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Datasheet for the decision of 19 February 2014

Case Number: T 0441/13 - 3.2.03

Application Number: 06110676.1

Publication Number: 1698823

IPC: F21S8/00, F21V7/04, F21W111/00, F21Y101/02

Language of the proceedings: EN

Title of invention:
Beacon light with reflector and light emitting diodes

Patent Proprietor:
DIALIGHT CORPORATION

Opponent:
Orga Suisse S.A.R.L.

Headword:

Relevant legal provisions:
EPC Art. 123, 84
EPC R. 80

Keyword:
Amendments - added subject-matter (no) - broadening of claim (yes)
Amendment occasioned by ground for opposition - (no)
Claims - clarity (yes)
Late-filed request - admitted (yes)

Decisions cited:

Catchword:

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Case Number: T 0441/13 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 19 February 2014

Appellant: (Patent Proprietor)	DIALIGHT CORPORATION 1501 Route 34 South Farmingdale, NJ 07727 (US)
Representative:	Asquith, Julian Peter Marks & Clerk LLP Fletcher House Heatley Road The Oxford Science Park Oxford OX4 4GE (GB)
Respondent: (Opponent)	Orga Suisse S.A.R.L. Rotfluhstrasse 85 8702 Zollikon (CH)
Representative:	Jansen, Cornelis Marinus V.O. Johan de Wittlaan 7 2517 JR Den Haag (NL)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 10 December 2012 revoking European patent No. 1698823 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman: U. Krause
Members: G. Ashley
E. Kossonakou

Summary of Facts and Submissions

I. European patent EP-B1-1 698 823 relates to a beacon light, typically used on tall buildings and towers to assist aircraft navigation. Grant of the patent was opposed on the grounds set out in Articles 100(a), (b) and (c) EPC.

II. The opposition division concluded that the claims of the main and auxiliary requests did not comply with Article 123(2) EPC, hence decided to revoke the patent. The decision was posted on 10 December 2012.

III. The patent proprietor (hereafter the appellant) filed notice of appeal on 18 February 2013, paying the appeal fee on the same day. A statement containing the grounds of appeal was filed on 26 March 2013.

IV. Oral proceedings took place on 19 February 2014.

V. Requests

The appellant requested that the above decision be set aside and that the patent be maintained on the basis of the claims of either the main request, filed with the grounds of appeal, or auxiliary request zero, filed during the oral proceedings.

The respondent requested that the appeal be dismissed.

VI. Claims

Claim 1 of the application as originally filed (EP-A-1 698 823) reads as follows:

"1. A light-emitting diode (LED) reflector optic, comprising:

a reflector having a plurality of reflecting surfaces and being associated with at least one optical axis, each reflecting surface comprising a linearly projected cross-section; and
at least one LED positioned such that a central light emitting axis of the at least one LED is angled relative to the at least one optical axis at about 90°."

Claim 1 of the main request is as follows. The amendments with respect to granted claim 1 are indicated, and the features are numbered according to the scheme set out on page 3 of the contested decision.

"1.
1.1 A light-emitting diode (LED) reflector optic (24), comprising:
1.2 a reflector (28) having a plurality of reflecting surfaces (32), wherein each one of said plurality of reflecting surfaces (32) is associated with at least one optical axis (36),
1.3 each reflecting surface (32) comprising a linearly projected cross-section (40) along a respective linear extrusion axis (44),
1.4 wherein the linearly projected cross-section (40) of each reflecting surface (32) comprises at least one of: a conic or a substantially conic shape;
and
1.5 a plurality of LEDs (52), characterised in that
1.6 each one of the plurality of LEDs is positioned in a line

1.7 parallel to said ~~linearly projected cross-section (40)~~ extrusion axis (44) of an associated one of said plurality of ~~reflective~~ reflecting surfaces (32)~~,~~ ~~relative to an associated reflecting surface (32) of said plurality of reflecting surfaces (32)~~

