CLAIMS

1. A power supply system for a light emitting diode (LED) pixel array, comprising:

at least two power supplies respectively configured to provide adjustable electrical power to respective LED pixel sub-arrays of LED pixels in the LED pixel array, each of the LED pixels including a current source and an LED; and

a controller for the at least two power supplies, the controller configured to:

measure forward voltage of respective LED pixels of an LED pixel sub-array of the LED pixel sub-arrays, and adjust the electrical power provided by the at least two power supplies based on measured forward voltage of respective LED pixels of the LED pixel sub-arrays.

2. The power supply for an LED pixel array of claim 1, wherein the LED pixel array comprises a microLED pixel array.

3. The power supply system for an LED pixel array of claim 1, wherein settings of the at least two power supplies are factory set.

4. The power supply system for an LED pixel array of claim 1, wherein settings of the at least two power supplies are dynamically set.

5. The power supply system for an LED pixel array of claim 1, wherein the at least two power supplies include buck converters.

6. The power supply system for an LED pixel array of claim 1, wherein the at least two power supplies include multiple ports, a first port of the multiple ports that supplies independent, positive power and a second port of the multiple ports that supplies a common ground voltage to all sub-arrays of the LED pixel array.

7. The power supply system for an LED pixel array of claim 1, wherein the at least two power supplies are each connectable in parallel to respective sub-arrays in the LED pixel array.

8. A micro light emitting diode (LED) pixel array system, comprising:

a plurality of microLED pixels arranged into independently powered sub-arrays, each of the microLED pixels including a current source and an LED;

at least two power supplies respectively connected to an LED pixel sub-array of the LED pixel sub-arrays and configured to provide adjustable electrical power to the LED pixel sub-array; and

a controller for the at least two power supplies, the controller configured to:

measure an electrical property of respective LED pixels of an LED pixel sub-array of the LED pixel sub-arrays, and

adjust electrical power provided by the at least two power supplies based on the measured electrical property.

9. The microLED pixel array system of claim 8, wherein each pixel in the plurality of microLED pixels is independently addressable.

10. The microLED pixel array system of claim 8, wherein settings of the at least two power supplies are factory set or set dynamically after deployment.

11. The microLED pixel array system of claim 8, wherein measured electrical properties include forward voltage of pixels of the LED sub-arrays.

12. The microLED pixel array system of claim 8, wherein the at least two power supplies include buck converters.

13. The microLED pixel array system of claim 8, wherein the at least two power supplies provide an independent positive power supply voltage and provide a shared common ground voltage.

14. The microLED pixel array system of claim 8, wherein the at least two power supplies are respectively electrically connected in parallel to each other and each of the at least two power supplies are electrically connected to a respective sub-array of the respective sub-arrays in the LED pixel array.

15. A control method for a light emitting diode (LED) array, comprising:

providing a plurality of microLED pixels arranged to include at least two independently electrically powered, micoLED pixel sub-arrays, each of the microLED pixel sub-arrays including distinct microLED pixels of the plurality of microLED pixels, each of the LED pixels including a current source and an LED;

supplying, to each microLED pixel sub-array and from a respective, dedicated power supply, power based on forward voltage shift matching;

measuring power usage and forward voltage shift for at least some of the plurality of microLED pixels of each of the microLED pixel sub-arrays; and

dynamically adjusting electrical power supplied to the independently powered microLED pixel sub-arrays based on the measured power and the forward voltage shift.

16. The control method of claim 15, wherein supplying the power includes supplying an independent positive supply and a shared common ground.

17. The control method of claim 15, wherein each pixel of the plurality of microLED pixels includes a current source, a pulse width modulation switch, and an LED connected in series.

18. The control method of claim 15, further comprising setting, at a manufacturing facility, settings of at least two power supplies that supply the power.

19. The control method of claim 15, further comprising independently altering operation of each pixel in the plurality of microLED pixels.

20. The control method of claim 15, wherein at least two power supplies that supply the power each include buck converters.