**FORM 2**

THE PATENTS ACT, 1970
(39 of 1970)
AND
THE PATENTS RULES, 2003

# COMPLETE SPECIFICATION

(See Section 10; rule 13)

TITLE OF THE INVENTION

"LIGHTGUIDE AS LUMINAIRE"

**APPLICANT**

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The following specification particularly describes
the invention and the manner in which
it is to be performed

CLAIMS

1. A luminaire, comprising

at least one light source; and

a lightguide configured to receive light from the at least one solid state light source,

wherein the light from the at least one solid state light source is coupled into the lightguide and transported within the lightguide by total internal reflection until the light exits the lightguide,

wherein a shape of the lightguide causes extraction of the light from the lightguide and the shape directs the extracted light from the lightguide.

2. The luminaire of claim 1, wherein the light source comprises a solid state light source.

3. The luminaire of claim 2, further comprising a reflective film located adjacent the solid state source to enhance coupling of the light from the solid state light source into the lightguide.

4. The luminaire of claim 2, wherein the light from the at least one solid state light source is coupled into the lightguide with an efficiency of at least 80%.

5. The luminaire of claim 1, wherein the lightguide has a first end and a second end opposite the first end, and wherein the light enters the lightguide at the first end and exits the lightguide at the second end.

6. The luminaire of claim 1, wherein the light transported within the lightguide exits at multiple sides of the lightguide.

7. The luminaire of claim 1, wherein the light exits the lightguide in an exiting light pattern determined by the shape of the lightguide.

8. The luminaire of claim 7, wherein the exiting light pattern is at least partially controlled by tapering the lightguide.

9. The luminaire of claim 7, wherein the exiting light pattern is at least partially controlled by bending the lightguide.

10. The luminaire of claim 7, wherein the exiting light pattern is at least partially controlled by features on a surface of the lightguide.

11. The luminaire of claim 10, wherein the features comprise a pattern of scattering features on the surface of the lightguide.

12. The luminaire of claim 10, wherein the features comprise a pattern of refracting features on the surface of the lightguide.

13. The luminaire of claim 1, further comprising a functional coating applied to the lightguide.

14. A luminaire, comprising

at least one solid state light source; and

a lightguide having a light input end and a distal end, and configured to receive light from the at least one solid state light source,

wherein the light from the at least one light source is coupled into the lightguide at the light input end and transported within the lightguide by total internal reflection until the light exits the lightguide,

wherein the lightguide has a continuous cross sectional shape between the light input end and the distal end,

wherein a shape of the lightguide causes extraction of the light from the lightguide and the shape directs the extracted light from the lightguide.

15. The luminaire of claim 14, wherein the lightguide directs the extracted light in a direction away from the light input end.

16. The luminaire of claim 14, wherein the lightguide directs the extracted light in a direction toward the light input end.

17. The luminaire of claim 14, wherein the light from the at least one solid state light source is coupled into the lightguide with an efficiency of at least 80%.

18. The luminaire of claim 14, wherein the light exits the lightguide in an exiting light pattern determined by the shape of the lightguide.

19. The luminaire of claim 18, wherein the exiting light pattern is at least partially controlled by tapering the lightguide.

20. The luminaire of claim 18, wherein the exiting light pattern is at least partially controlled by bending the lightguide.

21. The luminaire of claim 18, wherein the exiting light pattern is at least partially controlled by features on a surface of the lightguide.

22. The luminaire of claim 21, wherein the features comprise a pattern of scattering features on the surface of the lightguide.

23. The luminaire of claim 21, wherein the features comprise a pattern of refracting features on the surface of the lightguide.

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