



Patent Owner Signify's Demonstratives

IPR2024-00101, -01469



**Luminex Int'l Co. Ltd. and Menard Inc., *Petitioners*,
v. Signify Holdings B.V., *Patent Owner***

U.S. Patent No. 10,299,336

June 11, 2025 Oral Hearing



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Signify Ex. 2053
Luminex v. Signify
IPR2024-00101

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Summary

- I. The '336 Patent
- II. Claims 13, 15 and 16 Have a 2016 Priority Date
- III. Claim 13 and Its Dependents
 - A. The Petition's Failures Concerning Reiff
 - B. The Petition's Failures Concerning Chaimberg and Roberge
 - C. The Petition's Failures Concerning Halliwell
- IV. Claim 1 and Its Dependents
 - A. The Petition's Failures Concerning Chaimberg and Roberge
 - B. The Petition's Failures Concerning Halliwell

The '336 Patent

 US010299336B2	
(12) United States Patent Bowen et al.	(16) Patent No.: US 10,299,336 B2 (45) Date of Patent: May 21, 2019
(54) CONFIGURABLE LIGHTING SYSTEM	(78) Field of Classification Search CPC: ... H05D 7/02; H05D 13/00; H05D 13/04; H05D 13/06; F21K 8/02; F21S 8/02; (Continued)
(71) Applicant: Eaton Intelligent Power Limited , Dublin (IE)	(56) References Cited U.S. PATENT DOCUMENTS 6,127,783 A 10/2000 Pothier et al. 6,146,283 A 11/2000 Cunniff et al. (Continued)
(72) Inventor: John Edward Bowen , Stargrove, GA (US); Raymond Jarrin , Fayetteville, GA (US)	(57) FOREIGN PATENT DOCUMENTS CN 20084027 S2011 (Continued)
(73) Assignee: EATON INTELLIGENT POWER LIMITED , Dublin (IE)	(58) OTHER PUBLICATIONS Test Report of California Appliance Efficiency Compliance for Permanently Installed High Efficiency LED's under Title 24, issued Nov. 18, 2015. (Continued) Primary Examiner — Jimmy T Vu (74) Attorney, Agent, or Firm — King & Spalding LLP
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 156(b) by 0 days.	(77) ABSTRACT A luminaire can include a housing having at least one outer surface that forms a cavity. The luminaire can also include at least one electrical component disposed, at least in part, within the cavity. The luminaire can further include an electrical cable having a first end and a second end, where the first end is coupled to the at least one electrical component. The luminaire can also include a switch coupled to the electrical cable, where the switch is disposed remotely from the housing, where the switch has multiple positions, wherein each position of the switch corresponds to a discrete combined color temperature (CCT) output by one or more
(21) Appl. No.: 16/014,394	
(22) Filed: Jun. 21, 2018	
(65) Priority Publication Data US 2018/01081 A1 Oct. 25, 2018	
(67) Related U.S. Application Data Continuation-in-part of application No. 15/811,062, filed on Nov. 15, 2017, which is a continuation of (Continued)	
(51) Int. Cl. H05D 13/00 (2006.01) F21V 23/00 (2015.01) (Continued)	
(52) U.S. Cl. CPC: ... H05D 13/0016 (2015.01); F21V 23/00	

Filed: June 21, 2018
Provisional: February 19, 2016

- Disclosed a single device adaptable for multiple applications/customers by, e.g., delivering multiple CCT options at the device

nently attached to the luminaire. Stocking conventional light-emitting-diode-based luminaires at distribution to accommodate multiple configurations that users may desire can entail maintaining a relatively large or cumbersome inventory.

Luminex v. Signify
Luminex Exhibit 1001
Page 001

Need is apparent for a technology to provide a light emitting diode system that can adapt to various applications, for example by delivering multiple color temperatures, multiple lumens, and/or multiple photometric distributions. Need further exists for a capability to enable a single luminaire to be stocked at distribution and then quickly configured according to application parameters and deployment dictates. Need further exists for luminaires that are

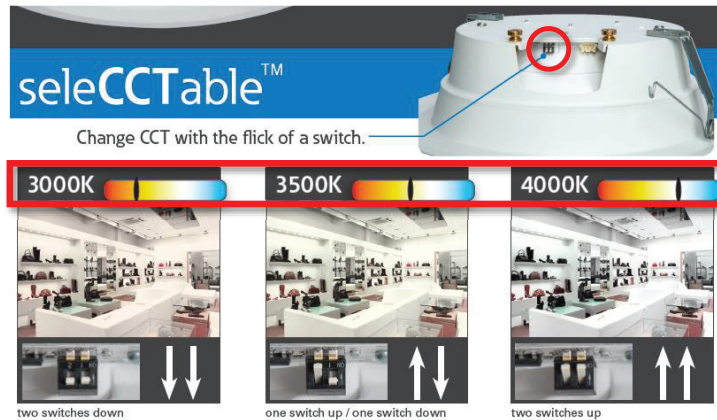
Ex. 1001, 1:45-57

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POR, 3-5 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The '336 Patent – The PR8 Products



Ex. 2036 at 2

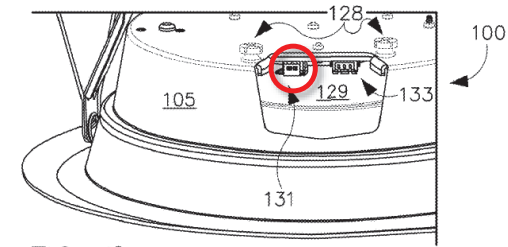


FIG. 1I

Switch 1	Switch 2	LED 1 3,000K	LED 2 4,000K	Resulting Color Temp
On	Off	On	On	3,500K
Off	On	On	On	3,500K
On	On	On	Off	3,000K
Off	Off	Off	On	4,000K

FIG. 3

Ex. 1001 ('336 Patent), Figs. 1I, 3



Eaton's Halo Color Selectable LED Downlights allow users to change the light's color temperature with a flick of a switch, bypassing the need for professionals to carry different lighting products for different color temperatures. The standard Halo downlight allows the color temperature to be set during installation, while the Halo Home allows homeowners to change their light's color temperature at any time via smartphone app.

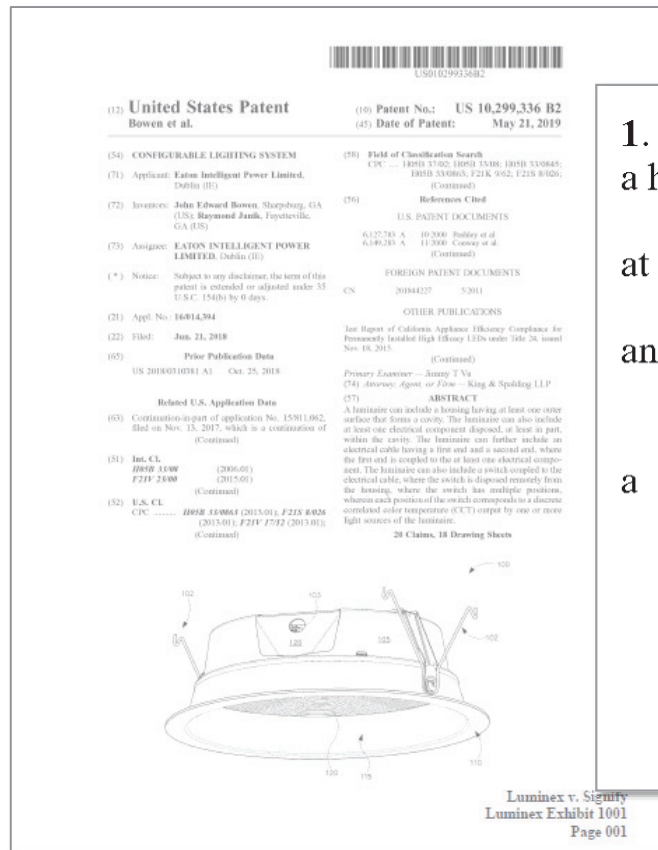


"Working with Eaton, we were able to deliver this at the same retail or less than the dedicated color temperature product before," says Kevin Doughty, merchant of commercial and recessed lighting at Home Depot. "Just a great, huge, awesome innovation, and a great value for our customers that's exclusive to Home Depot."

Ex. 2040 at 2

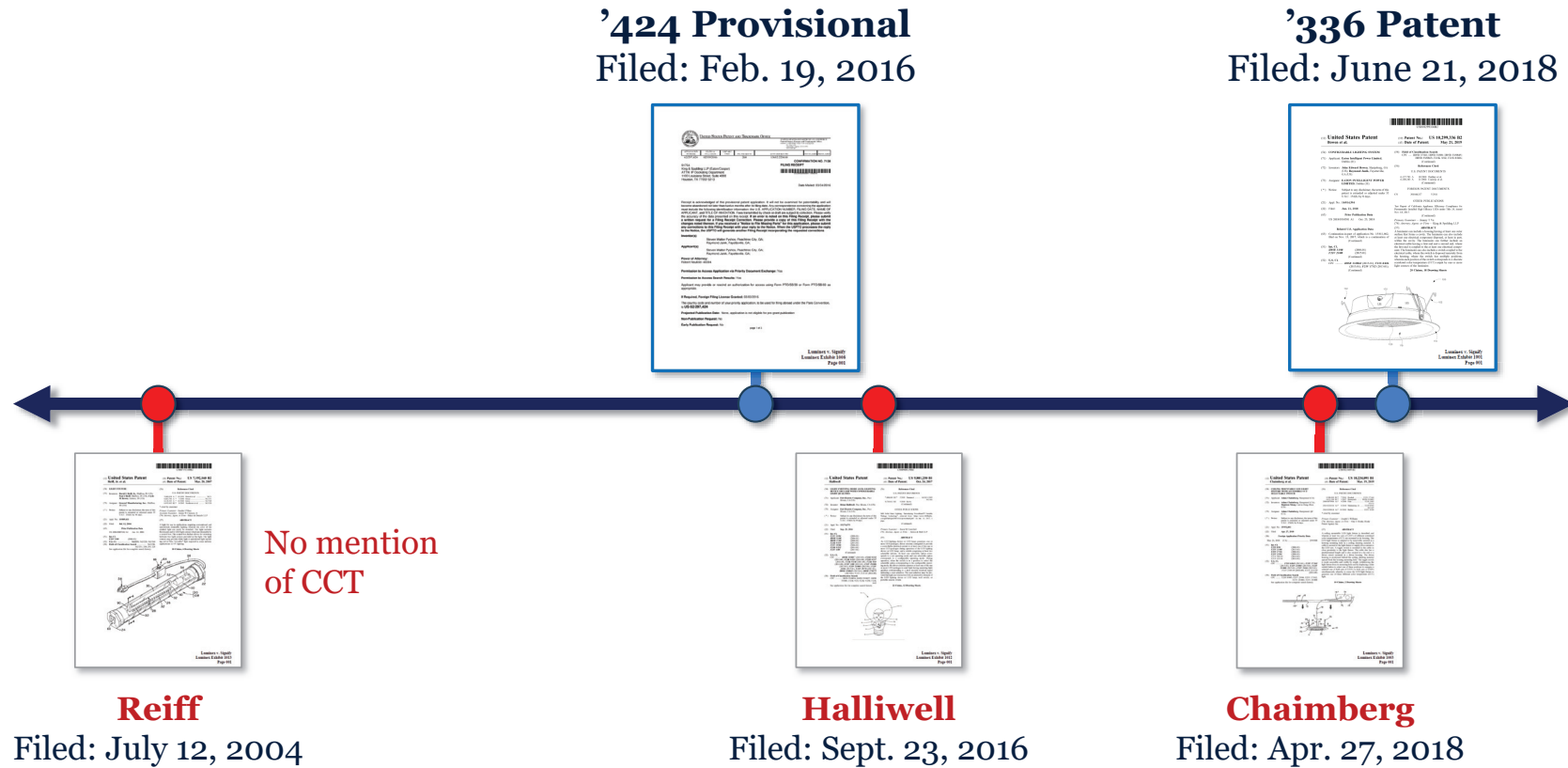
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The '336 Patent – Independent Claims



1. A luminaire comprising:
 - a housing comprising at least one outer surface that forms a first cavity;
 - at least one electrical component disposed, at least in part, within the first cavity;
 - an electrical cable comprising a first end and a second end, wherein the first end is coupled to the at least one electrical component; and
 - a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing, wherein the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire.

