**Patent Claims:**

1. A wafer comprising a multitude of optical devices, each of the optical devices comprising a first substrate comprising at least one optical structure comprising:

a main portion; and

a surrounding portion at least partially laterally surrounding the main portion;

each main portion and the respective surrounding portion forming a unitary part, wherein each of the optical devices further comprises non-transparent material applied onto the respective surrounding portion, wherein the non-transparent material applied to the surrounding portion of a first one of the optical structures is non-contiguous with the non-transparent material applied to the surrounding portion of a second one of the optical structures, and wherein the first and second opticals structures are arranged laterally side-by-side.

2. The wafer according to claim 1, wherein for each of the optical devices, the respective main portion forms a passive optical component.

3. The wafer according to claim 1, wherein each of the optical devices comprises further non-transparent material applied onto a surface portion of the respective first substrate adjacent to the respective surrounding portion, the further non-transparent material being continuous with the non-transparent material applied to the respective surrounding portion.

4. The wafer according to claim 1, wherein the non-transparent material is a resist material.

5. The wafer according to claim 1, wherein the non-transparent material is photostructurable.

6. The wafer according to claim 1, wherein the non-transparent material applied to the surrounding portion of a any one of the optical structures is non-contiguous with the non-transparent material applied to the surrounding portion of any other one of the optical structures.

7. The wafer according to claim 1, wherein for each of the optical devices, the respective at least one optical structure is sitting on the first substrate or is located fully or in part in the first substrate.

8. An opto-electronic module comprising a plurality of optical devices and comprising a first substrate, wherein each of the optical devices comprises a portion of the first substrate comprising at least one optical structure comprising a main portion; and a surrounding portion at least partially laterally surrounding said main portion; each main portion and the respective surrounding portion forming a unitary part, wherein each of the optical devices further comprises non-transparent material applied onto the respective surrounding portion, wherein the non-transparent material applied to the surrounding portion of a first one of the optical structures is non-contiguous with the non-transparent material applied to the surrounding portion of a second one of the optical structures, and wherein the first and second opticals structures are arranged laterally side-by-side.

9. The opto-electronic module according to claim 8, comprising a plurality of active optical components and a second substrate comprising the plurality of active optical components.

10. The opto-electronic module according to claim 9, comprising a spacer member arranged between the first substrate and the second substrate, for establishing a well-defined distance between the first substrate and the second substrate.

11. The opto-electronic module according to claim 9, wherein the plurality of optical structures are $N \geq 2$ optical structures, and the plurality of active optical components are $N \geq 2$ active optical components, each of the N active optical components being assigned to and aligned with respect to one of the N optical structures, N being an integer.

12. The opto-electronic module according to claim 8, wherein the opto-electronic module is a multi-channel optical sensor.

13. A wafer stack comprising a first wafer comprising a multitude of optical devices, wherein each of the optical devices comprises a first substrate comprised in the first wafer and comprises at least one optical structure comprising a main portion; and a surrounding portion at least partially laterally surrounding the main portion; each main portion and the respective surrounding portion forming a unitary part, wherein each of the optical devices further comprises non-transparent material applied onto the respective surrounding portion, wherein the non-transparent material applied to the surrounding portion of a first one of the optical structures is non-contiguous with the non-transparent material applied to the surrounding portion of a second one of the

optical structures, and wherein the first and second opticals structures are arranged laterally side-by-side.

14. The wafer stack according to claim 13, wherein for each of the optical structures, the non-transparent material applied to the surrounding portion of the respective optical structure is non-contiguous with the non-transparent material applied to the surrounding portion of another one of the optical structures.

15. The wafer stack according to claim 13, further comprising a second wafer; and a spacer wafer arranged between the first and the second wafer.

16. The wafer stack according to claim 15, wherein the second wafer comprises a multitude of active or passive optical components.