Claims

1. A phototherapy mask configurable to be worn and cover a forehead, chin and cheeks of a person comprising:

a flexible outer layer;

a flexible inner layer positionable opposite the skin of a person;

a coupling mechanism physically coupling the outer and inner layers together;

an LED assembly having a plurality of LEDs and a flexible LED printed circuit board to mount the LEDs, the LED assembly mounted between and positionally retained by the inner and outer layers;

wherein the mask is capable of being bent to adopt a curved shape profile at least in lengthwise direction between a forehead end and chin end of the mask.

2. The mask as claimed in claim 1 comprising a cheek slit extending inwardly from each lateral side of the mask towards a central longitudinal axis of the mask.

3. The mask as claimed in claim 2 wherein each slit is curved along its length corresponding to a widthwise direction across the mask.

4. The mask as claimed in claims 2 or 3 wherein a width of each slit decreases in a direction from a perimeter of the mask towards the central longitudinal axis.

5. The mask as claimed in any preceding claim comprising a pair of eye openings, a mouth opening and a nose opening; and

wherein each cheek slit is positioned in a lengthwise direction of the mask between the eye openings and the mouth opening.

6. The mask as claimed in any preceding claim when dependent on claim 5 further comprising an eye guard projecting from each of the respective eye openings at the inner layer, each eye guard comprising a material that is different to a material of the inner and/or outer layer.

7. The mask as claimed in any preceding claim further comprising a light reflector layer positioned intermediate the LED printed circuit board and the inner layer, the reflector layer comprising a plurality of openings through which the LEDs extend in a direction towards the inner layer.

8. The mask as claimed in any preceding claim further comprising a plurality of light diffusers positioned proximate to each LED at the inner layer.

9. The mask as claimed in claim 8 wherein each light diffuser comprises a conical section extending axially in a direction away from each LED at the inner layer.

10. The mask as claimed in any preceding claim wherein the outer layer and/or the inner layer comprise a silicone material.

11. The mask as claimed in any preceding claim wherein the flexible LED printed circuit board comprises at least one polymer substrate and a conductive layer having metallic tracks coupled to or mounted at the polymer substrate.

12. The mask as claimed in any preceding claim when dependent on claim 7 wherein the reflector layer comprises a polymer material, a white or reflective material.

13. The mask as claimed in any preceding claim wherein each LED is a multi-chip LED, the chips of each LED configured to emit light of a different wavelength; and

further comprising thermal partitioning to thermally partition the chips at each LED.

14. The mask as claimed in claim 13 further comprising an electronic controller electrically coupled to each LED, the controller configured to control a current supply to each LED to switch each chip of each LED between an active and inactive mode.

15. The mask as claimed in any preceding claim wherein a material composition of the mask is configured to allow the mask to be bent from a generally planar shape profile

to a contoured 3D shape profile approximately matching a contoured 3D shape profile of a face of a person.