The '336 Patent – Timeline



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POR, 30-31, 34 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE



Claims 13, 15 and 16 Have a 2016 Priority Date

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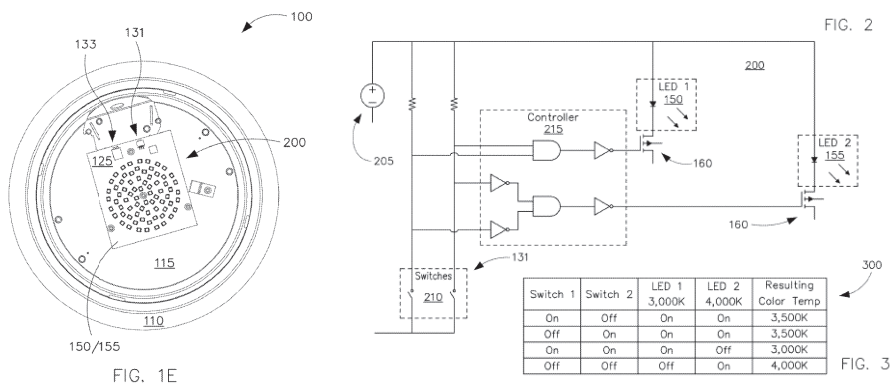
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The '424 Provisional

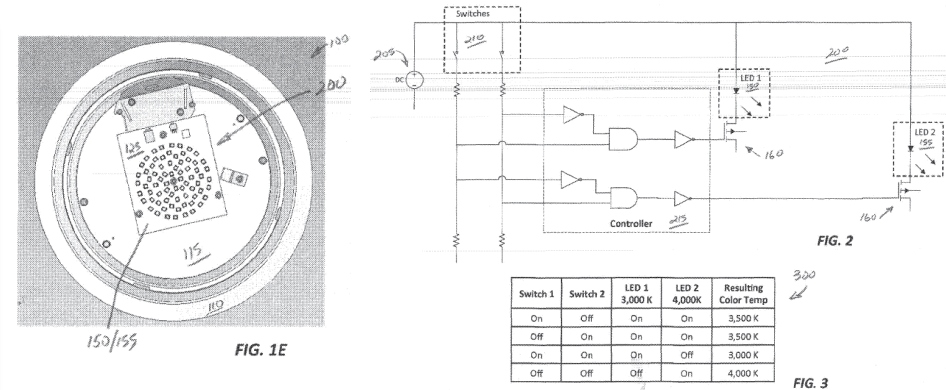
'336 Patent



The dual inline pin switch 131 comprises individual switches 210 that provide an input for configuring the luminaire 100 to operate at a selected color temperature.

Ex. 1001, 7:22-24

'424 Provisional



Switches 210 provide an input for configuring the luminaire 100 to operate at a selected correlated color temperature. ... In some embodiments, the switches 210 comprise dual inline pin (DIP) switches.

Ex. 1008, 5:12-28

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POR, 3-4, 11-14; Ex. 2031, ¶¶ 46, 75-81

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Claims 13, 15 and 16 are Supported

13. A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:
a body;
at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and
an actuator disposed on the body, wherein the actuator has a range of positions,
wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire.

15. The switch of claim **13**, wherein each position is discrete within the range of positions.

16. The switch of claim **15**, wherein the range of positions comprises a first position, a second position, a third position, a fourth position, and a fifth position.

Claim 13: Luminex's Reply Only Disputes One Limitation

13. A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:		(POR, 11-14)
(a) a body;		(POR, 14-15)
(b) at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire ; and	Only Dispute: Highlighted Text	(POR, 16-21)
(c) an actuator disposed on the body, wherein the actuator has a range of positions,		(POR, 21-23)
(d) wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire.		(POR, 23-24)

Luminex's Expert Admits Claim 13 Supported

Luminex's Expert (Dr. Eden):

Q. But DIP switch can be used as a CCT switch?

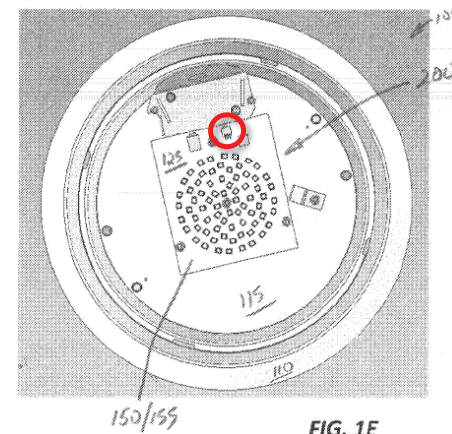
A. If you use it in a particular circuit that draws very little current through the switch.

Q. In that scenario, **a DIP switch**, in your opinion, **would have the limitations of claim 13**, like the other switches you mentioned?

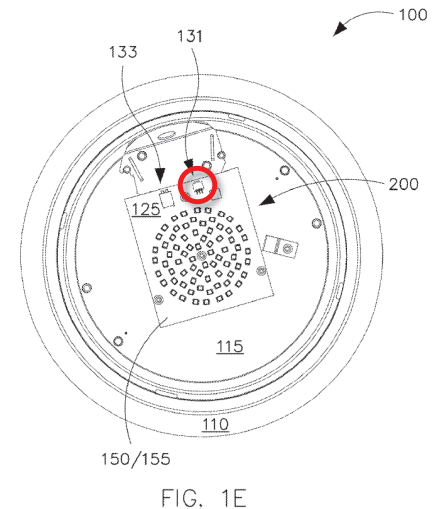
A. **Yes**. In the configuration shown in the **'336 patent**, but not in others.

Ex. 2030, 225:23-226:8

'424 Provisional:



'336 Patent:



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POR, 11, 16-21 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

“at least one first coupling feature disposed on the body”

“first coupling feature” is provided by pins disposed on DIP switch body

Luminex’s Expert (Dr. Eden):

Q. And that’s the ... **square body of the DIP switch** we see from a top view in Figure 1E, correct?

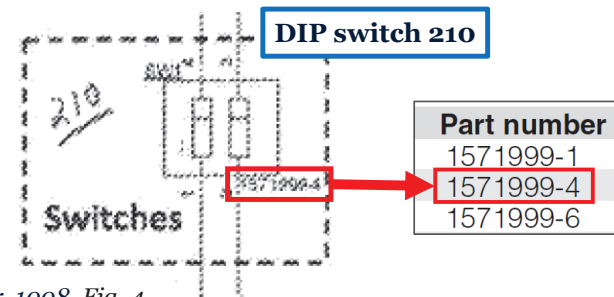
A. **Yes.**

Q. And in this diagram, the **DIP switch 131 is mounted on circuit board 125**; is that right?

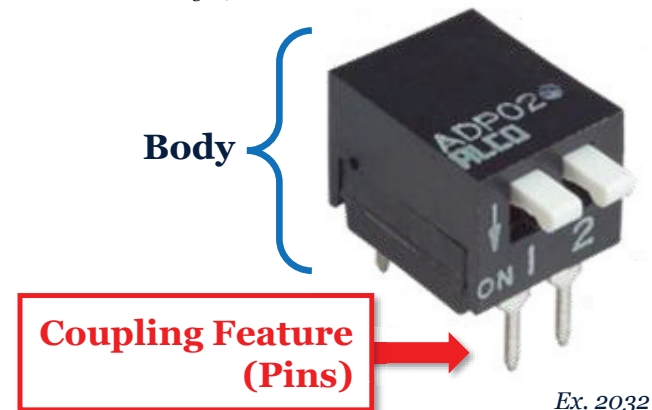
A. Well, it’s certainly lying on it. I assume that it’s actually inserted ...

Q. And by “inserted,” are you referring to **pins on the DIP switch body** that would be inserted into the circuit board?

A. **That’s normally how it’s done, yes.**



Ex. 1008, Fig. 4



Ex. 2032

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POR, 14-21, 25 (also citing Exs. 2029, 2033);
Ex. 2031, ¶¶ 77-78

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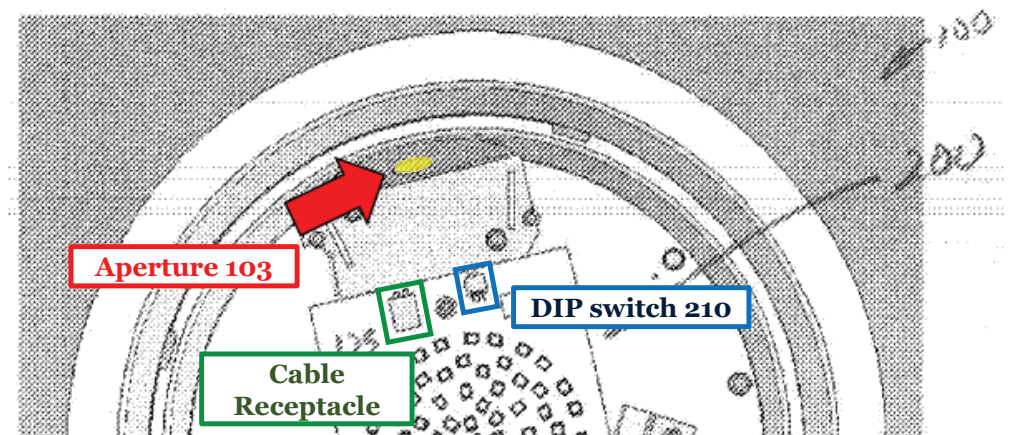
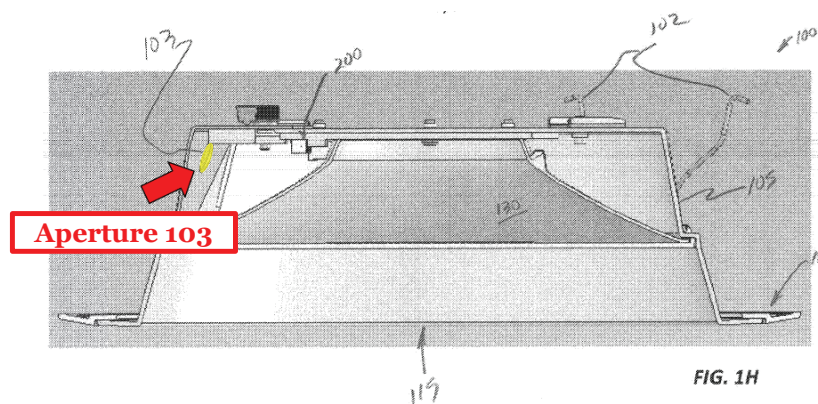
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

“configured to electrically couple to an electrical cable of the luminaire”

'424 Provisional:

The illustrated example luminaire 100 of Figure 1 comprises a circular housing 105 ... **Electrical wiring (not illustrated) extends through a wiring aperture 103 in the housing 105.**

Ex. 1008, 4:19-25, Figs. 1E, 1H



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POR, 16-21; Ex. 2031, ¶¶ 84-93

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

“configured to electrically couple to an electrical cable of the luminaire”

Signify's Expert (Dr. Krames):

90. I note that Figure 1E of the '424 Provisional discloses a **receptacle** (also labeled “133” in the corresponding figure in the '336 Patent) on substrate 125 near aperture 103 for **receiving power from the electrical cable** ...

Ex. 2031, ¶ 90

92. A POSITA would have understood from these disclosures that an **electrical cable (or “wiring”)** passes through aperture 103 and connects to substrate 125 to power the electrical circuit on the substrate, such that the **pins disposed on the body of the DIP switch are electrically coupled to the electrical cable via substrate 125** on which the DIP switch is mounted. ...

Ex. 2031, ¶ 92

Luminex's Expert (Dr. Eden):

Q. Could an **electrical cable**, as recited in the patent claims, **be a single wire**?

A. I don't know. If it met all of the requirements of the claim elements, then, **yes**. ...

Ex. 2030, 107:9-22

Luminex's Arguments Contradicted By Its Own Expert

Luminex's Argument: "House Wiring"

Luminex's Reply:

Thus, in implementations of the '424 Provisional using the "[e]lectrical wiring (not illustrated)," this refers to "existing wiring in the house" that *could* provide power to the LED driver, and such house wiring is not a cable of the luminaire.

Reply, 16-17

Luminex's Expert (Dr. Eden):

Q. Is it your opinion that the electrical wiring referenced in the '424 provisional could be house wiring?

A. **No, I don't think there's any reason to believe that.** ...

Ex. 2052, 140:23-141:2

Luminex's Arguments Contradicted By Its Own Expert

Luminex's Argument: "House Wiring"

Luminex's Expert (Dr. Eden):

Q. A luminaire also could have existing house wiring wired into it to connect it to power, correct?

A. ... I believe you're describing hard wiring. Are you describing having an electrician come in and take a 13/2 wire out of the wall and bring it to my luminaire? ...

Q. Yes. For example, that could be one way to power a LED luminaire, correct?

A. Would you want to do that, Mr. Dorsky?

Q. Well, I'm asking you if that's something you could do.

A. I could, but **I think I'd have my head x-rayed if I did that.**

Ex. 2030, 90:11-91:11

Luminex's Arguments Misrepresent the Record

Luminex's Argument: "Battery"

Luminex's Reply:

Dr. Krames conceded that the '424 Provisional's luminaire could be battery powered, such that switches 210 would not be electrically coupled to **any** electrical cable.

Reply, 17-18



Dr. Krames' Actual Testimony:

Q. Could a luminaire be powered by a battery, for example?
A. Yes.

Ex. 1031, 100:8-10

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Luminex's Expert (Dr. Eden):

Q. Now, the word "battery" does not appear anywhere in the provisional, correct?

A. **No.** ...

...

Q. In these figures of the provisional application, there is no depiction of a battery in any of Figures 1A through 1H, correct?

A. **That's true.** ...

...

Q. ... I'm asking you if the provisional luminaire was battery powered, what would be the purpose of electrical wiring extending through an aperture in the luminaire housing as described in the provisional?