1.8 such that a central light-emitting axis (56) of each one of the plurality of LEDs (52) is angled relative to the at least one optical axis (36) of said associated reflecting surface (32) of the plurality of reflecting surfaces (32) at about 90° and

1.9 such that each of the reflecting surfaces (32) ~~redirects~~ reflects and collimates a light output of a respective each one of the plurality of LEDs (52) at an angle of about 90° with respect to the central light emitting axis (56) of each one of the plurality of LEDs (52),

1.10 wherein each one of the plurality of reflecting surfaces (32) receives light from each one of ~~the plurality of~~ its associated LEDs (52) from ~~a~~ the focal distance of said associated one of said plurality of ~~reflective~~ reflecting surfaces (32)."

Claim 1 of auxiliary request zero reads as follows; the amendments with respect to claim 1 of the main request are indicated.

"1. A light-emitting diode (LED) reflector optic (24), comprising:

a reflector (28) having a plurality of reflecting surfaces (32), wherein each one of said plurality of reflecting surfaces (32) is associated with at least one optical axis (36), each reflecting surface (32) comprising a linearly projected cross-section (40) along a respective linear extrusion axis (44), wherein

the linearly projected cross-section (40) of each reflecting surface (32) comprises at least one of: a conic or a substantially conic shape; and

a plurality of LEDs (52), characterised in that each one of the plurality of LEDs is positioned in a line parallel to said ~~extrusion axis (44)~~ linearly projected cross-section (40) of an associated one of said of reflecting surfaces (32), such that a central light-emitting axis (56) of each one of the plurality of LEDs (52) is angled relative to the at least one optical axis (36) of said associated reflecting surface (32) of the plurality of reflecting surfaces (32) at about 90° and such that each of the reflecting surfaces (32) ~~reflects~~ redirects and collimates a light output of a respective each one of the plurality of LEDs (52) at an angle of about 90° with respect to the central light emitting axis (56) of each one of the plurality of LEDs (52), wherein each one of the plurality of reflecting surfaces (32) receives light from each one of its associated LEDs (52) from the focal distance of said associated one of said plurality of reflecting surfaces (32)."

Independent claim 14 is directed to a method:

"14. A method, comprising:

arranging a plurality of reflecting surfaces (32) relative to each other, each of the plurality reflecting surfaces (32) comprising a linearly projected cross-section (40) along a respective linear extrusion axis (44), wherein the linearly projected cross-section (40) of each reflecting surface (32) of said plurality of reflecting surfaces (32) comprises at

least one of: a conic or a substantially conic shape; and characterised by:

positioning each one of a plurality of LEDs (52) in a line parallel to said linearly projected cross-section (40) of an associated one of the plurality of reflecting surfaces (32), wherein the positioning step angles a central light-emitting axis (56) of each one of the plurality of LEDs (52) relative to at least one optical axis (36) associated with the plurality of reflecting surfaces (32) at about 90° such that each of the reflecting surfaces (32) redirects and collimates a light output of a respective each one of the plurality of LEDs (52) at an angle of about 90° with respect to the central light emitting axis (56) of each one of the plurality of LEDs (52), wherein each one of the plurality of reflecting surfaces (32) receives light from each one of its associated LEDs (52) from the focal distance of said associated one of said plurality of reflecting surfaces (32); and

transmitting the light from the plurality of LEDs (52) onto the associated one of the plurality of reflecting surfaces (32)."

