

LED Industry Webinar on Patent Issues Facing the Lighting Industry

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October 1, 2020

[Excerpts for Publication on EdisonReport.com]



Outline

1. Recent Trends in U.S. Patent Litigation in the LED Industry
2. The LED Patent Litigation Landscape: Who Is Suing and Who Is Being Sued
3. Update on the Philips/Signify EnabLED Licensing Program (after its loss before the International Trade Commission in July 2019)
4. Status of other LED Industry licensing programs including Lighting Science Group (LSG), CAO Lighting, Lynk Labs, TOGGLED/iLumisys, Univ. of California
5. Non-Practicing Entity Update: Bench Walk, Heavy Duty Lighting, LedComm
6. How Covid-19 has impacted patent litigation

Top LED (Lighting) Patent Assignees in 2019

No.	Assignees	# of Issued Patents
1	SIGNIFY HOLDING B.V.	103
2	SEOUL SEMI/SEOUL VIOSYS	63
3	IDEAL INDUSTRIES LIGHTING	49
4	LUMILEDS	40
5	OSRAM OLED GMBH	37
6	LUMENS CO., LTD.	28
7	XIAMEN ECO LIGHTING	27
8	CREE	25
9	EPISTAR	23
10	OSRAM	23
11	LEDVANCE	22
12	LUTRON	22
13	KONINKLIJKE PHILIPS N.V.	20
14	LED LABS SP. Z O.O.	20
15	ABL IP HOLDING LLC	19
16	CURRENT LIGHTING SOLUTIONS, LLC	17

No.	Assignees	# of Issued Patents
17	TRIDONIC GMBH & CO KG	16
18	FEIT	15
19	SENSOR ELECTRONIC TECHNOLOGY	15
20	BRIDGELUX	14
21	CITIZEN ELECTRONICS CO.	14
22	GOODRICH LIGHTING SYSTEMS	14
23	SELF ELECTRONICS CO., LTD.	14
24	REGENTS OF THE UNIV OF CALIF	14
25	LYNK LABS	13
26	PLAYNITRIDE INC.	13
27	DUK SAN NEOLUX CO., LTD.	12
28	HANGZHOU HPWINNER OPTO CORP	12
29	TSINGHUA UNIVERSITY	12
30	ALEDDRA	11
31	LEDVANCE LLC	11

SOURCE:



3. Update on the Philips/Signify
EnabLED Licensing Program
(after its loss before the International
Trade Commission in July 2019)



EnabLED Campaign (2018 to present)

PHILIPS

- 1) **Signify v. Howard Industries** (filed Feb. 2018)
 - 5 patents
 - Brought in Mississippi
 - Settled and dismissed October 2019
- 2) **Signify v. Reggiani Lighting** (filed Nov. 2018)
 - 4 patents
 - Brought in New York
 - Settled and dismissed June 2020
- 3) **Signify v. Delta Light** (filed April 2019)
 - 5 patents
 - Brought in New York
 - Settled and dismissed March 2020
- 4) **Signify v. Axis Lighting** (filed June 2019)
 - 7 patents
 - Brought in New York
 - Pending
- 5) **Signify v. Satco Products, Inc.** (filed Oct. 2019)
 - 7 patents
 - Brought in New York
 - Pending
- 6) **Signify v. Yeelink** (filed Oct. 2019)
 - 5 patents
 - Brought in New York
 - Signify attempted service via Hague Convention
 - Voluntarily dismissed July 2020

Philips' ITC Action: 2017-19



- Filed Sept. 2017
- Asserted 5 Patents (2 Dropped before Hearing)
- Brought against 7 Respondents:

