WE CLAIM:

1. A system configured to measure a plurality of analytes in an assay plate with reduced crosstalk between analytes, the system including:

a CCD camera including a CCD, an analog front end circuit, and an analog to digital circuit, the CCD camera being configured to measure the plurality of analytes and coupled to a focusing system and a plate carriage system configured to locate the assay plate to facilitate measurement of the plurality of analytes,

wherein the analog front end circuit is configured to receive a readout signal from a serial register of the CCD and to transfer the readout signal to the analog to digital circuit to generate a plurality of image data points, the analog front end circuit includes a reference level clamp circuit configured with a time constant selected to fully reset a reference level between sequential image data point readings so as to reduce crosstalk between a first measurement of a first one of the plurality of analytes and a second measurement of a second one of the plurality of analytes.

2. The system of claim 1, wherein the first one of the plurality of analytes and the second one of the plurality of analytes are contained in a single well of the assay plate.

3. The system of claim 1, wherein the first one of the plurality of analytes and the second one of the plurality of analytes are contained in different wells of the assay plate.

4. The system of claim 1, wherein fully resetting the reference level between sequential image data point readings causes an amplitude of the reference level to return to a predetermined value between sequential image data point readings.

5. The system of claim 1, wherein fully resetting the reference level between sequential image data point readings reduces an effect of a first image data point value on a second image data point value obtained sequentially after the first image data point value.

6. The system of claim 1, wherein the time constant is a decay time constant of the reference level clamp circuit.

7. The system of claim 1, wherein each of the plurality of image data points is representative of a pixel of the CCD.

8. The system of claim 1, wherein each of the plurality of image data points is representative of a plurality of binned pixels of the CCD.

9. The system of claim 1, wherein the plurality of analytes are spatially separated from one another.

10. A method of reducing crosstalk between measurements of a plurality of analytes in an assay plate performed by a CCD camera, the method comprising:

measuring the plurality of analytes with the CCD camera, the CCD camera including a CCD, an analog front end circuit, and an analog to digital circuit and being coupled to a focusing system and a plate carriage system configured to locate the assay plate to facilitate measurement of the plurality of analytes;

receiving, via the analog front end circuit, a readout signal from a serial register of the CCD, wherein receiving the readout signal includes:

transferring the readout signal from the serial register to the analog to digital circuit to generate a first image data point,

resetting fully, via a reference level clamp circuit having a time constant, a reference level of the analog front end circuit,

transferring the readout signal from the serial register to the analog to digital circuit to generate a second image data point,

wherein the time constant is selected so as to reduce crosstalk between a first measurement of a first one of the plurality of analytes and a second measurement of a second one of the plurality of analytes.

11. The method of claim 10, wherein the first one of the plurality of analytes and the second one of the plurality of analytes are contained in a single well of the assay plate.

12. The method of claim 10, wherein the first one of the plurality of analytes and the second one of the plurality of analytes are contained in different wells of the assay plate.

13. The method of claim 10, wherein resetting the reference level of the analog front end circuit between sequential image data point readings includes returning an amplitude of the reference level to a predetermined value between sequential image data point readings.

14. The method of claim 10, wherein resetting the reference level between sequential image data point readings reduces an effect of a first image data point value on a second image data point value obtained sequentially after the first image data point value.

15. The method of claim 10, wherein the time constant is a decay time constant of the reference level clamp circuit.

16. The method of claim 10, wherein each of the plurality of image data points is representative of a pixel of the CCD.

17. The method of claim 10, wherein each of the plurality of image data points is representative of a plurality of binned pixels of the CCD.

18. The method of claim 10, wherein the plurality of analytes are spatially separated from one another.