A. **The answer is that I don't know.** ...

Ex. 2052, 142:7-9, 143:12-15, 147:18-148:1

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Sur-Reply, 4-5 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claims 16 is Supported By the Provisional

16. The switch of claim 15, wherein the range of positions comprises a first position, a second position, a third position, a fourth position, and a fifth position.

'424 Provisional:

Switches 210 provide an input for configuring the luminaire 100 to operate at a selected correlated color temperature. In the illustrated embodiment, the circuit 200 comprises two manual switches 210. Other embodiments may have fewer or more switches 210. In some embodiments, the switches 210 comprise dual inline pin (DIP) switches.

Ex. 1008, 5:12-16

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More switch positions available at the time

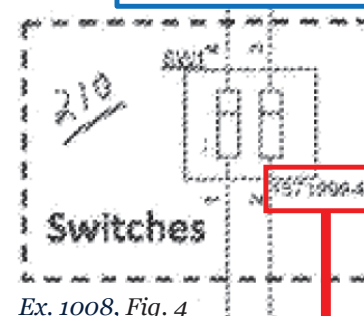


ADP Series



Product key	Positions	Mounting	Packaging	Part number
ADP0204	2	THT	tube	1571999-1
ADP02STR04		SMT	tape and reel	1571999-4
ADP0404	4	THT	tube	1571999-6
ADP04STR04		SMT	tape and reel	1571999-9
ADP0604	6	THT	tube	1-1571999-6
ADP06STR04		SMT	tape and reel	1-1571999-9
ADP0804	8	THT	tube	2-1571999-6
ADP08STR04		SMT	tape and reel	2-1571999-9
ADP1004	10	THT	tube	3-1571999-6
ADP10STR04		SMT	tape and reel	3-1571999-9

DIP switch 210



Ex. 1008, Fig. 4

Ex.2029, 15

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POR, 25-26; Sur-Reply, 7-8

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claims 16 is Supported By the Provisional

Signify's Expert (Dr. Krames):

102. A POSITA would have understood, particularly in view of the '424 Provisional's disclosure (including Figures 2, 3 and 4), that such exemplary DIP switches may include additional actuator positions to provide access to additional discrete CCT outputs, including the five positions recited in Claim 16. For example, a POSITA considering Figures 2, 3 and 4 and their associated descriptions would have readily understood that the depicted DIP switch is used for illustrative purposes, and that, when using more than two sets of LEDs (e.g., a set of LEDs in addition to LEDs 150 and 155), one could use a DIP switch having at least five positions, to select additional CCT outputs.

Ex. 2031, ¶ 102

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Luminex's Expert (Dr. Eden):

Q. Now the DIP switch illustrated in the '336 patent has two switches, correct?

A. There are two switches in the DIP package, correct.

Q. But DIP switches with three, four, five switches were available prior to February 2016, correct?

A. Yes. They can come in different numbers of individual SPST switches.

Ex.2030, 73:8-15

Q. So it's your opinion that by disclosing a switch with three positions, Chaimberg was in possession of a switch having five positions corresponding to five CCT settings; is that right?

A. I wouldn't say that Chaimberg has -- he did, I think, in the sense you intended. But I would say speaking much more largely, the community has the switch. And it was well known, not only by Chaimberg but everybody.

Ex.2052, 104:21-105:8

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POR, 25-26; Sur-reply, 7-8

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE



The Petition Fails to Demonstrate Unpatentability for Claim 13 or Its Dependents

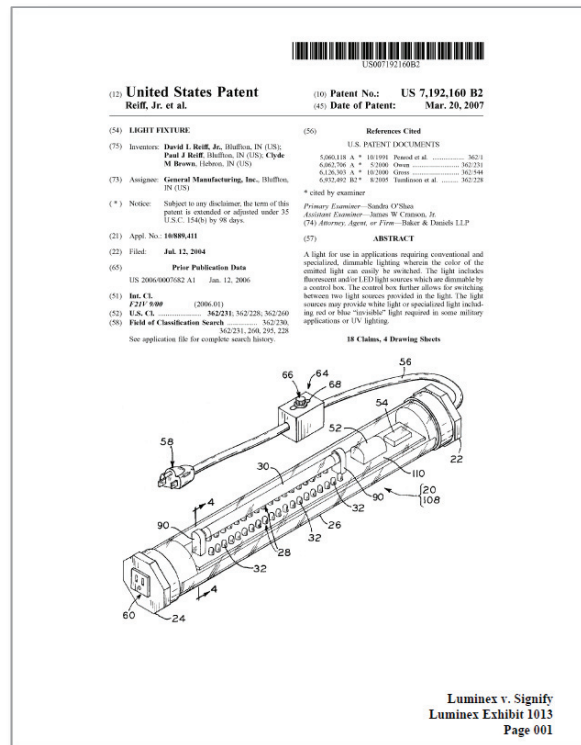
The Petition Fails for Claim 13 & Dependents



Chaimberg (Grounds 1a/1b) and Halliwell (Ground 2)
NOT Prior Art to Claims 13, 15 or 16

- **Ground 3: Reiff**
 - Element 13(d): The Petition Fails to Demonstrate Reiff Discloses a CCT Switch
 - Limitations 13(a) and (b): The Petition Fails to Identify a Switch “Body” or “Coupling Feature Disposed On the Body”
- **Grounds 1(a) and 1(b) : Chaimberg Alone / Chaimberg with Roberge**
 - Limitations 13(a) and (b): The Petition Fails to Identify a Switch “Body” or “Coupling Feature Disposed On the Body”
 - The Petition Fails to Demonstrate Obviousness
- **Ground 2: Halliwell**
 - Limitations 13(a) and (b): The Petition Fails to Identify a Switch “Body” or “Coupling Feature Disposed On the Body”

Reiff (Ex. 1013): Light Source Selection



Ex. 1013

The present invention relates to lighting having **multiple sources of light** particularly useful for **specialized industrial or military applications**. In particular, this invention relates to such a light wherein **the color of light emitted can be changed by an in line switch**.

When specialized lighting is used or is necessary for a task, **the light having a red, blue, infrared, or UV light source** is often a portable light which must be transported between areas. These specialized lights may not be large enough to illuminate a large tent as a, e.g., command center or curing room. Alternatively, if the lights are large, they are cumbersome and not easily transferred between areas.

It is desired to provide a **light having the capability of producing both conventional and specialized light colors** for an area while being sturdy and durable enough to endure harsh and extreme environments, and **wherein the color of the emitted light can be switched** by means of an in line switch.

Ex. 1013, 1:6-10, 1:43-55

Claim 13(d): Reiff Does Not Disclose CCT Selection

Element 13(d) Requires that Each Position of the Switch Actuator Correspond to a Correlated Color Temperature (CCT) of Emitted Light

13. A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:

a body;

at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and

an actuator disposed on the body, wherein the actuator has a range of positions,

wherein **each position** of the range of positions of the actuator **corresponds to a CCT of the light** emitted by the luminaire.

Claim 13(d): Reiff Does Not Disclose CCT Selection

CCT Refers to White Light

The **color temperature (CT)** of a **white light source**, given in units of kelvin, is the temperature of a planckian black-body radiator that has the same chromaticity location as the white light source considered.

If the color of a white light source does not fall on the planckian locus, the **correlated color temperature (CCT)**, also given in units of kelvin, is used. The correlated color temperature **of a white light source** is defined as the temperature of a planckian black-body radiator **whose color is closest to the color of the white light source**.

Ex. 2044, 309

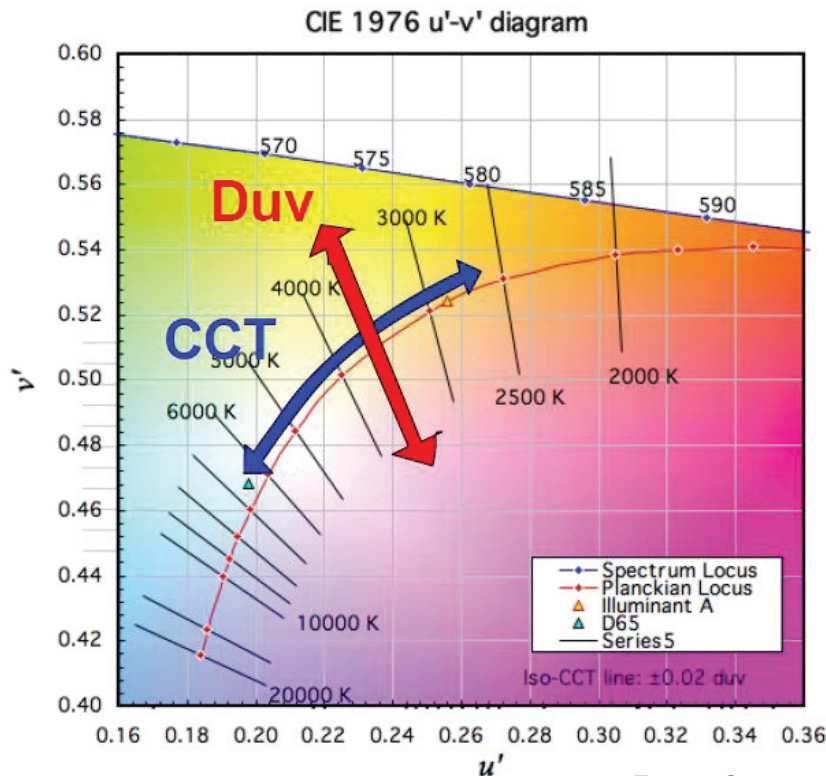
6.4 Limits to applicability

The CCT is used to express the chromaticity of a light stimulus in one number ... Based on the concept of CCT, **this term applies only to white light stimuli and should not be used for coloured light sources**.

Ex. 2050, 6

Claim 13(d): Reiff Does Not Disclose CCT Selection

“Color” does NOT = CCT



Luminex's Expert (Dr. Eden):

Q. So if light is **the color red** but it's not on this curve, that color red light **would not have a CCT**?

A. **That is correct.** That is correct. ...

Ex. 2052, 220:8-16

Luminex's Evidence:

That is, with all other factors being equal, **two lights with the same CCT can vary in appearance**; this variation is generally in the pink-green dimension. Likewise, light sources with the same Duv value can vary in the blue-yellow dimension.

Ex. 1042; Ex. 2052, Ex. A at 2-3

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POR, 31-34; Sur-Reply, 9-11; Ex. 2031, ¶¶ 120-127

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claim 13(d): Reiff Does Not Disclose CCT Selection

NO DISPUTE Reiff does not mention the concept of “CCT” *at all*

Luminex’s Expert (Dr. Eden):

Q. Now, the term “correlated color temperature” does not appear in Reiff, correct?

A. **That is correct.**

Q. And the word “temperature” on its own does not appear in Reiff, correct?

A. No, he refers to -- you are correct. ...

Q. And just to be clear, the word -- or the term “CCT” does not appear in Reiff, correct?

A. **That is true.** ...

...

Q. And Reiff doesn’t provide the CCT values of the light outputted by those sources, correct?

A. **He does not.**

Ex. 2030, 148:5-150:2

Claim 13(d): Reiff Does Not Disclose CCT Selection

Selection between two different light sources does NOT disclose CCT selection

Luminex's Expert (Dr. Eden):

Q. You could have two different types of light sources, one LED and one non-LED that output light at the same color temperature, correct?

A. It could, yes.

Ex. 2030, 48:22-49:1

Q. So if someone told you they had two sources of white light, you would need to know the CCT of each source to determine if they're the same or different colors?

A. Exactly. Isn't that why we call one CCT, quote, warm light, and another one cool light? Isn't that exactly what's happening?

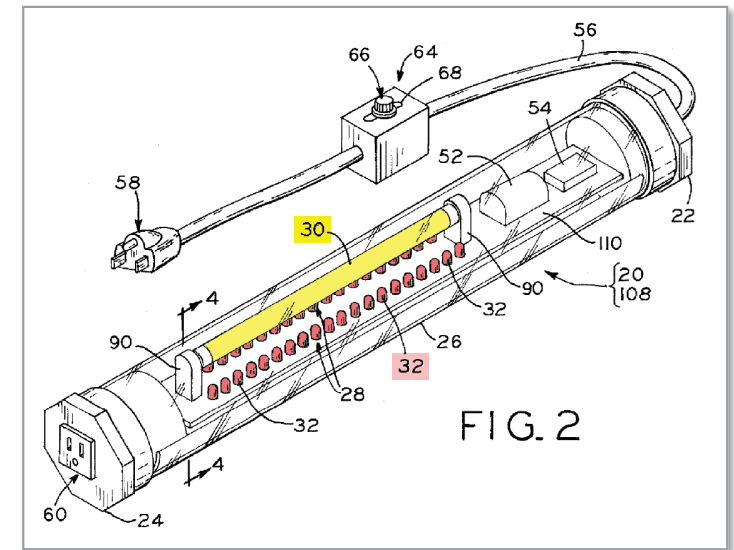
Ex. 2052, 261:13-20

Claim 13(d): Reiff Does Not Disclose CCT Selection

SUMMARY:

- ✗ Reiff does not mention the concept of CCT at all, much less CCT selection
- ✗ Reiff does not disclose the CCT output of any disclosed light source
- ✗ CCT is not used to describe colored light sources, and Reiff's LED light source is a “colored” LED light source (“emitting red, blue, or UV light”)
- ✗ Fluorescent and LED light sources do not necessarily emit light having different CCT values
- ✗ Even if the LEDs are assumed to emit white light (not disclosed), that still does not suggest different CCT values

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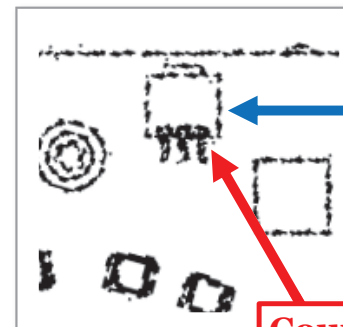
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claim 13(a) & (b): Switch “Body” and “Coupling Feature”

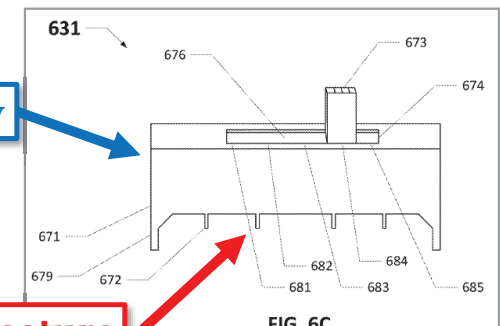
13. A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:
a body;
at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and
an actuator disposed on the body, wherein the actuator has a range of positions,
wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire.