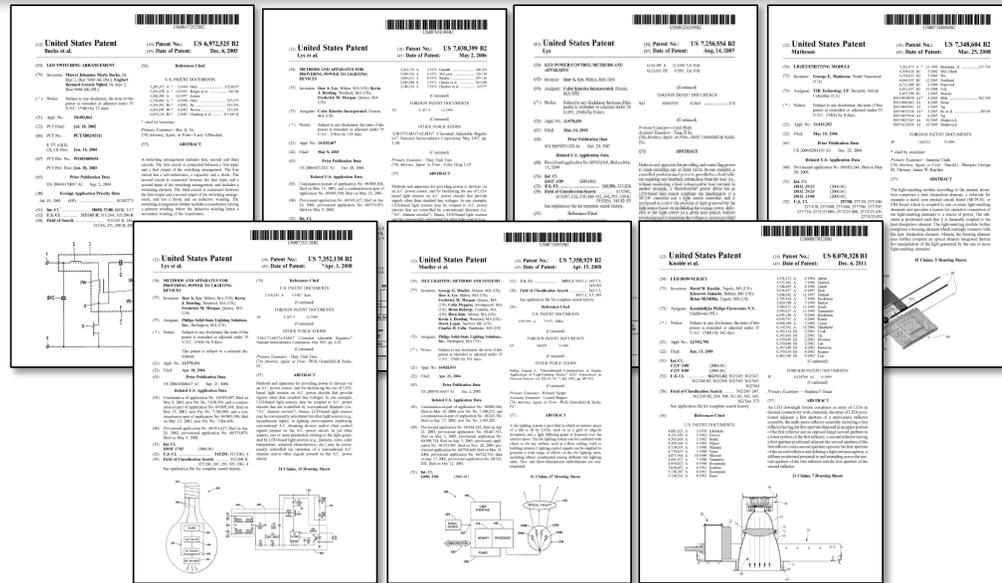


- **Feit**
- **Lowe's**
- **Satco**
- RAB Lighting (Settled)
- Topaz Lighting (Settled)
- WAC Lighting (Settled)
- MSi Lighting (Default)



- Hearing: August 20, 2018
- Initial Determination: **Finding Violation** (Dec. 2018)
- Full ITC Reversal: **No Violation** (July 2019)

Signify files New Suit Against Satco (EDNY)



- Filed Oct. 2019
- Brought in the Eastern District of New York
- Asserted 7 Patents (4 old; 3 new)
- Status: Pending

Multi-Piece Reflector Downlight ('328 Patent)



US008070328B1

(12) **United States Patent**
Knoble et al.

(10) **Patent No.:** **US 8,070,328 B1**
(45) **Date of Patent:** **Dec. 6, 2011**

(54) **LED DOWNLIGHT**

5,351,172 A 9/1994 Attree

Filed (Priority Date): 2009
Expiration: 2029

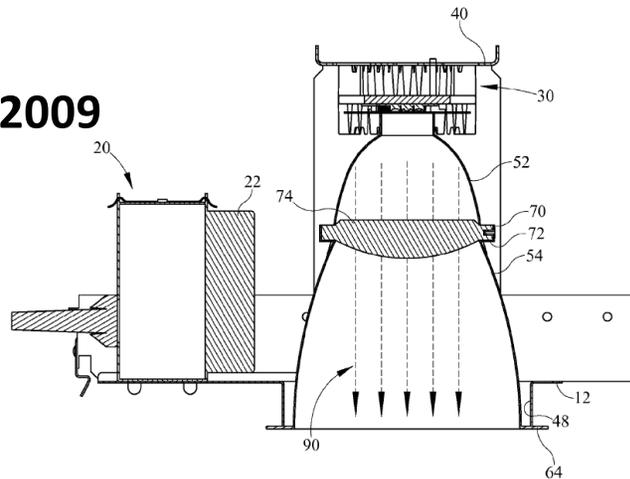


FIG. 6

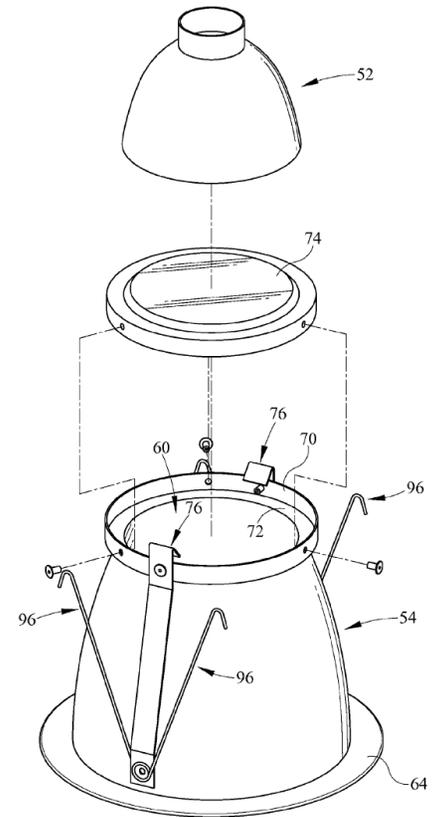


FIG. 7

Light-Emitting Module ('604 Patent)

