~~(2nd amendment under PCT article 34)~~

Claims

[Claim 1]

A solar panel device which is attached to a lamp tube of a liner fluorescent lamp having high-temperature regions (H) on both sides and a low-temperature region (L) between the high-temperature regions (H) or a lamp tube of a linear LED lamp having a low-temperature region as a whole to construct a power-generating lamp, comprising:

one or more solar panels (11) for receiving light from a rear surface of the lamp tube (14) to generate an electromotive force; which have an arc band-like shape in a cross-sectional view with an arc length in a range of 1/5 to 1/2 of an outer circumference of the lamp tube (14) in a cross-sectional view,

a power supply line (12) for outputting the electromotive force of the solar panel (11); and

a tubular base holder (13) that has a tube shape with a length range from the same longitudinal length of the low-temperature region (L) of the lamp tube (14) to the total longitudinal length of the lamp tube (14), in which the solar panel (11) is attached to an inner or outer surface thereof in a length direction, the tubular base holder being externally fitted to the lamp tube (14) to cover the lamp tube (14), and to hold the solar panel (11) so that a light-receiving surface of the solar panel (11) comes in contact with the surface of the lamp tube (14) or is located with a distance of 10 mm or less from the surface of the lamp tube (14), wherein a plurality of minute

mm or less from the surface of the lamp tube (14) or so that the light-receiving surface of each unit solar panel (31A) is located with a distance of 10 mm or less from the surface of the lamp tube (14), wherein a plurality of minute protrusions are formed in the surface of tubular base holder and light from the high-temperature regions (H) on both sides of the lamp tube (14) is randomly reflected by the plurality of minute protrusions.

~~[Claim 4]~~

~~[Claim 5] (amended)~~

The solar panel device according to claim 1, wherein at least a part of the tubular base holder (13, 23, 33) facing a lower half surface of the lamp tube (14) in a cross-sectional view is transparent or semi-transparent.

~~[Claim 6] (delete)~~

~~[Claim 7]~~

A solar panel device which is attached to a linear fluorescent lamp having high-temperature regions (H) on both sides and a low-temperature region (L) between the high-temperature regions (H) or a lamp tube of a linear LED lamp having a low-temperature region as a whole to construct a power-generating lamp, comprising:

one or more solar panels (41) comprising a plurality of unit solar panels which comprise one or a plurality of solar cell modules mounted on a

band-like flexible substrate and are connected so as to be tubular shape and are held in the tubular shape by an adhesive tape or a jig_for receiving light from a surface of the lamp tube (14) to generate an electromotive force;

a tubular base holder (43,) having a circular tube shape or an elliptical tube shape, wherein the solar panel is attached to an inner surface or an outer surface thereof in a longitudinal direction to cover the lamp tube (14), and the tubular base holder holds the solar panel (41, 51) so that a light-receiving surface of the solar panel (41, 51) comes in contact with the surface of the lamp tube (14) or is located with a distance of 10 mm or less from the surface of the lamp tube (14); and

a power supply line (42) for outputting the electromotive force of the solar panel (41, 51).

~~[Claim 8]~~

A solar panel device which is attached to a linear fluorescent lamp having high-temperature regions (H) on both sides and a low-temperature region (L) between the high-temperature regions (H) or a lamp tube of a linear LED lamp having a low-temperature region as a whole to construct a power-generating lamp, comprising:

one or more solar panel (61) for receiving light from the lamp tube (14) to generate an electromotive force, comprising a plurality of unit solar panels which comprise one or a plurality of solar cell modules mounted on a band-like flexible substrate and are connected so as to be tubular shape and are held in the tubular shape by an adhesive tape or a jig,_are externally fit ted to the lamp tube (14) to cover the lamp tube (14) so that a light-receivin

g surface thereof comes in contact with the surface of the lamp tube (14) or is located with a gap of 10 mm or less from the surface of the lamp tube (14),

a power supply line for outputting the electromotive force of the solar panel (61).

~~[Claim 9]~~

~~[Claim 10]~~

~~[Claim 11]~~

~~[Claim 12](added)~~

A solar panel device which is attached to a lamp tube of a linear fluorescent lamp having high-temperature regions (H) on both sides and a low-temperature region (L) between the high-temperature regions (H) or a lamp tube of a linear LED lamp having a low-temperature region as a whole to construct a power-generating lamp, comprising:

a solar panel (51) comprising a plurality of unit solar panels which comprise a plurality of solar cell modules mounted on a flat band-like solid substrate and are connected so as to be foldable and extendable, and the plurality of unit solar panels are extended in the polygonal tube shape and are held in the polygonal tube shape by an adhesive tape or a jig, and receives light from a rear surface of the lamp tube (14) and generates an electromotive force;

a tubular base holder (53) having a circular tube shape or an

elliptical tube shape wherein said solar panels (51) are externally fitted to the lamp tube (14) to cover the lamp tube (14), so that a light-receiving surface thereof comes in contact with the surface of the lamp tube (14) or is located with a distance of 10 mm or less from the surface of the lamp tube (14); and

a power supply line (22) that outputs the electromotive force of the solar panel (21).