Ex. 1001, Cl. 13

'336 Patent DIP Switch



'336 Patent Slide Switch



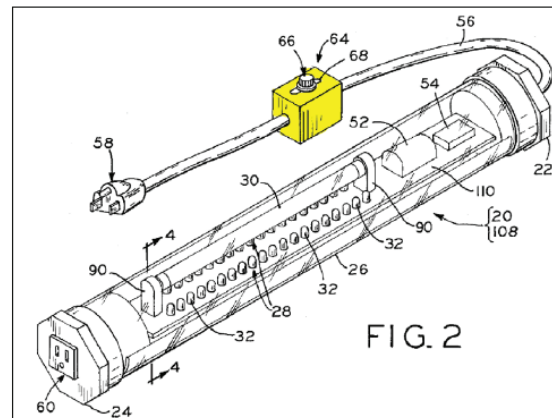
Ex. 1001, Figs. 1E, 6C

Claim 13(a): The Petition Failed to Identify a Switch “Body” in Reiff

Petitioner identified Control Box 64 as the “body”

Luminex’s Expert (Dr. Eden):

is ... linearly slidable in slot 68.” Ex. 1013, 4:28-36. As shown in Fig. 2 below, the control box 64 necessarily includes a body portion for the switch. The portion of the control box 64 that forms a body for the switch has been highlighted in yellow in reproduction of Fig. 2 below.



Ex. 1013, Fig. 2 (color added).

Claim 13(a): The Petition Failed to Identify a Switch “Body” in Reiff

Control Box 64 is NOT a switch “body”

Signify’s Expert (Dr. Krames):

137. A POSITA would have understood the portion of Figure 2 highlighted by Dr. Eden to at most depict the outer surfaces of a separate “control box” within which a switch (and other components) may be located, as described by Reiff. Ex. 1013, 4:28-39 (“control box 64 may include switch 66”). In other words, the highlighted control box 64 is entirely separate from switch 66 described in Reiff, and thus a POSITA would not have understood the surfaces highlighted by Dr. Eden to correspond to a switch “body.”

Ex. 2031, ¶ 137

Luminex’s Expert (Dr. Eden):

Q. And according to that same paragraph, 341, the last sentence at the bottom of 142, you state, the portion of the control box 64 that performs a body for the switch has been highlighted in yellow in reproduction of Figure 2 below. Correct?

A. That’s what it says. That statement was an oversight. I missed that in the review of the declaration. ...

...

A. My testimony today is that it could be the body of the switch. It depends on the nature of the switch and the way it was manufactured. ...

Ex. 2030, 139:21-141:23

Claim 13(b): The Petition Failed to Identify a “Coupling Feature” in Reiff

The Experts Agree Reiff does NOT disclose any “coupling feature disposed on the body”

Institution Decision:

In particular, **Petitioner does not show** where Reiff describes the claimed “first coupling feature” as “**disposed on the body**” instead of “disposed in the body.”

Inst. Dec., 61

Signify’s Expert (Dr. Krames):

142. Furthermore, **Reiff is silent as to the contents of control box 64**, and **does not describe**, for example, how switch 66 is constructed, or how it operates or **whether or not it has any “coupling feature”** (configured to couple with cable 56 or otherwise). ...

Ex. 2031, ¶ 142

Luminex’s Expert (Dr. Eden):

Q. Now, turning back to control box 64 15 in Figure 2, other than switch 66, **Reiff 16 doesn’t describe what component may be inside 17 control box 64**, correct?

A. **No, he does not** ...

A. ... And so Reiff tells me that I can choose the switch. ... We teach our undergraduates how to take the cable out of the enclosure and into this large -- it looks like a Plexiglas cylinder, and how to design the power circuit so as to drive the LED and the fluorescent tube.

Q. But **that’s not described in Reiff**, that’s something that you know yourself and teach, correct?

A. **Yes.** ...

Ex. 2030, 150:14-20, 154:17-156:3

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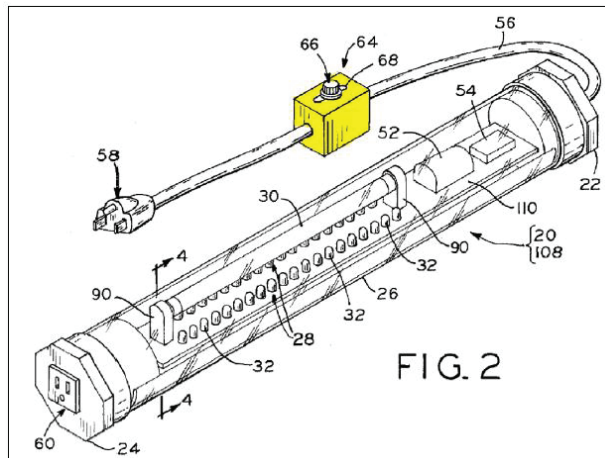
POR, 40-42; Sur-Reply, 12-14

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Luminex Attempts to Change the Petition's Theory

Luminex's Petition:

“Because the control box 64 is located on the electrical cable 56, it is necessarily electrically coupled to cable 56, and therefore must include at least one coupling feature.”

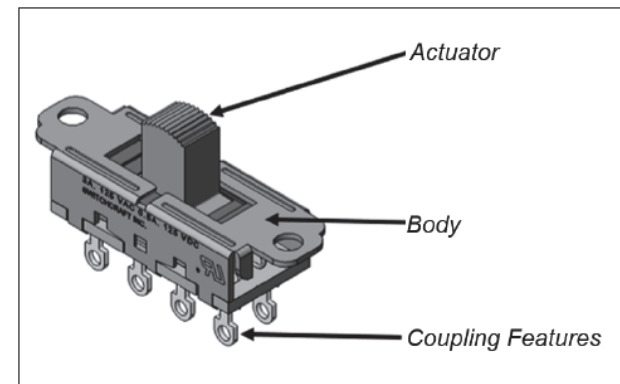


Petition, 85-87

Luminex's Reply:

B. Claim 13's “Body” And “At Least One Coupling Feature” Would Have Been Obvious

Thus, POSA would have understood Reiff's switch as a slide switch with a body and at least one coupling feature, as was well-known before the '424 Provisional[.]



Reply, 20, 27-30 (citing Ex. 1029)

The Petition Failed to Identify Elements 13(a) & (b) in Reiff

- ✗ Control Box 64 is NOT a switch “body” and has no “coupling feature”
- ✗ NO obviousness theory based on components within Control Box 64
- ✗ NO theory based on “nature” or “manufacturer” of Reiff’s switch
- ✗ NO theory based on extrinsic switch designs (Reply at 28; Ex. 1029)
- ✗ NO theory based on the in-line switch disclosed in the ’336 Patent (Reply at 30)

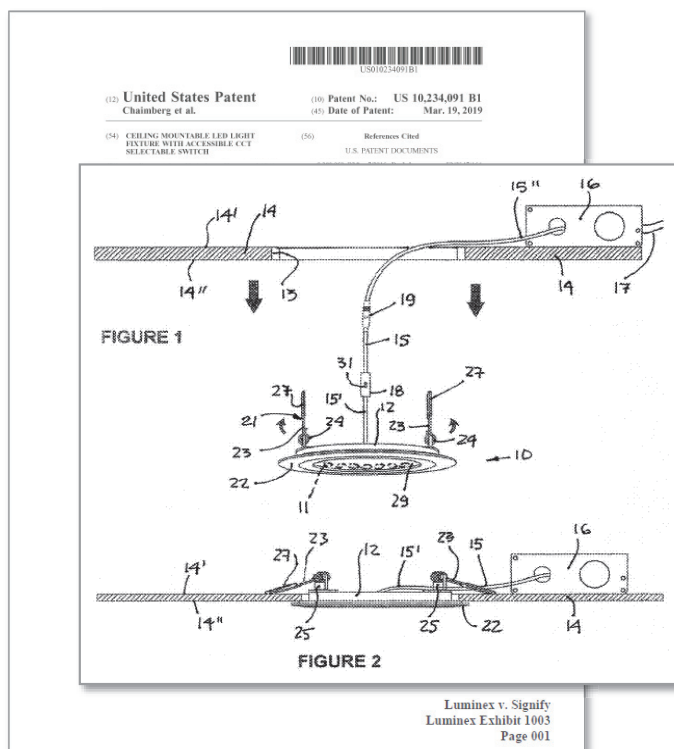
The Petition Fails for Claim 13 & Dependents



Chaimberg (Grounds 1a/1b) and Halliwell (Ground 2)
NOT Prior Art to Claims 13, 15 or 16

- **Ground 3: Reiff**
 - Element 13(d): The Petition Fails to Demonstrate Reiff Discloses a CCT Switch
 - Limitations 13(a) and (b): The Petition Fails to Identify a Switch “Body” or “Coupling Feature Disposed On the Body”
- **Grounds 1(a) and 1(b) : Chaimberg Alone / Chaimberg with Roberge**
 - Limitations 13(a) and (b): The Petition Fails to Identify a Switch “Body” or “Coupling Feature Disposed On the Body”
 - The Petition Fails to Demonstrate Obviousness
- **Ground 2: Halliwell**
 - Limitations 13(a) and (b): The Petition Fails to Identify a Switch “Body” or “Coupling Feature Disposed On the Body”

Chaimberg (Ex. 1003): Switch Remote from Junction Box



Ex. 1003

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Some LED light fixtures ... [a] switch is mounted on the driver housing to select a desired color temperature of the LED light fixture. ... Because the housings of LED light fixture are of different diameter sizes the fixture mounting hole may be too small to provide easy access to the driver housing and to manipulate the housing to retract it from the fixture mounting hole. This is not a task that is suitable for many people and damage can be caused to the ceiling sheeting material about the mounting hole. Still further, there is a hazard presented by the live wire connected to the driver circuit inside the driver housing, particularly if there is a fault in the wiring. There is also a hazard of working on a ladder to be close to the ceiling to remove the driver housing from the fixture mounting hole. **Manipulating the driver housing is therefore not recommended for safety reasons.**

A ceiling mountable LED light fixture is described and wherein at least two sets of LED's of different correlated color temperatures (CCT) are mounted in its housing. ... **A toggle switch** is mounted in the cable in close proximity to the light fixture.

Ex. 1003, Abstract, 1:44-66

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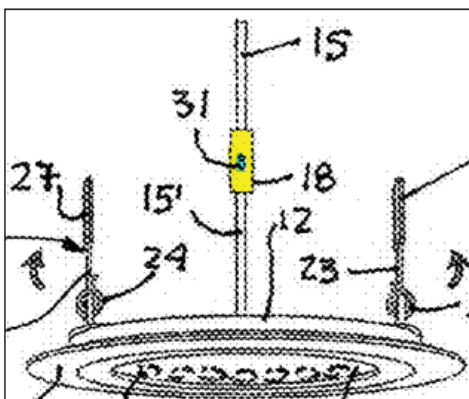
POR, 43-44, 52 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claim 13(a): The Petition Failed to Identify a Switch “Body” in Chaimberg

Petitioner identified Element 18 as the “body”

Luminex’s Petition:

the slide button 31 is located. Ex.1004, ¶154. The “body” portion of the switch 18 is highlighted in yellow below, and the slide button 31 is highlighted in blue:



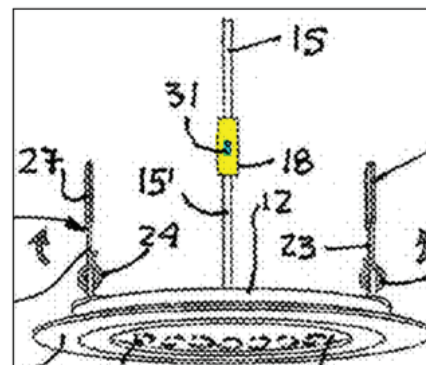
Ex.1003, Fig. 1 (colors added).