LIGHT-EMITTING MODULE

Inventor: **George E. Matheson**, North Vancouver (CA)

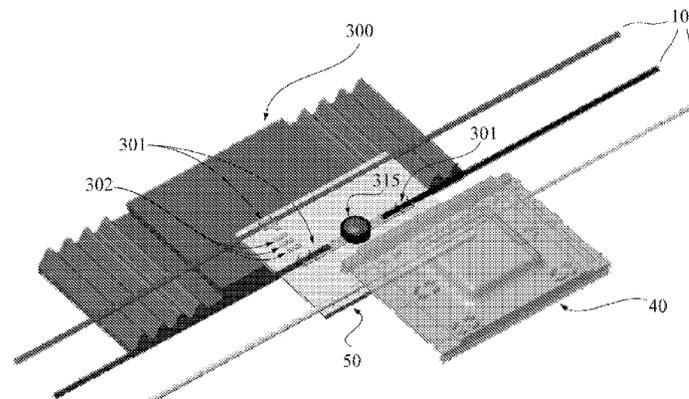
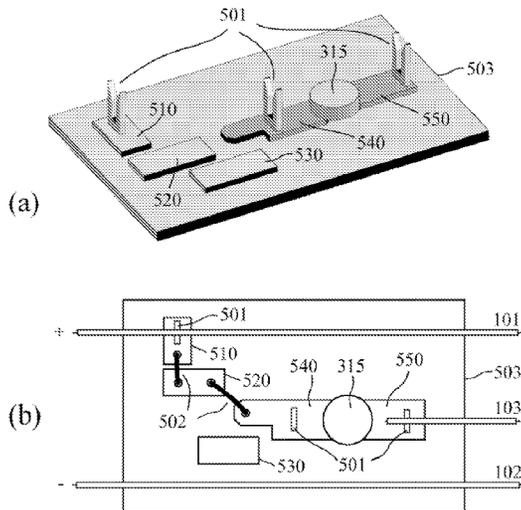
Assignee: **TIR Technology LP**, Burnaby, British Columbia (CA)

Related U.S. Application Data

Provisional application No. 60/683,244, filed on May 20, 2005.

Expiration: 2026

Exemplar Accused Products:



S9380

S9389



S29750

Signify/Philips v. Satco



US007358929B2

(12) **United States Patent**
Mueller et al.

(10) **Patent No.:** US 7,358,929 B2
(45) **Date of Patent:** Apr. 15, 2008

(54) **TILE LIGHTING METHODS AND SYSTEMS** (52) **U.S. CL.** 345/1.3; 345/1.1; 345/3.3;

Exemplar Accused Products:



S29341



Nuvo 65-333/R1



Nuvo 65-318

Expiration: 2024

1. A tile lighting system, comprising:
a plurality of addressable lighting units configured in a flexible string and arranged in a grid;
a controller for controlling illumination generated by the addressable lighting units; and
at least one substantially translucent cover disposed over the grid for receiving and diffusing the illumination from the addressable lighting units.

