein the wall is composed of a black reference card.

20. The testing unit of any one of claims 16, 17, 18 or 19 wherein the partition is composed of a grey reference card.

21. The testing unit of any one of claims 16 through 20 wherein the transparent cover is composed of glass.

22. The testing unit of any one of claims 16 through 20 wherein the transparent cover is composed of a polymer material.

23. The testing unit of any one of claims 16 through 22 including a plurality of moveable partitions each of which is slidable into and out of the region independently of the other partitions, and wherein the partitions have different reflectivities from one another.

24. The testing unit of claim 16 wherein the wall is composed of a black reference card and the partition is composed of a grey reference card, wherein the processing unit is configured to provide control signals so that the black reference card is used for measuring leakage between a light emitting element and light detecting element in the optical device, and the grey reference card is used for measuring the optical response of the optical device against a surface with well-defined reflectance properties.

What is claimed is:

1. A testing unit for testing an optical device, the testing unit comprising:

a device holder to hold the optical device;

a testing electronics module adjacent the device holder, the testing electronics module including electrical contacts for connection to electrical contacts of the optical device and including electronics to measure a response of the optical device;

a transparent cover adjacent the device holder;

a wall located on a side of the transparent cover opposite that of the device holder, the wall having a first reflectivity;

a movable partition that is slidable in and out of a region, wherein the partition has a reflectivity different from the wall; and

a processing unit configured to:

generate a control signal to cause the optical device to emit light that is transmitted through the transparent cover toward the wall;

analyze a first response of the optical device;

generate a control signal to cause the movable partition to be moved between the wall and the transparent cover;

generate a control signal to cause the optical device to emit light that is transmitted through the transparent cover toward the movable partition;

analyze a second response of the optical device; and

determine whether or not the optical device passes a test based at least in part on analyzing the responses of the optical device.

2. The testing unit of claim 1 wherein the wall is substantially perpendicular to the transparent cover and is composed of a material that absorbs substantially all light from the optical device that impinges on the wall.

3. The testing unit of claim 1 wherein the partition is at least partially reflective.

4. The testing unit of claim 1 wherein the wall is composed of a black reference card.

5. The testing unit of claim 1 wherein the partition is composed of a grey reference card.

6. The testing unit of claim 1 wherein the transparent cover is composed of glass.

7. The testing unit of claim 1 wherein the transparent cover is composed of a polymer material.

8. The testing unit of claim 1 including a plurality of moveable partitions each of which is slidable into and out of the region independently of the other partitions, and wherein the partitions have different reflectivities from one another.

9. The testing unit of claim 1 wherein the wall is composed of a black reference card and the partition is composed of a grey reference card, wherein the processing unit is configured to provide control signals so that the black reference card is used for measuring leakage between a light emitting element and light detecting element in the optical device, and the grey reference card is used for measuring the optical response of the optical device against a surface with well-defined reflectance properties.