Petition, 40-41

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Luminex’s Expert (Dr. Eden):

button 31 is located. Fig. 1 shows the CCT switch 18 and slide button 31. Switch 18 is highlighted in yellow, the slide button 31 is highlighted in blue in Fig. 1 below, and the perimeter of the switch “body” is represented by the dashed rectangular box.



Q. So in your opinion, the body of the switch disclosed in Chaimberg is the dashed rectangular box labeled 18?

A. Yes. ...

Ex. 1004, ¶ 154; Ex. 2030, 208:12-15

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POR, 44-47 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

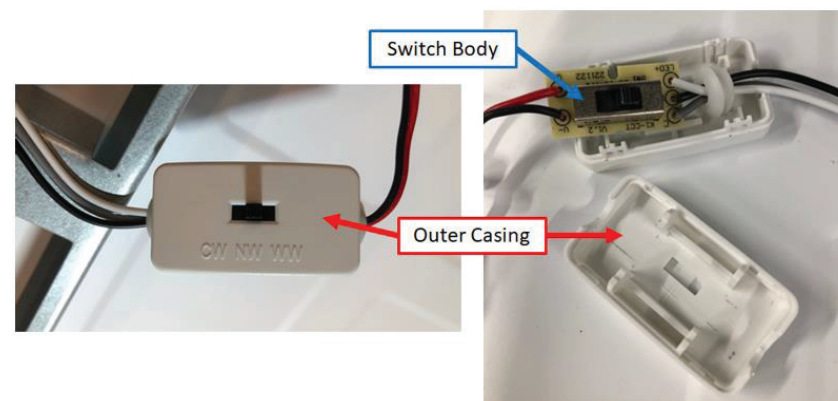
Claim 13(a): The Petition Failed to Identify a Switch “Body” in Chaimberg

Element 18 is NOT a switch “body”

Signify’s Expert (Dr. Krames):

154. A POSITA would have instead understood the portion of Figure 1 highlighted by Dr. Eden to at most depict **an outer casing within which a switch may be located**. Indeed, this type of outer casing is common for switches like the one disclosed in Chaimberg, as it can provide additional protection to the switch itself as well as any other components that may be located within the casing. **One example of such an outer casing** can be seen in a product I analyzed in connection with the related litigation pending in the Western District of Wisconsin. ... **“SKU” 348-2107**, which is sold as “Patriot Lighting® 5070 Lumen 47-3/4” LED Back-Lit Flat Panel Light.” Ex. 2049.

Ex. 2031, ¶ 154



Claim 13(b): The Petition Failed to Identify a “Coupling Feature” in Chaimberg

The Experts agree that Chaimberg does NOT disclose a “coupling feature”

Signify’s Expert (Dr. Krames):

160. Furthermore, Chaimberg is silent on the construction of its switch, and does not mention the presence of any “coupling feature” at all. I note that Dr. Eden acknowledged the same at his deposition, and therefore we appear to agree on Chaimberg’s lack of disclosure. Ex. 2030, 209:6-11, 214:8-11 (“Q. Now, Chaimberg doesn’t disclose any image or description of coupling features, correct? A. Right.”), 218:16-24, 220:18-221:1 (“There could be a pot of gold inside it. I have no idea.”). Therefore, we agree that Chaimberg does not disclose this claim feature.

Ex. 2031, ¶ 160

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Luminex’s Expert (Dr. Eden):

Q. There is no coupling feature of switch 18 described in Chaimberg, correct?

A. Right. ...

Q. Now, Chaimberg doesn’t disclose any image or description of coupling features, correct?

A. Right. ...

Q. And Chaimberg doesn’t say what components may or may not be inside the dashed box 18, correct?

A. No. But it doesn’t need to.

...

A. There could be a pot of gold inside it. I have no idea.

Ex. 2030, 209:6-11, 214:8-11, 218:16-24, 220:18-221:1

Claim 13(b): The Petition Failed to Identify a “Coupling Feature” in Chaimberg

The Experts agree Chaimberg does NOT “necessarily” include a “coupling feature”

Luminex’s Expert (Dr. Eden):

Q. So is it your opinion that it would be impossible to implement a slide switch as a wireless switch?

A. No. Why would I say it's impossible?

Q. So it is possible to implement a slide switch as a wireless switch?

A. Sure. ...

Q. And Chaimberg doesn't say what components may or may not be inside the dashed box 18, correct?

A. No. But it doesn't need to.

Q. So there could be a wireless transceiver in there, right, if you wanted to implement it that way?

A. There could be a pot of gold inside it. I have no idea.

Ex. 2030, 212:8-213:2, 220:18-221:1

Luminex Attempts to Change the Petition's Theory

Luminex's Reply:

B. Claim 13's "Body" And "At Least One Coupling Feature" Would Have Been Obvious

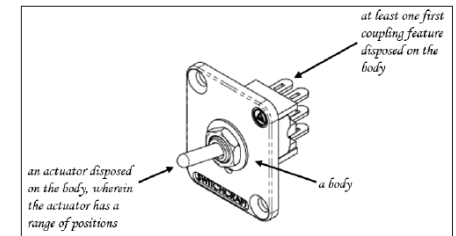
[A] POSA understood such toggle switches as including both a "body" and "at least one first coupling feature disposed on the body." ...

Finally, Globe's products embodying Chaimberg included a wired, in-line CCT switch with the claimed body, coupling feature, electrical cable, and actuator as shown below (EX1027, ¶¶93-94)

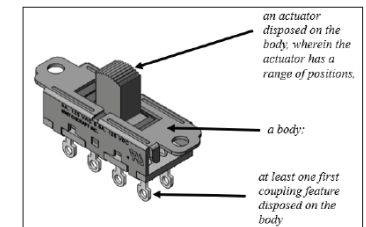
Reply at 20-24



Ex. 1027, ¶¶ 89, 93



Ex. 1028 (annotated).



Ex. 1029 (annotated).

Luminex's Reliance on the "Globe" Products is Improper

NO evidence that Globe Products are prior art to the '336 Patent

Q. And here you state that Globe began selling products embodying Chaimberg at least as early as October 2018, correct?

A. Yes. That's correct. It could have been earlier, but it's not clear.

...

Q. So October 2018 would be after the filing date of the '336 patent, right?

A. Yes, of course.

...

Q. So do you know when Globe began selling product number 92291 ...?

A. I don't know specifically when it entered the market, no.

Q. And do you know when Globe began selling product number 91458 ...?

A. No.

NO evidence that Globe Products "embody" any claim of Chaimberg

Q. And just to be clear, in your reply declaration, you don't provide a element-by-element analysis of any Chaimberg claim to any Globe product, correct?

A. That is correct. I didn't believe it to be necessary.

Chaimberg's claims are NOT relevant to the '336 Patent

Q. The claims of Chaimberg do not include a limitation requiring that the switch must include a coupling feature that is electrically coupled to a cable of the luminaire, correct?

A. Right. Why would they?

Ex. 2052, 28:5-10, 34:2-6, 44:24-45:17, 51:22-52:7, 55:9-18

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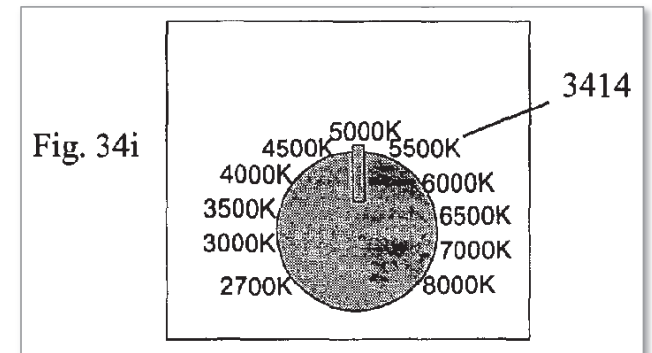
Sur-Reply, 16-17 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The Petition Failed to Identify Elements 13(a) & (b) in Chaimberg

- ✗ Element 18 in Fig. 1 is **NOT** a switch “body” and has no “coupling feature”
- ✗ **NO** obviousness theory based on components within element 18
- ✗ **NO** theory based on “Globe” products (Exs. 1032, 1044, 1045)
- ✗ **NO** theory based on other extrinsic switch designs
(Reply at 20-24; Exs. 1028, 1029)
- ✗ **NO** theory based on the in-line switch disclosed in the ’336 Patent
(Reply at 22)

Chaimberg Obviousness/Combination with Roberge Fails

- Chaimberg's reference to "at least two" set of LEDs simply describes what is necessary to operate the light – no mention of additional LEDs or switch positions
- Roberge's "dial" is not part of any luminaire, and instead is used to pre-set a static CCT value
- ✗ **NO** reason why a POSITA would attempt to combine Roberge's external dial with Chaimberg's switch
- ✗ **NO** reason why a POSITA would select only particular CCT values from Roberge to modify Chaimberg
- ✗ **NO** evidence of any expectation of success
- ✗ Luminex's rationale based on **improper hindsight**



In other embodiments of the present invention it may be desirable to **limit user control**. ... Referring to **FIG. 34i**, ... **the designer can specify a particular setting**, and the installer can set it according to the design plan. ...

Ex. 1011, 42:39-65, Fig. 34i

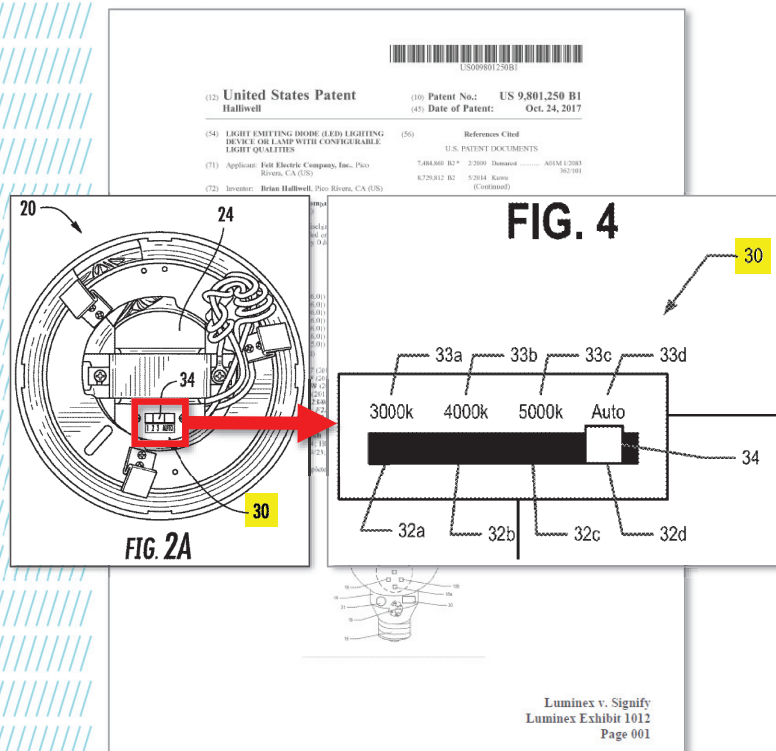
The Petition Fails for Claim 13 & Dependents



Chaimberg (Grounds 1a/1b) and Halliwell (Ground 2)
NOT Prior Art to Claims 13, 15 or 16

- **Ground 3: Reiff**
 - Element 13(d): The Petition Fails to Demonstrate Reiff Discloses a CCT Switch
 - Limitations 13(a) and (b): The Petition Fails to Identify a Switch “Body” or “Coupling Feature Disposed On the Body”
- **Grounds 1(a) and 1(b) : Chaimberg Alone / Chaimberg with Roberge**
 - Limitations 13(a) and (b): The Petition Fails to Identify a Switch “Body” or “Coupling Feature Disposed On the Body”
 - The Petition Fails to Demonstrate Obviousness
- **Ground 2: Halliwell**
 - Limitations 13(a) and (b): The Petition Fails to Identify a Switch “Body” or “Coupling Feature Disposed On the Body”

Halliwell (Ex. 1012): Device-Located Switch and Remote Interface



Ex. 1012

In example embodiments, the LED lamp 10 and/or LED lighting device 20 comprises a switch 30. In example embodiments, the switch 30 may be configured to allow a user to select an operating mode (e.g., a programmable custom mode, a set mode, or a configurable mode).

[I]f the switch selector 34 is placed in switch position 34d, the operating color temperature of the LED lamp 10 or LED lighting device 20 may be configurable by using a wall switch, remote control, and/or the like (e.g., remote switch 40 shown in FIG. 5).

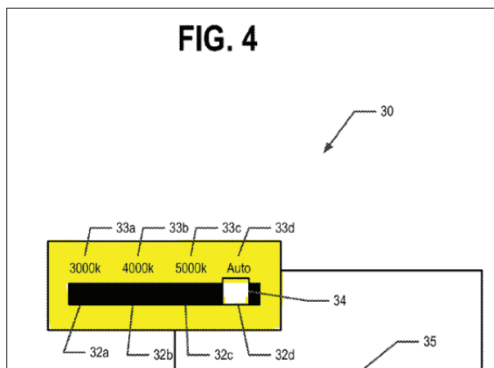
Ex. 1012, 11:35-39, 12:60-13:49

Claim 13(a): The Petition Failed to Identify a Switch “Body” in Halliwell

Petitioner identified the box labeled “30” in Fig. 4 as the “body”

Luminex’s Petition:

Halliwell discloses this claim element. Ex.1004, ¶¶307-309. Halliwell’s exemplary CCT switch 30 includes a body, which is highlighted in yellow in Fig. 4 below (Ex.1004, ¶308):



Ex.1012, Fig. 4 (color added).

