surface before reaching the diffusive reflective inner surface of said spherical shell;

an output aperture formed within said hollow spherical shell through which only light that is reflected off said diffusive reflective inner surface exits said hollow spherical shell; and

a handle which is capable of being detached from said outer spherical surface of said hollow spherical shell at a position which covers said input aperture.

2. A light delivery device according to claim **1**, wherein said output aperture is covered by a transparent window.

3. A light delivery device according to claim **1**, wherein said input and output apertures are diametrically opposed from one another.

4. A light delivery device according to claim **1**, wherein said diffusive reflective surface is supported from said inner surface of said hollow spherical shell by a plurality of supports.

5. A light delivery device according to claim **1**, wherein said diffusive reflective surface is planar.

6. A light delivery device according to claim **5**, wherein said diffusive reflective surface is supported away from the inner surface of said hollow spherical shell by a distance which is between about one to one-sixth a radius of said hollow spherical shell.

7. A light delivery device according to claim **1**, wherein said diffusive reflective surface is convex.

8. A light delivery device according to claim **7**, wherein said diffusive reflective surface is supported away from the inner surface of said hollow spherical shell by a distance which is between about one-tenth to one-half a radius of said hollow spherical shell.

9. A light delivery device according to claim **1**, wherein said hollow spherical shell comprises two half shell portions which are connected together.

10. A light delivery device according to claim **9**, wherein said two half shell portions included cooperating threaded portion by which said two half shell portions can be connected together.

11. A light delivery device according to claim **1**, wherein said handle is hollow.

12. A light delivery device according to claim **11**, wherein an optical fiber support is connected to said handle.

13. A light delivery device according to claim **12**, wherein said optical fiber support is connected to said handle at an end thereof which is opposed to said hollow spherical shell.

14. A light delivery device according to claim **12**, wherein said optical fiber support includes a gasket means for receiving and securing an optical fiber.

15. A light delivery device according to claim **1**, wherein said hollow spherical shell is made from a metal and said diffusive reflective inner surface of said hollow spherical shell comprises a diffusive reflective coating.

16. A method of applying photodynamic therapy to a target situs which comprises:

a) providing light delivery device, said light delivery device including:

a hollow sperical shell which defines an outer sperical surface and a sperical cavity therein, and which includes a diffusive reflective inner surface,

an input aperture formed within said hollow sperical shell for passing a beam of light into said cavity,

a diffusive reflective surface within said cavity which is supported away from the inner surface of said hollow spherical shell and aligned with said input aperture, whereby light which passes through said input aperture into said cavity is reflected off said diffusive reflective surface before reaching the diffusive reflective inner surface of said spherical shell,

an output aperture formed within said hollow spherical shell through which only light that is reflected off said diffusive reflective inner surface exits said hollow spherical shell, and

a handle which is capable of being detached from said outer spherical surface of said hollow spherical shell at a position which covers said input aperture;

b) positioning said output aperture of said light delivery device near a target situs; and

c) delivering light into said light delivery device and therethrough to said target situs.

17. A method of applying photodynamic therapy to a target situs according to claim **16**, further comprising providing the output aperture with a transparent window and placing said transparent window near the target situs in step b).

18. A method of applying photodynamic therapy to a target situs according to claim **17**, wherein said window is placed against the target situs in step b).

* * * * *