Independent claim 17 concerns a reflector optic:

"17. A reflector optic (24), comprising:

a plurality of reflecting surfaces (32) for reflecting light in the direction of at least one optical axis (36), each reflecting surface (32) comprising a means for receiving light along a linearly projected cross-section (40) along a respective linear extrusion axis (44), wherein the linearly projected cross-section (40) of each reflecting surface (32) of said plurality of

reflecting surfaces (32) comprises at least one of: a conic or a substantially conic shape; and

a plurality of light emitting means (52) for emitting a hemisphere of light,
characterised in that each one of the plurality of light emitting means (52) is positioned in a line parallel to said linearly projected cross-section (40) of an associated one of said plurality of reflecting surfaces (32) such that a central light-emitting axis (56) of each one of the plurality of light emitting means (52) is angled relative to at least one optical axis (36) at about 90° and such that each of the plurality of reflecting surfaces (32) redirects and collimates a light output of a respective each one of the plurality of light emitting means (52) at an angle of about 90° with respect to the central light emitting axis (56) of each one of the plurality of light emitting means (52), wherein each one of the plurality of reflecting surfaces (32) receives light from each one of its associated light emitting means (52) from the focal distance of said associated one of said plurality of reflecting surfaces (32)."

Dependent claims 2 to 13, 19, 22 and 23 define preferred embodiments of the LED reflector optic of claim 1; dependent claims 15 to 16 and 20 concern the method of claim 14, and dependent claims 18 and 21 relate to the reflector optic of claim 17.

VII. Submissions of the Parties

Main Request

Article 123(2) EPC:

a) The respondent submitted that the application refers to several embodiments of the invention (see page 6, lines 1 to 10). Features cannot be picked randomly from these different embodiments and assembled into a claim. The combination of features defined in claim 1 has not been disclosed in the original application.

In response, the appellant argued that the statements on page 6 referred to by the respondent relate to the same embodiment. Aspects of this embodiment are not shown only in Figure 2, but also in several of the Figures, as is indicated in the description of drawings on pages 3 and 4.

b) Feature 1.10:
"wherein each one of the plurality of reflecting surfaces (32) receives light from each one of its associated LEDs (52) from the focal distance of said associated one of said plurality of reflecting surfaces(32)"

- Both the respondent and the opposition division were of the view that the embodiment shown in Figure 2, upon which the amendment was based, requires more structural features than just the position of the LEDs with respect to the reflective surfaces in order to achieve the required reflector optic. Hence in their view, the

amendment amounts to an intermediate generalisation contrary to Article 123(2) EPC.

The appellant argued that the claim defines all the features essential for the invention. The fact that, for example, Figure 2 shows a beacon light having the shape of a particular polygon does not mean that this feature is essential and must be included in the claim. An additional basis for omitting the further constructional features shown in Figures 1 and 2, in particular the hexagonal shape, can be found on page 7, lines 27 to 31 of the application as filed.

- According to the respondent, the amendment of "a focal distance" in granted claim 1 to "the focal distance of said associated one of said plurality of reflecting surfaces (32)" cannot be derived unambiguously from the original application, since it is only disclosed in the application in reference to "the reflecting surface", and not to an associated one. In addition, only a parabolic reflecting surface is associated with a focal distance, yet claim 1 includes reflecting surfaces having a conic or substantially conic shape. This amendment is also contrary to Article 123(2) EPC for the reason that there is no disclosure in the original application of a conical shape, other than a parabolic shape, capable of receiving light from a focal distance.

The appellant argued that, although there is a reference in claim 1 to reflector surfaces having a conic shape, it is clear that the claim is limited to those cases where there is a focal distance. It is also apparent that the

reflector(s) receive light from a focal distance and not from a focal point (see the application, page 11, lines 21 to 23 and Figure 16A), consequently there is support for the amendment.

- The respondent submitted that it is not possible for each reflecting surface shown in Figure 2 to receive light from each LED, since some LEDs are positioned behind the reflector. There is therefore no support for the feature that each one of the reflecting surfaces receives light from each one of the LEDs.