Petition, 77

Luminex’s Expert (Dr. Eden):

5000 K. *Id.* 12:60-13:14, Fig. 4. The switch includes a body which is highlighted in yellow in Fig. 4 below.

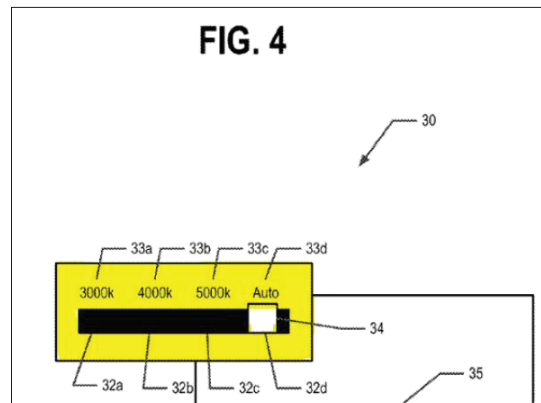


Fig. 4 (color added).

Ex. 1004, ¶ 308

Claim 13(a): The Petition Failed to Identify a Switch “Body” in Halliwell

The box labeled “30” in Fig. 4 is NOT a switch “body”

Signify’s Expert (Dr. Krames):

[A] POSITA would *not* have understood the block highlighted by Petitioner in Figure 4 to constitute a switch “body” as recited in claim 13, but **instead to be depicting of a portion of the lighting device housing where the switch and (and indicators) are located**, consistent with Halliwell’s disclosure.

Ex. 2031, ¶ 224

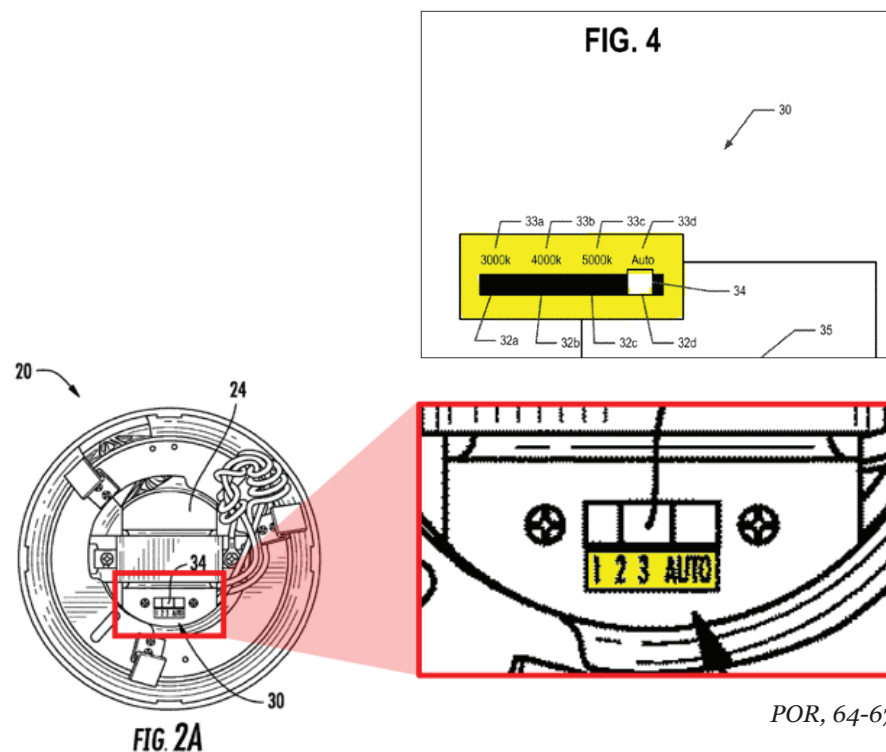
Luminex’s Expert (Dr. Eden):

Q. So if I understand your testimony, **Halliwell doesn’t depict or describe the switch body**, but you’re basing that on your understanding of all switches having a body; is that right?

A. **Correct.** ...

Ex. 2030, 194:15-20

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POR, 64-67 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claim 13(b): The Petition Failed to Identify a “Coupling Feature” in Halliwell

The box labeled “30” in Fig. 4 does NOT include a “coupling feature”

Luminex’s Expert (Dr. Eden):

Q. Now, Halliwell also doesn’t disclose or depict a coupling feature associated with a switch, correct?

A. That’s correct.

Q. Well, Halliwell doesn’t say that it’s switch coupled to a cable of luminaire, correct?

A. That’s correct. ...

Q. What would be the design of the switch 40, then, located in the junction box, according to Halliwell?

A. Well, I’m unable to answer that question because there are many design choices of a wall-mounted switch ...

Ex. 2030, 192:20-193:20, 195:1-4, 196:16-20

Luminex Attempts to Change the Petition's Theory

Dr. Eden's First Declaration:

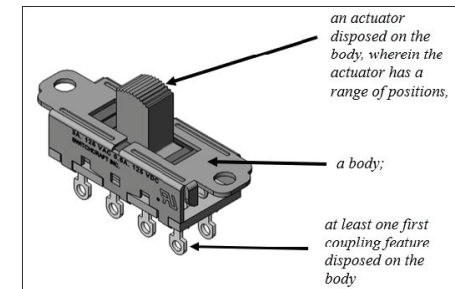
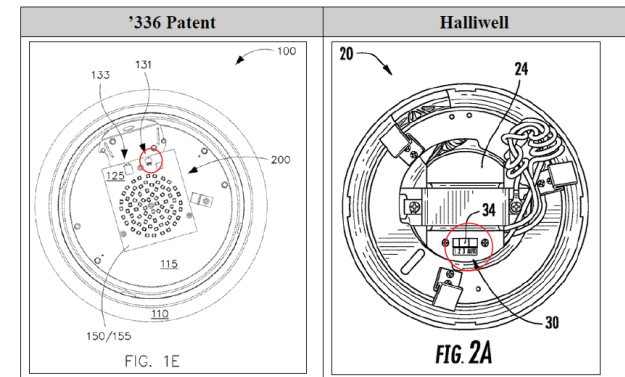
308. The exemplary CCT switch 30 shown in Fig. 4 includes four positions corresponding to four “color temperature mode[s],” including 3000 K, 4000 K, and 5000 K. *Id.* 12:60-13:14, Fig. 4. The switch includes a body which is highlighted in yellow in Fig. 4 below.

Ex. 1004, ¶ 308

Dr. Eden's Reply Declaration:

98. Further, Halliwell describes the switch 30 of Figure 4 as a slide switch. A POSA would have understood a slide switch to include a body. For example, the figure below shows a typical three-position slide switch from Switchcraft that was readily available for purchase off the shelf at the time of the '336 Patent ...

Ex. 1027, ¶ 98-99



Ex. 1029 (annotated).

The Petition Failed to Identify Elements 13(a) & (b) in Halliwell

- ✗ Element 30 in Fig. 4 is NOT a switch “body” and has no “coupling feature”
- ✗ NO obviousness theory based on components within the luminaire housing
- ✗ NO theory based on “Globe” products (Exs. 1032, 1044, 1045)
- ✗ NO theory based on other extrinsic switch designs (Reply at 24-26; Ex. 1029)
- ✗ NO theory based on switches disclosed in the '336 Patent (Reply at 24-26)



The Petition Fails to Demonstrate Unpatentability for Claim 1 or Its Dependents

The Petition Fails for Claim 1 & Dependents

- **Grounds 1(a) and 1(b) : Chaimberg Alone / Chaimberg with Roberge**
 - Limitation 1(d): The Petition Fails to Demonstrate that Chaimberg's CCT Switch is "Disposed Remotely from the Housing"
 - Claim 7: The Petition Fails to Demonstrate Disposing a CCT Switch in a Junction Box is Disclosed or Obvious in view of Chaimberg
 - The Petition Fails to Demonstrate Obviousness
- **Ground 2: Halliwell**
 - Limitation 1(d): The Petition Fails to Demonstrate that Halliwell's CCT Switch is "Disposed Remotely from the Housing"
 - Limitation 1(e): The Petition Fails to Demonstrate that "Each Position" of Halliwell's CCT Switch Corresponds to a Discrete CCT Output
 - Claim 7: The Petition Fails to Demonstrate Disposing a CCT Switch in a Junction Box is Disclosed or Obvious in view of Halliwell

Claim 1(d): Switch “Disposed Remotely from the Housing”

a switch coupled to the electrical cable, wherein the switch is disposed remotely from the housing, wherein the switch has a plurality of positions, wherein each

Ex. 1001, Cl. 1; Fig. 9A, 9B, 10

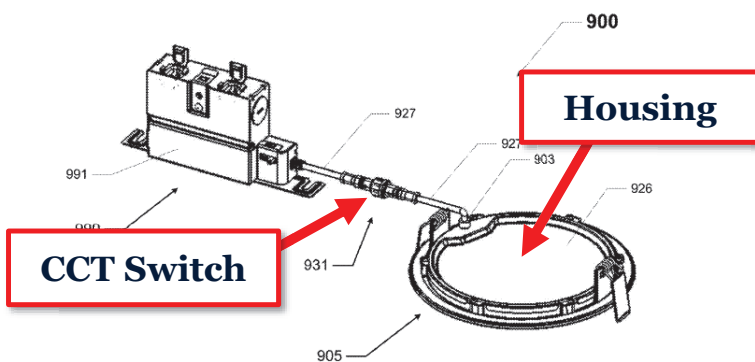


FIG. 9B

With the embodiments discussed previously, the example switch is located on the housing of the luminaire or within the housing of the luminaire. Here, the switch 931 is located outside of the housing 905 of the luminaire 900. Specifically,

Ex. 1001, 11:61-64

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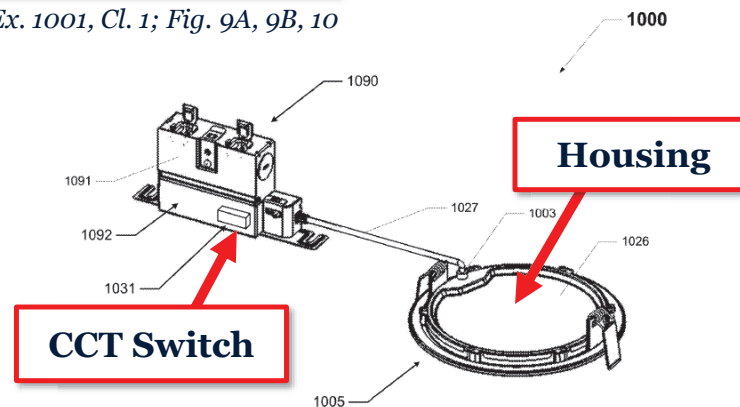


FIG. 10

ments. Referring to FIGS. 1A-10, the luminaire 1000 of FIG. 10 is substantially the same as the luminaire 900 of FIGS. 9A and 9B, except that the switch 1031 of the luminaire 1000 of FIG. 10 is in a different location separate from the housing 1005.

Ex. 1001, 12:33-39

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Pet., 21-22; POR, 5, 48, 76; Ex. 2031, ¶¶ 50-52, 69

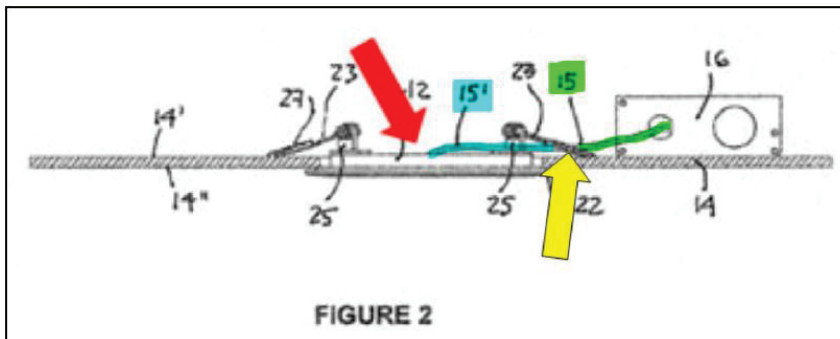
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claim 1(d): The Petition Failed to Demonstrate Chaimberg's Switch is "Disposed Remotely from the Housing"

Chaimberg's switch is NOT "hidden" behind element 23 in Figure 2

- Luminex incorrectly assumes 15, 15' and 15" are separate, distinct cable portions, to argue switch is "hidden" at yellow arrow location

Luminex's Reply:



Reply, 2-3

Luminex's Expert (Dr. Eden):

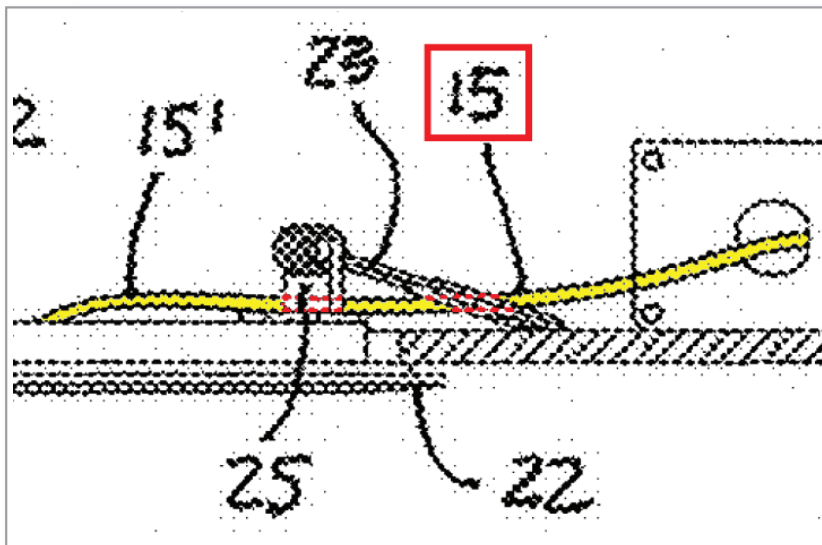
Q. So Chaimberg says that **element 15 is the entire cable** that runs from the luminaire housing to the driver housing, and that **15 prime and 15 double prime refer to opposing ends** of that cable 15, correct?