~~[Claim 13](added)~~

A solar panel device which is attached to a lamp tube of a linear fluorescent lamp having high-temperature regions (H) on both sides and a low-temperature region (L) between the high-temperature regions (H) or a lamp tube of a linear LED lamp having a low-temperature region as a whole to construct a power-generating lamp, comprising:

one or more solar panels (71) for receiving light from a rear surface of the lamp tube (14) to generate an electromotive force, comprising a plurality of unit solar panels which comprises a plurality of solar cell modules mounted on a flat band-like solid substrate, and are connected so as to be foldable and extendable, and the plurality of unit solar panels are extended in the polygonal tube shape and are held in the polygonal tube shape by an adhesive tape or a jig, and are externally fitted to the lamp tube (14) to cover the lamp tube (14) so that a light-receiving surface thereof comes in contact with the surface of the lamp tube (14) or is located with a distance of 10 mm or less from the surface of the lamp tube (14), and

a power supply line that outputs the electromotive force of the solar

mm or less from the surface of the lamp tube (14) or so that the light-receiving surface of each unit solar panel (31A) is located with a distance of 10 mm or less from the surface of the lamp tube (14), wherein a plurality of minute protrusions are formed in the surface of tubular base holder and light from the high-temperature regions (H) on both sides of the lamp tube (14) is randomly reflected by the plurality of minute protrusions.

[Claim 4]

The solar panel device according to claim 1, wherein at least a part of the tubular base holder (13, 23, 33) facing a lower half surface of the lamp tube (14) in a cross-sectional view is transparent or semi-transparent.

[Claim 5]

A solar panel device which is attached to a linear fluorescent lamp having high-temperature regions (H) on both sides and a low-temperature region (L) between the high-temperature regions (H) or a lamp tube of a linear LED lamp having a low-temperature region as a whole to construct a power-generating lamp, comprising:

one or more solar panels (41) comprising a plurality of unit solar panels which comprise one or a plurality of solar cell modules mounted on a

band-like flexible substrate and are connected so as to be tubular shape and are held in the tubular shape by an adhesive tape or a jig_for receiving light from a surface of the lamp tube (14) to generate an electromotive force;

a tubular base holder (43,) having a circular tube shape or an elliptical tube shape, wherein the solar panel is attached to an inner surface or an outer surface thereof in a longitudinal direction to cover the lamp tube (14), and the tubular base holder holds the solar panel (41, 51) so that a light-receiving surface of the solar panel (41, 51) comes in contact with the surface of the lamp tube (14) or is located with a distance of 10 mm or less from the surface of the lamp tube (14); and

a power supply line (42) for outputting the electromotive force of the solar panel (41, 51).

[Claim 6]

A solar panel device which is attached to a linear fluorescent lamp having high-temperature regions (H) on both sides and a low-temperature region (L) between the high-temperature regions (H) or a lamp tube of a linear LED lamp having a low-temperature region as a whole to construct a power-generating lamp, comprising:

one or more solar panel (61) for receiving light from the lamp tube (14) to generate an electromotive force, comprising a plurality of unit solar panels which comprise one or a plurality of solar cell modules mounted on a band-like flexible substrate and are connected so as to be tubular shape and are held in the tubular shape by an adhesive tape or a jig,_are externally fit ted to the lamp tube (14) to cover the lamp tube (14) so that a light-receivin

g surface thereof comes in contact with the surface of the lamp tube (14) or i s located with a gap of 10 mm or less from the surface of the lamp tube (14),

a power supply line for outputting the electromotive force of the solar panel (61).

[Claim 7]

A solar panel device which is attached to a lamp tube of a linear fluorescent lamp having high-temperature regions (H) on both sides and a low-temperature region (L) between the high-temperature regions (H) or a lamp tube of a linear LED lamp having a low-temperature region as a whole to construct a power-generating lamp, comprising:

a solar panel (51) comprising a plurality of unit solar panels which comprise a plurality of solar cell modules mounted on a flat band-like solid substrate and are connected so as to be foldable and extendable, and the plura lity of unit solar panels are extended in the polygonal tube shape and are held in the polygonal tube shape by an adhesive tape or a jig, and receives light from a rear surface of the lamp tube (14) and generates an electromotive force;

a tubular base holder (53) having a circular tube shape or an

elliptical tube shape wherein said solar panels (51) are externally fitted to the lamp tube (14) to cover the lamp tube (14), so that a light-receiving surface thereof comes in contact with the surface of the lamp tube (14) or is located with a distance of 10 mm or less from the surface of the lamp tube (14); and

a power supply line (22) that outputs the electromotive force of the solar panel (21).

[Claim 8]

A solar panel device which is attached to a lamp tube of a linear fluorescent lamp having high-temperature regions (H) on both sides and a low-temperature region (L) between the high-temperature regions (H) or a lamp tube of a linear LED lamp having a low-temperature region as a whole to construct a power-generating lamp, comprising:

one or more solar panels (71) for receiving light from a rear surface of the lamp tube (14) to generate an electromotive force, comprising a plurality of unit solar panels which comprises a plurality of solar cell modules mounted on a flat band-like solid substrate, and are connected so as to be foldable and extendable, and the plurality of unit solar panels are extended in the polygonal tube shape and are held in the polygonal tube shape by an adhesive tape or a jig, and are externally fitted to the lamp tube (14) to cover the lamp tube (14) so that a light-receiving surface thereof comes in contact with the surface of the lamp tube (14) or is located with a distance of 10 mm or less from the surface of the lamp tube (14), and

a power supply line that outputs the electromotive force of the solar