The appellant was of the view that the claim must be interpreted by a willing mind, and since it does not make technical sense that each of the reflecting surfaces shown in the embodiment of Figure 2 would receive light emitted by each of the LEDs, this would not be considered by the skilled person. It is clear that a reflecting surface can only receive and collimate light from those LEDs associated with it.

c) Feature 1.9:
"each one of the reflecting surfaces (32) reflects and collimates a light output of a respective each one of a plurality of LEDs (52) at an angle of about 90° with respect to the central light emitting axis (56) of each one of the plurality of LEDs"

- The same arguments, as summarised above, were put forward by the parties concerning the disclosure of each of the reflecting surfaces collimating the light output of each of the LEDs, and the disclosure of the light output "at about

90°" when this only applies to parabolic reflectors.

- In addition, the respondent and the opposition division were of the opinion that in the discussion of Figure 12 on page 10, lines 26 to 27, it only states that the direction of reflected light is parallel to the optical axis (36) - there is no information about the angle relative to the incident light.

Although Figure 8 and the description (page 5, lines 14 to 17) describe the angle θ_A between light emitting axis (56) and optical axis (36) as being about 90°, this, according to the respondent, is not the same as the angle between the light emitting axis and the reflected/collimated light.

The appellant submitted that the reflector shown in Figure 12 is parabolic, and the LED is positioned relative to the reflecting surface such that the angle between the light emitting axis and the optical axis is about 90° (see page 5 of the application). Hence the angle between the emitted and reflected light is also about 90°, since the reflected light is said to travel parallel to the optical axis (36) (lines 30 to 33 of page 10).

d) Feature 1.3:
"each reflecting surface (32) comprising a linearly projected cross-section (40) along a respective linear extrusion axis (44)"

The respondent submitted that the expression "extrusion axis" indicates that the object has been made by extrusion, but does not define a

geometrical direction. Since there is no basis in the application for this understanding of the "extrusion axis", the amendment is contrary to Article 123(2) EPC.

The appellant, agreeing with the opposition division, argued that the expression "extrusion axis" had been used consistently throughout the application to denote a direction. In addition, feature 1.7 requires that each one of the LEDs is positioned in a line parallel to the extrusion axis. The reference to two features being "parallel" must mean that a direction is being considered. The expressions "in a line parallel to the linearly projected cross-section" and "in a line parallel to the extrusion axis" have one and the same meaning, so there can be no infringement of Article 123 on this basis.

e) Feature 1.4:
"wherein the linearly projected cross-section (40) of each reflecting surface (32) comprises at least one of: a conic or a substantially conic shape"

Whereas dependent claim 3 of the original application disclosed each reflecting surface as comprising a conic or substantially conic shape, the respondent submitted that there is no disclosure of the linearly projected cross section having such a shape. The appellant submitted that it is clear that the linearly projected cross section has the same shape as the reflecting surface.

Article 123(3) EPC:

a) Feature 1.10

Both the respondent and the opposition division considered that the amendment of "each one of a plurality of LEDs (52)" to "each one of its associated LEDs (52)" extends the scope of protection.

They argued that granted claim 1 defines a reflector optic where each reflector receives light from each LED, whereas according to the amendment, each reflector receives light only from certain LEDs, ie those associated with it. Since these two embodiments are different, the scope of protection has been extended. As above, the appellant argued that it only makes technical sense if each reflector receives light from its associated LEDs, hence this is the meaning that would be considered by the skilled person.

b) Feature 1.6:

The respondent and opposition division also argued that the expression "relative to an associated reflecting surface (32) of said plurality of reflecting surfaces (32)" has a technical meaning, thus deleting it has broadened the scope of protection. The appellant argued that the expression merely repeated a feature already present in the claim, hence its deletion could not extend the scope of protection.

c) Feature 1.7:

The respondent submits that a "cross-section" is different from an "extrusion axis", hence an extension of protection results from the amendment. As summarised above, the appellant considered that in the context of the definition given in the claim, the two expressions have the same meaning.

d) Feature 1.9:

Granted claim 1 stated that each of the reflecting surfaces (32) "redirects" the light output, whereas claim 1 of the main request uses the term "reflects".

