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**Datasheet for the decision
of 16 March 2018**

Case Number: T 0807/15 - 3.2.03

Application Number: 06821415.4

Publication Number: 1952055

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Language of the proceedings: EN

Title of invention:

LAMP ASSEMBLY

Applicant:

Philips Lighting Holding B.V.

Headword:

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0807/15 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 16 March 2018

Appellant: Philips Lighting Holding B.V.
(Applicant) High Tech Campus 45
5656 AE Eindhoven (NL)

Representative: Verweij, Petronella Daniëlle
Philips Lighting B.V.
Philips Lighting Intellectual Property
High Tech Campus 45
5656 AE Eindhoven (NL)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 15 December
2014 refusing European patent application No.
06821415.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Ashley
Members: C. Donnelly
G. Weiss

Summary of Facts and Submissions

I. The appeal lies from the decision of the examining division refusing European patent application No. 06 821 415.4.

In its decision the examining division held that the subject-matter of claim 1 according to the main request and auxiliary requests 1 and 2 lacked an inventive step starting out from US 1 253 881 (D7) in combination with US2005/225985 (D2).

II. The applicant (hereinafter: the "appellant") requests that the decision under appeal be set aside and that a patent be granted on the basis of the main request, which corresponds to that refused by the examining division, alternatively on the basis of the first auxiliary request filed with the grounds of appeal.

III. Claim 1 according to the main request reads:

"A lamp assembly (1) for illuminating a surface (S) comprising lighting means (4) having:

- a cavity (5) having a substantially diffuse reflective surface (6), said cavity having an open aperture (7) facing said surface (S) to be illuminated; and having

- a plurality of light emitting diodes (9A, 9B, 9C) capable of emitting visible light (LA, LB, LC));

- wherein said light emitting diodes are arranged on or near said diffuse reflective surface of said cavity, the majority of the light emitted from the LEDs (9A, 9B, 9C) is directed towards the surface (6) and is

capable of reflecting from said diffuse reflective surface towards said surface to be illuminated,

characterized in that

- said lamp assembly further comprises a chamber (3) having light transmitting walls, said chamber accommodating the lighting means (4) to obtain direct illumination for luminance of the chamber of the lamp assembly itself providing directly ambience lighting and said chamber being open towards said surface (S) to be illuminated,

- further characterized in that said cavity (5) comprises a metallic body thermally coupled to said light emitting diodes (9A, 9B, 9C) and wherein said metallic body has a layer or coating providing said substantially diffuse reflective surface (6)."

Reasons for the Decision

Inventive step, Article 56 EPC

1. Both the examining division and the appellant consider that D7 is the nearest prior art. The board sees no reason to deviate from this position. D7 discloses:

a lamp assembly (see figure) for illuminating a surface (ceiling of a room - see page 1, lines 61 to 64) comprising lighting means ("ordinary electric light bulb" - see page 1, line 45), wherein said lamp assembly further comprises:

a chamber (5) having light transmitting walls ("inverted shade" of "translucent glass" - see page 1, lines 48 to 51), said chamber accommodating the lighting means to obtain direct illumination for luminance of the chamber of the lamp assembly itself providing directly ambience lighting and said chamber being open towards the ceiling to be illuminated.

2. The subject-matter of claim 1 differs therefrom in that:

- the lighting means comprises a cavity having a substantially diffuse reflective surface, said cavity having an open aperture facing said surface to be illuminated; and

- said cavity comprises a metallic body thermally coupled to said light emitting diodes and wherein said metallic body has a layer or coating providing said substantially diffuse reflective surface;

- a plurality of light emitting diodes capable of emitting visible light;

- wherein said light emitting diodes are arranged on or near said diffuse reflective surface of said cavity, the majority of the light emitted from the LEDs is directed towards the surface and is capable of reflecting from said diffuse reflective surface towards said surface to be illuminated.

3. The appellant and the examining division essentially agree on this analysis. The examining division and the appellant also agree that the technical effect of these features is to reduce energy consumption, improve control of the illuminated area and provide better

cooling of the device. The objective technical problem was therefore seen to be one of how to obtain a more efficient and thermally stable illumination system.

4. The examining division argued that the skilled person would regard it as a normal option to replace the light bulb of the lamp assembly in D7 with the retrofit lighting module shown in figure 4 of D2 when seeking a solution to the above defined technical problem. In particular, it argued that light impinging the shade 5 of the lamp shown in D7 will be scattered in all directions including downwards. This downward directed light will not reach the second shade 6, but it would reach the exterior of the lamp directly from shade 5. Therefore, a part of the light exiting shade 5 will be directly emitted as ambience lighting, thereby fulfilling the requirement in claim 1 of the "chamber.....itself providing directly ambience lighting".
5. However, the board does not find the examining division's assertion that D2 discloses a retrofit lighting module "as providing the same advantages as in the present application" convincing.
6. Document D2, as its title suggests, discloses a replacement illumination device for a miniature flashlight bulb. Apart from the obvious difference in scale between the table/wall lamp of D7 and the miniature flashlight of D2, it is generally known that flashlights are intended to produce a focused narrow beam of light to illuminate one particular area. Therefore, the board agrees with the appellant that the skilled person faced with the technical problem defined above would not have taken D2 into consideration since

it deals with a completely different kind of lighting device for a different purpose.

7. Notwithstanding this conclusion, if (as argued by the examining division) the skilled person wanted to replace the incandescent light-bulb of D7 by the LED module of D2, then it would be necessary to adapt significantly the size of the LED module. As pointed out by the appellant, the size of the LED module disclosed in D2 is about 1.5cm (see D2, paragraph [0043]) whereas a typical incandescent light-bulb used in D7 has much larger dimensions of around 10 to 12cm. Therefore, the skilled person would have to scale up the size of the module known from D2 in order for to fit it into the device of D7.

8. In addition, should the skilled person replace the incandescent light-bulb of D7 with the LED and reflector module shown in figure 4 of D2, the manner in which D7 functions is altered. The reflector 21 shown in figure 4 of D2 is not translucent and is intended to focus light in a narrow beam for use in the conventional flashlight manner as indicated by the light beam path 23. Further, as argued by the appellant, if this reflector is scaled up in size at the same ratio as would be necessary for the unit to be fitted into the device of D7, it would completely screen the translucent glass shade 5. Therefore, if the skilled person carried out this modification, all light would exit the apparatus of D7 via the aperture 7 and the lighting effect of the translucent glass would be nullified. Further, there would be no downward directed light to reach the exterior of the lamp directly from shade 5, which the examining division suggested would fulfil the requirement for a part of the light exiting shade 5 to be directly emitted as ambience lighting.

9. In view of this, the board agrees with the appellant that, faced with the above objective problem, a more logical modification of the lamp of D7 would be simply to substitute the incandescent lamp by the LED without reflector 21, since the use of an LED is generally known to reduce energy consumption and the disadvantages identified above concerning the presence of the reflector would be avoided. However, in this arrangement, there would be no cavity 5 having a diffuse reflective surface 6, as defined in claim 1, hence there would be no possibility of determining the shape and the mix of colour of the light beam.

10. In conclusion, the examining division's suggestion that the skilled person would modify a domestic lighting fixture from the beginning of the previous century, by replacing the incandescent bulb with an LED retrofit unit intended for a miniature flashlight and thereby arrive at the claimed light assembly, is not realistic.

11. Therefore, the board considers the subject-matter of claim 1 according to the main request to involve an inventive step with respect to D7 in combination with D2.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division for further prosecution.

The Registrar:

The Chairman:



C. Spira

G. Ashley

Decision electronically authenticated