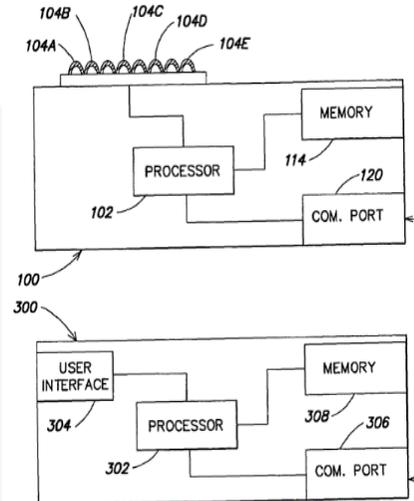


FIG. 3

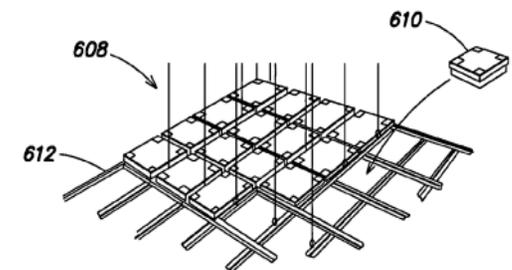
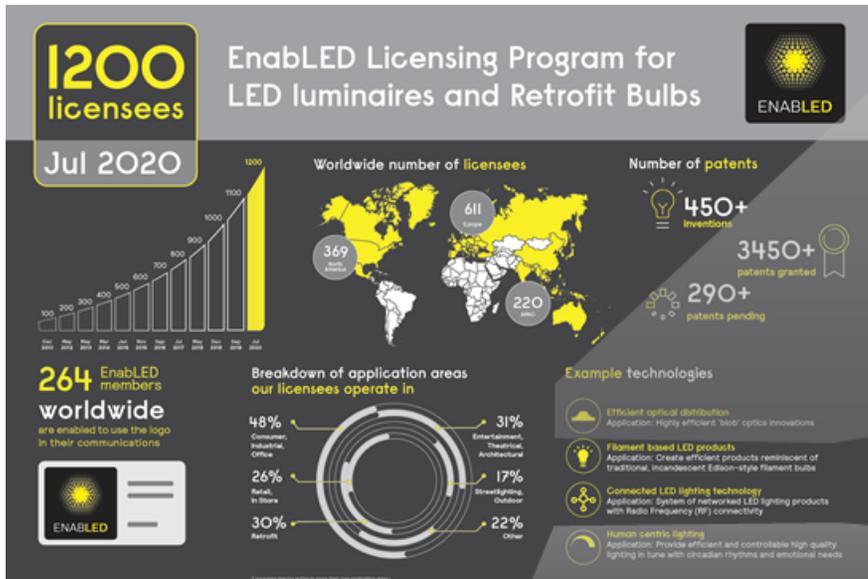


FIG. 6D

EnabLED 2020 Update: New “Example Technologies”



Efficient optical distribution

Application: Highly efficient 'blob' optics innovations



Human centric lighting

Application: Provide efficient and controllable high quality lighting in tune with circadian rhythms and emotional needs

Signify/Philips: 2020 Recent Events

- Closed on the Cooper Lighting/Eaton Transaction Jan 2020
- Added certain Cooper patents to the EnabLED program


 US009820350B2

(12) **United States Patent**
Pyshos et al.

(10) **Patent No.:** **US 9,820,350 B2**
 (45) **Date of Patent:** **Nov. 14, 2017**

(54) CONFIGURABLE LIGHTING SYSTEM

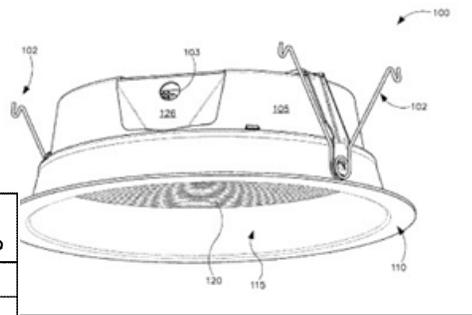
(71) Applicant: **Cooper Technologies Company,**
 Houston, TX (US)

(72) Inventors: **Steven Walter Pyshos,** Peachtree City, GA (US); **Raymond Janik,** Fayetteville, GA (US); **Kevin Ray Harpenau,** Atlanta, GA (US)

(73) Assignee: **Cooper Technologies Company**
 Houston, TX (US)

(2013.01); *F21V 17/12* (2013.01); *F21V 21/088* (2013.01); *F21V 23/001* (2013.01); *H05B 33/0845* (2013.01); *F21Y 2113/13* (2016.08); *F21Y 2115/10* (2016.08)

(58) **Field of Classification Search**
 CPC ... H05B 37/02; H05B 33/08; H05B 33/0845; H05B 33/0863; F21K 9/62; F21S 8/026;




 US007674018B2

(12) **United States Patent**
Holder et al.