The respondent argues that "redirects" implies some sort of directing of the light output, whereas "reflects" can include scattering without imparting any particular direction to the light, hence has a broader meaning. The appellant was of the view that both terms have the same meaning.

Article 84 EPC:

The respondent submitted that the following expressions give rise to a lack of clarity:

- amendment of "linearly projected cross-section" to "extrusion axis" lacks clarity, since it is not apparent to which axis the extrusion axis refers;

- the reflecting surfaces are now defined as receiving light from "associated LEDs", but the meaning of the term "associated" lacks clarity;

- by amending "a" to "the" in feature 1.10 it becomes unclear as to what "the focal distance" refers;

- it is unclear which surfaces are being referred to in the expression "each one of the plurality of reflecting surfaces" in feature 1.10. The arguments of the appellant directed to the corresponding points raised under Article 123 EPC above are applicable here.

Rule 80 EPC:

The respondent submitted that the amendments defined in features 1.7 and 1.10 were carried out as a "clarifying amendment", as stated by the appellant in its letter of 12 September 2011.

The appellant argued that Rule 80 EPC includes a discretion for a board to allow an amendment, and the mere fact that an amendment may improve clarity does not mean that it is "not occasioned by a ground of opposition".

Auxiliary Request Zero

a) Admissibility

The respondent contested the admissibility of this request on the basis that a large number of requests had already been filed in the written stage of the proceedings. The appellant submitted

that it addressed the objections raised and discussed in the oral proceedings.

b) Article 123(2) EPC

The respondent raised the following additional objections.

- The expression "linear projected cross-section" does not define an axis. The expression does not have the same meaning as "extrusion axis", and it can refer to any axis of cross-section, not necessarily the axis of length.

The appellant argued that "linearly projected cross-section" is not a "cross-section", but indicates a direction. The only reasonable interpretation is that it concerns the direction of linear projection. This feature is disclosed in the application, for example, on page 1, line 25 and page 2, line 9.

- The responded submitted that there is no basis in the application for the feature of redirecting the light output of the LEDs in combination with the requirement that this occurs at about 90°.

The appellant referred to claim 13 of the application, which mentions directing the light, and submitted that "direct" and "redirect" have the same meaning in this context. In addition, Figure 12 shows redirected light at an angle of about 90°. The term "about" merely reflects the fact that in reality there is some spread to the beam.

Reasons for the Decision

1. The appeal is admissible.

Main Request

2. Article 123(3) EPC

Granted claim 1 contains the feature that each of the reflecting surfaces redirects and collimates the light output of a respective each one of the plurality of LEDs. This was amended by replacing the term "redirects" by "reflects". Whereas "redirects" simply indicates a change in direction, a light output that is reflected by a surface would in practice inevitably include scattering to some degree. It is therefore considered that the term "reflects" has a broader meaning than "redirects", and hence the amendment is contrary to Article 123(3) EPC.

3. Rule 80 EPC

The expression "linearly projected cross-section" in granted claim 1 was replaced by the term "extrusion axis".

The disputed patent consistently uses the expression "extrusion axis (44)" to indicate a geometrical direction rather than to imply that the reflectors have been made by extrusion. This expression is equated to the linearly projected cross-section (40), as set out for example in paragraphs [0011] and [0039] of the published patent specification. The Board therefore

agrees with the appellant, that the two expressions have the same meaning. Since there is no difference in meaning, the amendment cannot be said to be occasioned by a ground for opposition, as is required by Rule 80 EPC.

4. In summary, claim 1 of the main request does not meet the requirements of either Article 123(3) EPC or Rule 80 EPC, and consequently is not allowable.

Auxiliary Request Zero

5. Admissibility

The respondent contested the admissibility of auxiliary request zero into the proceedings, since a large number of requests had already been submitted in the written proceedings.