A. **Yes.** That's one way of phrasing it.

Ex. 2052, 71:21-72:2

**Claim 1(d): The Petition Failed to Demonstrate
Chaimberg's Switch is "Disposed Remotely from the Housing"**
Chaimberg's switch is NOT "hidden" behind element 23 in Figure 2

- Figure 2 itself indicates that nothing is
"hidden" behind element 23:



Sur-reply at 22; Ex. 1003, Fig. 2

Luminex's Expert (Dr. Eden):

Q. So sitting here today, you can't tell me in Figure 1 if switch 18 is depicted as wider than clamping arm 23?

A. **No, I can't.** ...

Q. Whether or not it's shown in Figure 2, do you believe the size or width of the switch changed in Figure 2?

A. **I don't know.** ...

Ex. 2052, 76:5-77:11, 79:10-80:9

Claims 7 & 19: “Disposed Within a Junction Box”

7. The luminaire of claim 1, further comprising:
a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch.

19. The switch of claim 13, wherein the body is configured to be disposed within a junction box.

Ex. 1001, Cl. 7, 19; Fig. 10

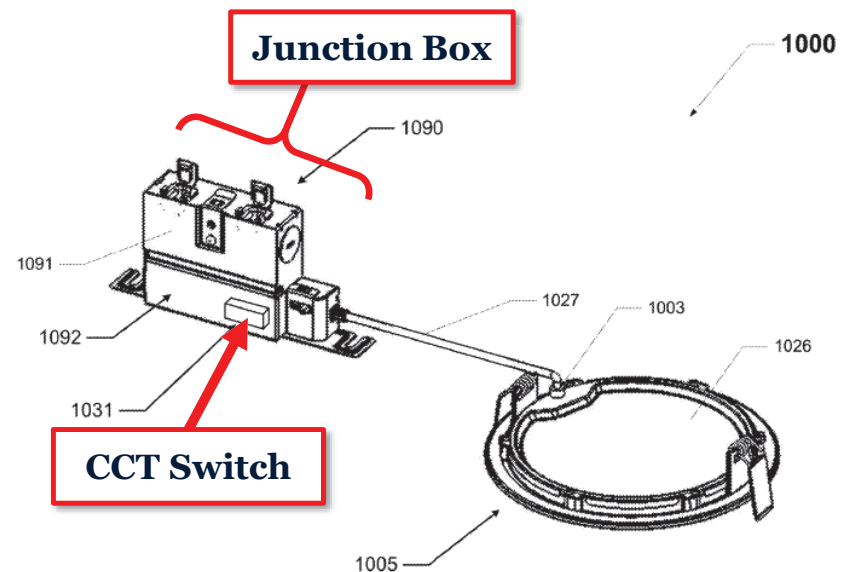


FIG. 10

Claims 7 & 19: Chaimberg Teaches Away From Switch Disposed in a Junction Box

Chaimberg:

Some LED light fixtures ... [a] switch is mounted on the driver housing ... Because the housings of LED light fixture are of different diameter sizes the fixture mounting hole may be too small to provide easy access to the driver housing and to manipulate the housing to retract it from the fixture mounting hole. This is not a task that is suitable for many people and damage can be caused to the ceiling sheeting material about the mounting hole. Still further, there is a hazard presented by the live wire connected to the driver circuit inside the driver housing, particularly if there is a fault in the wiring. There is also a hazard of working on a ladder to be close to the ceiling to remove the driver housing from the fixture mounting hole. Manipulating the driver housing is therefore not recommended for safety reasons.

Ex. 1003, 1:44-66

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Signify's Expert (Dr. Krames):

173. In fact, as discussed above, Chaimberg expressly discourages and teaches away from the general concept of mounting a CCT switch on, or anywhere near (or otherwise requiring access to) a junction box. ... Dr. Eden identifies no passage in Chaimberg that suggests doing so was “common,” and I disagree a POSITA would have interpreted Chaimberg in that manner. Notably, Dr. Eden did not rely on any prior art in his declaration demonstrating that such arrangement was in fact “common.”

Ex. 2031, ¶ 173

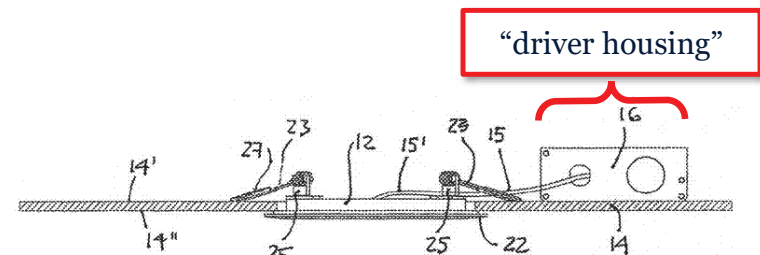


FIGURE 2

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POR, 52-55 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

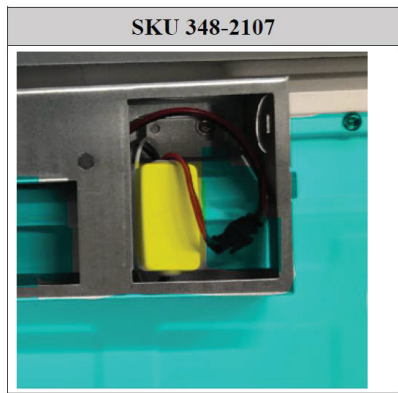
Claim 1(d): The Petition Failed to Demonstrate Chaimberg's Switch is "Disposed Remotely from the Housing"

Chaimberg does NOT match the infringement read from the litigation

Luminex's Reply:

Chaimberg's switch 18 is indisputably external from housing 12 and therefore *must* be remote. PO cannot claim that the switch on the left (yellow) below is remote from the housing it touches (blue), yet argue that Chaimberg's switch is not.

Reply at 3-4



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Luminex's Expert (Dr. Eden):

Q. Now, in Chaimberg, there is no figure showing a corresponding view of the back of its luminaire, correct?

A. No, there is not. ...

Q. ... There's no description in Chaimberg of the back of the luminaire housing; is that correct?

A. Not as far as I know.

Ex. 2052, 86:5-9, 86:22-87:2

The Petition Fails for Claim 1 & Dependents

- **Grounds 1(a) and 1(b) : Chaimberg Alone / Chaimberg with Roberge**
 - Limitation 1(d): The Petition Fails to Demonstrate that Chaimberg's CCT Switch is "Disposed Remotely from the Housing"
 - Claim 7: The Petition Fails to Demonstrate Disposing a CCT Switch in a Junction Box is Disclosed or Obvious in view of Chaimberg
 - The Petition Fails to Demonstrate Obviousness
- **Ground 2: Halliwell**
 - Limitation 1(d): The Petition Fails to Demonstrate that Halliwell's CCT Switch is "Disposed Remotely from the Housing"
 - Limitation 1(e): The Petition Fails to Demonstrate that "Each Position" of Halliwell's CCT Switch Corresponds to a Discrete CCT Output
 - Claim 7: The Petition Fails to Demonstrate Disposing a CCT Switch in a Junction Box is Disclosed or Obvious in view of Halliwell

Claim 1(d): The Petition Failed to Demonstrate Halliwell's Switch is "Disposed Remotely from the Housing"

Halliwell requires a device-located switch that is NOT remote

Halliwell (Describing Switch 30):

[I]f the switch selector 34 is placed in the **switch position 32a**, a set operating color temperature mode is selected with the set operating color temperature being **3000K**. ...

[I]f the switch selector 34 is placed in the **switch position 32b**, a set operating color temperature mode is selected with the set operating color temperature being **4000K**. ...

[I]f the switch selector 34 is placed in the **switch position 32c**, a set operating color temperature mode is selected with the set operating color temperature being **5000K**. ...

[I]f the switch selector 34 is placed in **switch position 34d**, the operating color temperature of the LED lamp 10 or LED lighting device 20 may be **configurable by using a wall switch, remote control, and/or the like** (e.g., **remote switch 40** shown in FIG. 5).

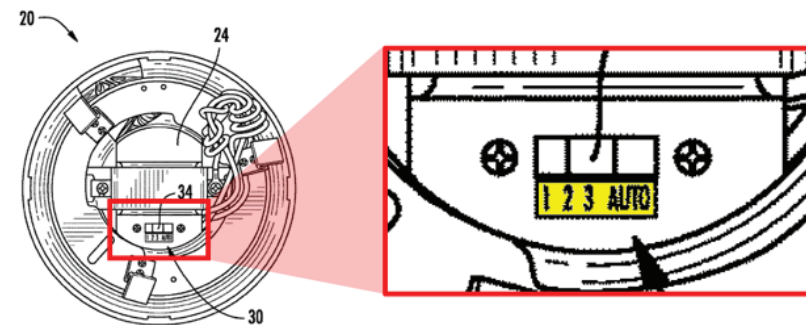
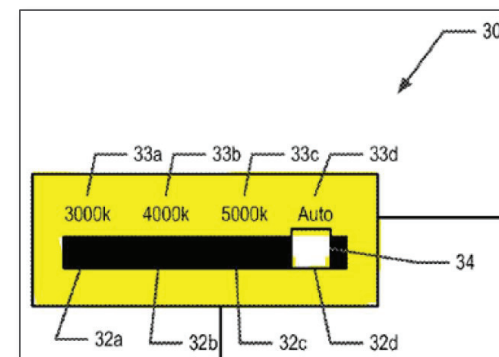


FIG. 2A

Ex. 1012, 12:60-13:49, Figs. 2A, 4

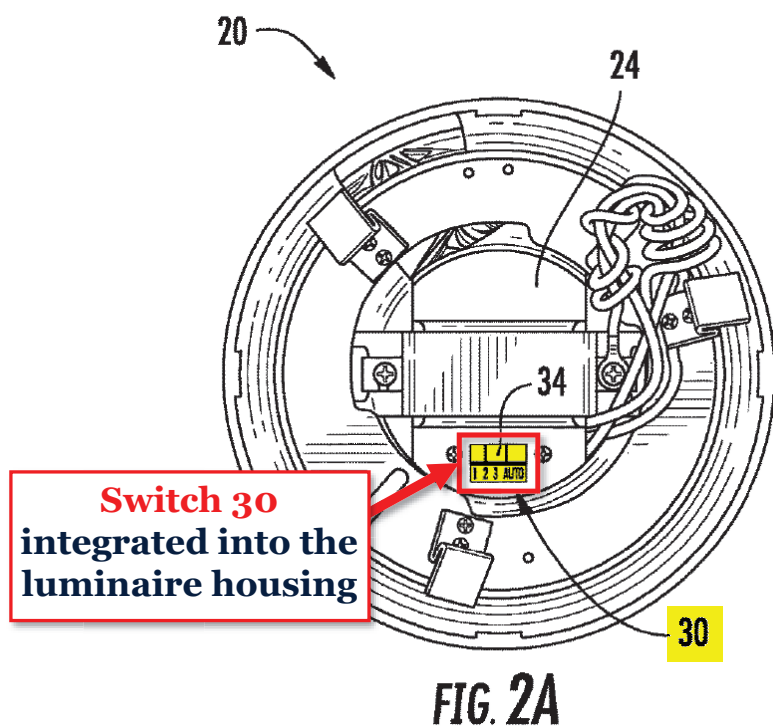
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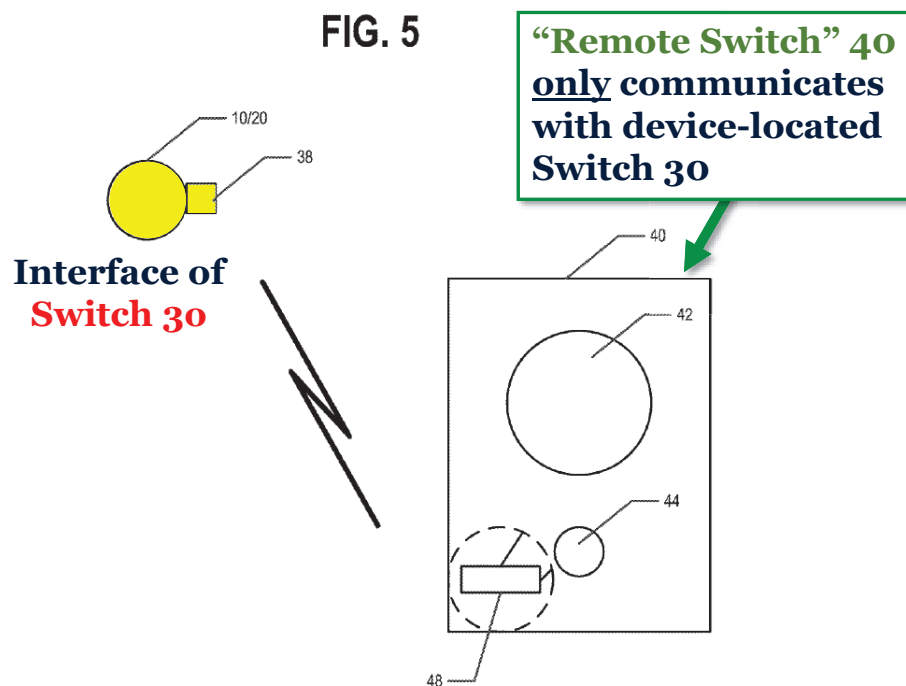
POR, 64-67, 71-74 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claim 1(d): The Petition Failed to Demonstrate Halliwell's Switch is "Disposed Remotely from the Housing"

