WHAT IS CLAIMED IS:

1. A light emitting device comprising:

a plurality of individually addressable light emitting diodes mounted on a single chip;

a plurality of phosphor tiles; and

a bond layer between each of the individually addressable light emitting diodes and phosphor tiles, wherein the bond layer has a thickness that is uniform, the thickness varying less than 20% between each individually addressable light emitting diode and phosphor tile across the single chip.

2. The light emitting device of claim 1, wherein the thickness of the bond layer is between 0.3 μm and 2 μm.

3. The light emitting device of claim 1, wherein the plurality of LED die are mounted on a tile, a portion of the plurality of LED die have a height from the tile that varies from another portion of the plurality of LED die, the bond layer maintaining uniform thickness on the plurality of LED die.

4. The light emitting device of claim 1, wherein surfaces of the plurality of phosphor tiles in contact with the bond layer have a surface roughness, and the bond layer conforms to the surface roughness while maintaining the uniform thickness.

5. The light emitting device of claim 1, wherein surfaces of the plurality of light emitting diodes in contact with the bond layer have a surface roughness, and the bond layer conforms to the surface roughness while maintaining the uniform thickness.

6. The light emitting device of claim 1, wherein the bond layer includes multiple channels.

7. The light emitting device of claim 6, wherein the multiple channels have openings on an edge of the bond layer.

~~8. The light emitting device of claim 1, wherein the bond layer comprises a first bond layer in contact with the plurality of phosphor tiles and a second bond layer in contact with the plurality of light emitting diodes and the first bond layer.~~

~~9. The light emitting device of claim 8, wherein the first bond layer has a different physical characteristic from the second bond layer.~~

~~10. The light emitting device of claim 8, wherein the first bond layer includes multiple channels.~~

~~11. The light emitting device of claim 8, wherein the first bond layer has a different refractive index from the second bond layer.~~

~~12.~~ A method for forming a light emitting device comprising:

~~aligning~~ aligning a converter layer bonding device over a phosphor, the converter layer bonding device comprising an adhesive layer adhered to a release liner;

~~bringing~~ bringing the adhesive layer and the phosphor into contact at an elevated temperature, the elevated temperature being a temperature at which the adhesive layer adheres to the phosphor; cooling the adhesive layer adhered to the phosphor; removing the release liner from the adhesive layer; bringing one or more LED die into contact with the adhesive layer opposite the phosphor; and heating the adhesive layer, one or more LED die, and phosphor to cure the adhesive layer and form a bond layer between the one or more LED die and the phosphor.

~~cooling the adhesive layer adhered to the phosphor;~~

~~removing the release liner from the adhesive layer;~~

~~bringing one or more LED die into contact with the adhesive layer opposite the phosphor; and~~

~~heating the adhesive layer, LED die, and phosphor to cure the adhesive layer and form a bond layer between the LED die and the phosphor.~~

~~13.~~ 2. The method of claim ~~12~~1, wherein the adhesive layer is solid and non-adhesive at a first temperature below the elevated temperature.

14. 3. The method of claim 12 1, wherein the complex shear modulus G* (at 1Hz 1 Hz) of the adhesive layer at the first temperature is greater than 100 KPa, and the G* (at 1Hz 1 Hz) of the adhesive layer at the elevated temperature is between 1 KPa and 100 KPa.

15. 4. The method of claim 12 1, wherein bringing the adhesive layer and the phosphor into contact at an elevated temperature includes applying a vacuum to the converter layer bonding device and the phosphor.

16. 5. The method of claim 12 1, further including dicing the phosphor and the bonding layer between the one or more LED die.

17. 6. The method of claim 12 1, further comprising, after removing the release liner, cutting the phosphor and adhesive layer into n x xm arrays, and wherein bringing one or more LED die into contact with the adhesive layer opposite the phosphor comprises bringing each of the one or more LED die into contact with an n x xm array.

18. 7. The method of claim 12 1, further comprising cutting channels into the adhesive layer onof the converter layer bonding device.

19. 8. The method of claim 12 1, further comprising:

before bringing one or more LED die into contact with adhesive layer, aligning a second converter layer bonding device over the adhesive layer, the second converter layer bonding device comprising a second adhesive layer adhered to a second release liner, a first surface of the second adhesive layer opposite the second release liner facing thea second surface of the adhesive layer;

opposite the phosphor; bringing the first surface of the second adhesive layer and athe second surface of the adhesive layer opposite the phosphor into contact at ana second elevated temperature, the second elevated temperature being a temperature at which the second adhesive layer adheres to the adhesive layer;

cooling the second adhesive layer adhered to the adhesive layer;

removing the second release liner from the second adhesive layer; and

bringing the one or more LED die into contact with a surface of the second adhesive layer opposite the adhesive layer.

~~20. A converter layer bonding device comprising:~~

~~a release liner; and~~

~~an adhesive layer coating the release liner, wherein the adhesive layer is solid and non-adhesive at a first temperature, and is adhesive at an elevated temperature above the first temperature.~~