It is however appropriate to admit this request, since it was filed in response to the points discussed during the oral proceedings. In addition, the request does not give rise to any issues that have not already been dealt with.

6. Article 123 EPC

6.1 In addition to the objections specifically directed to claim 1 of auxiliary request zero, as raised by the respondent during the oral proceedings, consideration is given to those objections concerning the main request which are also of relevance here.

6.2 Regarding the disclosure of features in different embodiments, this does not automatically mean that they cannot be combined without infringing Article 123(2)

EPC; the test is whether the skilled person would consider such a combination from the disclosure as a whole.

The features depicted in Figures 1 to 9, 12, 13 and 16a can be considered together, as indicated in the description of the drawings on pages 2 to 4 of the application. Furthermore, the embodiments described at the top of page 6 represent either details or developments of the beacon light shown in Figures 1 and 2. Consequently, the information presented in these Figures and the corresponding explanations in the description can provide a basis for the amendments.

6.3 Concerning feature 1.10 ("each one of the plurality of reflecting surfaces receives light from each one of its associated LEDs from the focal distance of said associated one of said plurality of reflecting surfaces"), the respondent and the opposition division considered that more features are disclosed in the embodiment depicted in Figures 1 and 2 than just the position of the LEDs with respect to the reflective surfaces, hence the amendment amounted to an intermediate generalisation contrary to Article 123(2) EPC. However, the positioning of the LEDs with respect to the reflective surfaces is independent of the other constructional features shown in Figures 1 and 2. The further features shown in these embodiments, such as a hexagonal reflector optic, are not required for achieving the required light intensity distribution, and the application as filed (page 7, lines 27 to 31) explicitly states that a polygon shape is not necessary. Consequently, there is support for the amendment and no intermediate generalisation.

6.4 Also concerning feature 1.10, it is clear from Figures 2, 4, 6, 20 together with the disclosure in lines 8 to 10 on page 6 that the device can comprise a plurality of reflecting surfaces and a plurality of LEDs positioned at the focal distance of the reflecting surfaces. By positioning LEDs at the focal distance of a reflecting surface the LEDs become "associated" with that particular reflecting surface, thus each reflector cannot receive light from each LED, but only from those associated with it. Likewise, the term "respective" in feature 1.9 ("each one of the reflecting surfaces reflects and collimates a light output of a respective each one of a plurality of LEDs") has the same meaning as "associated".

Granted claim 1 defined a reflector optic where each reflector receives light from each LED, whereas according to the amended feature 1.10, each reflector receives light only from certain LEDs, i.e. those associated with it. Since these two embodiments are different, the respondent and the opposition division argued that the scope of protection has been extended (Article 123(3) EPC).

However, both granted claim 1 and present claim 1 clearly require that each reflecting surface has associated LEDs, and consequently there can be no extension of the scope of protection. In particular, both claims define that "each one of the plurality of LEDs is positioned in a line parallel to said linearly projected cross-section (40) of an associated one of said plurality of reflective surfaces (32)". The interpretation adopted by the respondent and the opposition division is not realistic.

6.5 The respondent submitted that amending "a focal distance" in granted claim 1 to "the focal distance" is contrary to Article 123(2) EPC, since the specific focal distance to which the feature refers is not apparent from the application. However, present claim 1 defines "the focal distance of said associated one of said plurality of reflecting surfaces (32)". The disclosure of the reflecting surface to which "the focal distance" relates is clear.

6.6 Regarding feature 1.9 ("…each one of the reflecting surfaces (32) redirects and collimates a light output… of LEDs at an angle of about 90°…"), Figure 8 and the description (page 5, lines 14 to 17) describe the angle θ_A between light emitting axis (56) and optical axis (36) as being about 90°. According to the respondent this does not disclose that the angle between the light emitting axis and the redirected/collimated light is also about 90°.

The respondent also argues that claim 1 defines the reflecting surfaces to be conic or substantially conic in shape, for which there is no disclosure of redirecting light at 90°, as this can only be achieved by a reflector having a parabolic cross-section.