Halliwell requires a device-located switch that is NOT remote



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Claim 1(d): The Petition Failed to Demonstrate Halliwell's Switch is "Disposed Remotely from the Housing"

Luminex's Expert (Dr. Eden):

Q. ... [A]re you aware of any passage in Halliwell that describes using remote switch 40 without or completely in place of device located switch 30?

A. **I'm not aware of such an option** ... So why would you want to dispense with 30?

A. I don't think -- you need to have switch 30 on the -- the reason that you're not seeing an embodiment that eliminates switch 30 is that **the actual switching process is conducted at the luminaire ... So even though 40 is known as a remote switch, it's not a switch at all.** It's simply a unit that conveys instructions from the user to the unit. ... **So I don't think you want to do away with switch 30.**

Q. Okay.

A. Because **it won't switch otherwise.**

Ex. 2030, 182:20-184:7

Claim 1(d): The Petition Failed to Demonstrate Halliwell's Switch is "Disposed Remotely from the Housing"

The Petition incorrectly assumes "Remote Switch 40" is a CCT "slide" switch using Figure 4's design

Petition:

However, Halliwell discloses that the remote switch 40 (like the switch 30) may include "a slide ... button" as an actuator and that the remote switch "may comprise additional user interface components as appropriate for the application." ... As explained by Dr. Eden, a POSA would have understood that a slide switch, like that shown in figure 4, would have been "appropriate for the application" of a "junction box mounted" CCT switch[.]

Petition, 62-63

Luminex's Expert (Dr. Eden):

Q. If switch 30 depicted in Figure 4 was used as remote switch 40, what would be the purpose of the auto position? ...

A. I'm sorry. I don't understand where you're going. I thought we decided a little while ago that Figure 3 tells us that switch 30 is not remote.

A. ... Switch 30 is the switch that's actually on the luminaire. It's not remote. ...

A. But my text is saying it does not disclose using the switch of Figure 4 as the remote switch. It's not used as the remote switch. That's why it's labeled 30.

Q. And remote switch 40 in Halliwell could be a slide button switch, right?

A. Probably not. There probably -- there's probably, most likely, with today's technology, a screen that you -- like a touchscreen on your phone.

Ex. 2030, 190:19-192:19, 211:18-212:7

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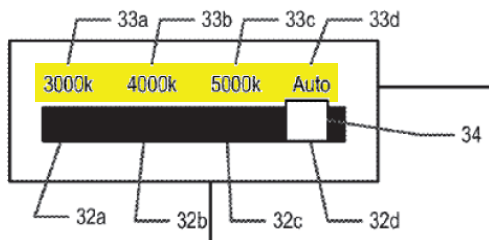
Claim 1(e): The Petition Failed to Demonstrate “Each Position” of Halliwell’s Switch Corresponds to “Discrete” CCT Outputs

the switch has a plurality of positions, wherein each position of the plurality of positions of the switch corresponds to a discrete correlated color temperature (CCT) output by one or more light sources of the luminaire.

Petition identified all four positions:

The exemplary switch shown in Fig. 4 includes four positions that “correspond to set operating color temperature modes with each position corresponding to a particular set operating color temperature,” including 3000K, 4000K, and 5000K.

Petition, 69



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“AUTO” does NOT correspond to a “discrete” CCT: Halliwell:

For example, switch positions 32a, 32b, and 32c may correspond to set operating color temperature modes with each position corresponding to a particular set operating color temperature. The switch position 32d may correspond to a configurable operating color temperature mode.

... if the switch selector 34 is placed in the switch position 32d, the configurable operating color temperature mode is selected. ... the operating color temperature of the LED lamp 10 or LED lighting device 20 may be configurable by using a wall switch, remote control, and/or the like ...

Ex. 1014, 11:62-12:15, 12:60-13:49

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POR, 74-75 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claim 7: The Petition Failed to Demonstrate that Halliwell's "Junction Box" is of "the Luminaire"

7. The luminaire of claim 1, further comprising:
a junction box comprising at least one wall that forms a second cavity, wherein the switch is disposed within the second cavity, wherein the second end of the electrical cable is coupled to the switch.

Luminex's Petition:

As discussed above, Halliwell discloses that "the remote switch 40 may be a ... junction box mounted toggle switch ... in wired communication with the switch control unit 35." Ex.1012, 17:39-42. Thus, Halliwell discloses that the switch can be mounted in or on the junction box, i.e. disposed within the cavity of the junction box.

Petition, 72

Luminex's Expert (Dr. Eden):

Q. ... So in that wall or junction box mounted scenario, the switch would remain accessible to a user in order to make the selection, correct?

A. What do you mean, it would be made available? I don't recall exactly how you phrased that.

Q. Well, remote -- in this arrangement, remote switch 40 would not be, for example, in a junction box of the luminaire up in the ceiling, for example.

A. Right. As it says in line 37 -- excuse me -- 36, it may be wall-mounted is one possibility.

Ex. 2030, 185:6-19



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Additional Slides

Legal Requirements for Establishing Priority

Establishing priority “requires that the earlier application describe the later claimed invention, and do so in sufficient detail that one skilled in the art can clearly conclude that *the inventor was ‘in possession’ of the claimed invention* as of the filing date sought.”

Bradford Co. v. Conteyor N. Am., 603 F.3d 1262, 1269 (Fed. Cir. 2010)

“This test requires an ‘objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.’ ... Given this perspective, in some instances, *a patentee can rely on information that is ‘well-known in the art’ to satisfy written description.*”

Streck, Inc. v. Research & Diagnostic Sys., Inc., 665 F.3d 1269, 1285 (Fed. Cir. 2012)

For a “patent [to] enable[] one skilled in the art to make and use the claimed invention” it “*need not teach, and preferably omits, what is well known in the art.*”

Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384 (Fed. Cir. 1986)

Dr. Eden's Undisclosed Construction for "Electrical Cable"

Petition: **NO Construction**

C. 37 C.F.R. § 42.104(b)(3): Claim Construction

The Board gives claims their ordinary and customary meaning, or "the meaning that the term would have to a [POSA] at the time of the invention." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (*en banc*); 37 C.F.R. § 42.100(b). At this time, Luminex applies the same scope of the claim terms that Signify applied in its complaint and its infringement contentions served on October 6, 2023 in the district-court case. Luminex proposes no terms for construction at this time. Luminex

Petition at 15-16

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Dr. Eden's Deposition: Specific Structural Requirements

A. ... There's a length of cable between the electrical driver and the LEDs over here and my right hand, left hand is the electrical driver, connected by a cable. And in that cable somewhere is a switch. That's what the '336 patent means by the electrical cable of the luminaire.

...

Q. So in your opinion, for there to be an electrical cable of a luminaire, there has to be a driver housing separated from the luminaire housing with a cable running between the two.

Is that correct?

A. That's the principle that is described by the '336 patent and by Chaimberg.

Q. And that's how you're interpreting electrical cable of a luminaire in your declarations, correct?

A. Yes, because that's what they say.

Ex.2052, 118:10-120:7

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Sur-Reply, 5-6 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claim 13(d): Reiff Does Not Disclose CCT Selection

Luminex's Expert (Dr. Eden) Did Not Understand Basic CCT Concepts

First Deposition

Q. Does chromaticity change depending on brightness?

A. **I do not know.** ...

Q. Do you know if the perception of color is based on the color's hue?

A. **I do not recall.**

Q. ... Referring to the diagram on the right, any point on the line labeled 4000k would correspond to a CCT value of 4000k, correct?

A. **I don't know.** ...

Ex. 2030, 35:20-37:1, 42:10-23

Second Deposition

(Discussing the CIE Diagram)

Q. ... I see black lines intersecting that Planckian locus that are labeled with CCT values. Do you see those?

A. Oh, yeah, I see that. **But those are not meaningful,** particularly for white light ... But I will say emphatically that these lines, **these black lines that are drawn at an angle are not correct.** ...

Q. So to be clear, **it's your understanding that no two points in the chromaticity diagram can share the same CCT value;** is that right?

A. That's what I said from day 1. ...

Ex. 2052, 222:25-223:21, 232:15-19

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POR, 38; Sur-Reply, 9-11

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

13(b): The Petition Failed to Identify a “Coupling Feature” in Reiff

The Experts agree Reiff does NOT “necessarily” include a “first coupling feature”

Signify’s Expert (Dr. Krames):

144. For example, the switch could instead be electrically coupled to a battery and wireless transmitter (e.g., via a circuit board within control box 64) that is communicative with circuitry and/or other components within the tubular lighting device, such that the switch can inform the components which light source to selectively energize, which would not require any “coupling feature” that is configured to “electrically couple” to a cable of the luminaire.

Ex. 2031, ¶ 144

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Luminex’s Expert (Dr. Eden):

Q. So is it fair to say a person of ordinary skill would understand that a remote CCT switch can communicate wirelessly with a luminaire housing to control the CCT?

A. Yes. I believe so.

Q. Reiff does not describe how switch 66 interfaces with cable 56 inside control box 64, right?

A. **Correct.** ...

Q. But it would at least be possible for the switch in control box 64 to communicate wirelessly with components within the housing, correct?

A. **It’s possible**, but as I said a moment ago, there are many things that are possible when a POSITA looks at Reiff.

Ex. 2030, 137:10-14, 150:12-15, 154:10-16

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POR, 40-43 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claim 13(b): The Petition Failed to Identify a “Coupling Feature” in Halliwell

If Petitioner Relies on Halliwell’s remote “switch” 40, it is coupled to “line voltage,” NOT an electrical cable of the luminaire

Signify’s Expert (Dr. Krames):

233. ... [A] POSITA would not have understood “directly wired to line voltage” to refer to an electrical cable of the luminaire, as claim 13 requires. In particular, “line voltage” is a common term that typically refers to the standard voltage supplied by an electrical power line in a home or building (e.g., 120 volts). A POSITA would not have understood existing house wiring that is wired directly into a lighting device to constitute “an electrical cable *of the luminaire*,” which Dr. Eden likewise acknowledged.

Ex. 2031, ¶ 233

Luminex’s Expert (Dr. Eden):

Q. Well, remote -- in this arrangement, remote switch 40 would not be, for example, in a junction box of the luminaire up in the ceiling, for example.

A. **Right**. As it says in line 37 -- 18 excuse me -- 36, it may be wall-mounted is one possibility.

Q. But you agree it’s possible to hard wire a luminaire inside your house using house wiring, not a cable of the luminaire?

A. **Yes**. ...

Ex. 2030, 91:12-15, 185:13-19



Dr. Eden did NOT dispute that Halliwell’s “line voltage” refers to house wiring (not an electrical cable of a luminaire)

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POR, 69-70; Sur-Reply, 3-4; Ex. 2031, ¶ 233

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Claim 11: The Petition Failed to Demonstrate that Halliwell's "Remote Switch" is Ever "Inaccessible"

11. The luminaire of claim 1, wherein the switch is inaccessible when the housing is installed.

Luminex's Petition:

As discussed above, Halliwell discloses an LED luminaire wherein the CCT switch is mounted in a junction box. A POSA would have understood that because the CCT switch is mounted in the junction box, it is inaccessible to the user when the LED housing is installed in the ceiling.

Petition, 75

Luminex's Expert (Dr. Eden):

Q. Now, the -- in the scenario of using remote switch 40, you would want that remote switch 40 to remain accessible at all times, right, like a wall switch for lights?

A. Well, as it says here, it's wall-mounted, so that, by definition, would make it accessible at all times. ...

Ex. 2030, 187:22-188:21