Although the claim is directed to reflecting surfaces having a conic shape in general, it is nevertheless clear that the claimed subject-matter is limited to a reflector having a parabolic or substantially parabolic shape.

The combination of features 1.8, 1.9 and 1.10 clearly restrict the optical system to one having a substantially parabolic reflector with the LEDs located at its focus. In particular, these features define on

the one hand an angle of about 90° between the light emitting axis of the LEDs and the optical axis of the associated reflecting surface, and on the other hand the direction of reflected light; the position of the LEDs is defined as being at the focal distance of the associated reflecting surfaces.

Such an arrangement is disclosed in the application: the cross-section of the reflecting surface is described at page 5, lines 1 to 6 as being conic, and several shapes are given as examples, one of which is a parabola. From the discussion on page 11, lines 17 to 27 of Figures 16A, 16B and 12, it is apparent that the reflector shown in Figure 12 is parabolic. Page 5 (lines 14 to 18) goes on to say that the LED (52) is positioned relative to the reflecting surface such that the angle between the light emitting axis and the optical axis is about 90°. This disclosure in combination with Figure 12 indicates that the light emitting axis of LED (52) and the optical axis (36) of the reflector of Figure 12 are at about 90° to each other. It thus follows that the angle between the emitted and reflected light is also about 90°, since the reflected light is said to travel parallel to the optical axis (36) (lines 30 to 33 of page 10).

6.7 Both the respondent and the opposition division considered that deletion from granted claim 1 of the feature "relative to an associated reflecting surface of said plurality of reflecting surfaces" (feature 1.7) was contrary to Article 123(3) EPC, since this feature has a technical meaning, and hence its deletion broadened the scope of the claim. However, the position of LEDs relative to the associated reflecting surface is already defined in feature 1.7 ("each one of the plurality of LEDs is positioned in a line parallel to

said linearly projected cross section (40) of an associated one of said plurality of reflecting surfaces"). Deletion of a duplicated feature does not extend the scope of protection.

6.8 Concerning the replacement of the expression "extrusion axis" by "linearly projected cross-section", it is considered that these expressions have the same meaning (see point 3 above). It is clear that the linearly projected cross-section must refer to the longitudinal axis, as is disclosed in Figure 2 - any other direction of cross-section does not make technical sense.

6.9 The replacement of "reflects" by "redirects" is derivable from the application. Light that is redirected is considered to have less of a beam spread than light that is reflected (see point 2 above). Claim 13 of the original application refers to directed light having a beam spread of less than 10°. This is also disclosed in the application on page 11, lines 19 to 23, where it is said that the light reflected parallel to the optical axis has increased collimation, i.e. diffusion is excluded and the light is redirected at 90°. As submitted by the appellant, redirected rays are also shown in Figure 12 as being at about 90°.

6.10 In summary, the claims of auxiliary request zero meet the requirements of Article 123 EPC.

7. Article 84 EPC

The objections raised by the respondent under Article 84 EPC (see above) concern points discussed above in the context of Article 123 EPC, hence claim 1 is considered to meet the requirements of Article 84 EPC for the same reasons.

In addition, the expressions "associated LEDs" and "each one of the plurality of reflecting surfaces" (in feature 1.10) were not the subject of amendment, and hence are excluded from consideration in opposition appeal proceedings.

8. The above conclusions apply equally to the subject-matter of independent claims 14 and 17.

9. Remittal

The decision of the opposition division only concerns issues arising under Article 123 EPC (Article 100 (c) EPC). It is thus necessary to remit the case to the opposition division for consideration of the other grounds of opposition raised by the opponent under Articles 100(a) and (b) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance for further prosecution on the basis of the claims of auxiliary request zero.

The Registrar: The Chairman:

C. Spira U. Krause

Decision electronically authenticated