(10) **Patent No.:** **US 7,674,018 B2**
 (45) **Date of Patent:** **Mar. 9, 2010**

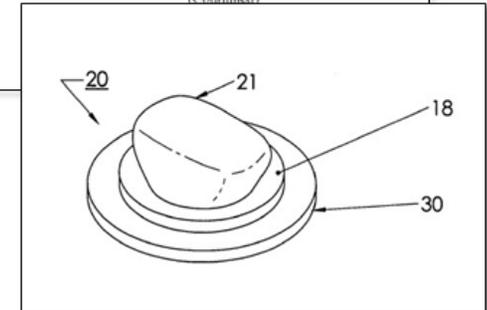
(54) LED DEVICE FOR WIDE BEAM GENERATION

(75) Inventors: **Ronald G. Holder,** Niguel, CA (US); **Greg Rhoads,** Irvine, CA (US)

(73) Assignee: **Illumination Management Solutions Inc.**

4,941,072 A 7:1990 Yasumoto
 5,636,057 A * 6:1997 Dick et al. 359:625
 5,924,788 A * 7:1999 Parkyn, Jr. 362:329

(Continued)



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

4. Status of other LED Industry
licensing programs including:
Lighting Science Group (LSG),
CAO Lighting,
Lynk Labs,
TOGGLED/iLumisys,
University of California

LSG Campaign #2



- 10 District Court Suits and ITC complaint filed in May 2019 against:

LIGHTING SCIENCE

AcuityBrands.

CREE 

 **LUMILEDS**

 **Signify**

OSRAM



 **NICHIA**

LEEDARSON

EATON



CAO Lighting

Who: CAO Lighting

-versus-

GE Lighting, LEDVANCE/OSRAM and Feit

What: 2 patents directed to LED chips & LED bulbs

Where: Dist. Of Delaware; Central Dist. Of California

When: May-June 2020

Status: Litigations Pending



CAO Lighting


 US006465961B1

(12) **United States Patent**
Cao

(10) Patent No.: **US 6,465,961 B1**
 (45) Date of Patent: **Oct. 15, 2002**

(54) **SEMICONDUCTOR LIGHT SOURCE USING A HEAT SINK WITH A PLURALITY OF PANELS**

5,721,430 A	*	2/1998	Wond	250/339.13
5,803,579 A	*	9/1998	Turnbull et al.	362/83.1
5,941,626 A		8/1999	Yamuro	362/246
5,947,588 A		9/1999	Huang	362/235
5,982,092 A		11/1999	Chen	313/512

(75) Inventor: **Densen Cao, Sandy, UT (US)**


 US006634770B2

(12) **United States Patent**
Cao

(10) Patent No.: **US 6,634,770 B2**
 (45) Date of Patent: ***Oct. 21, 2003**

(54) **LIGHT SOURCE USING SEMICONDUCTOR DEVICES MOUNTED ON A HEAT SINK**

5,655,830 A	*	8/1997	Ruskowski	362/240
5,688,042 A	*	11/1997	Madadi et al.	362/240
5,806,965 A	*	9/1998	Deese	362/249
5,890,794 A	*	4/1999	Abtahi et al.	362/294
5,941,626 A		8/1999	Yamuro	362/246
5,947,588 A		9/1999	Huang	362/235

(76) Inventor: **Densen Cao, 2851 E. Durban Rd., Sandy, UT (US) 84109**

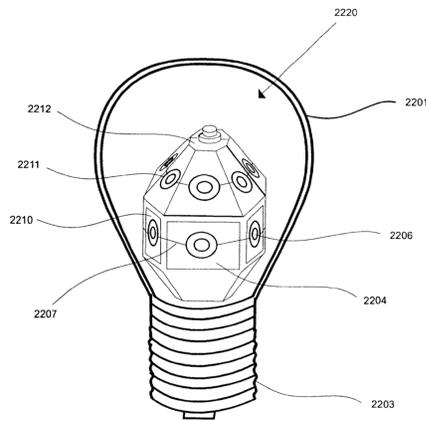


Fig. 2, '961 Patent

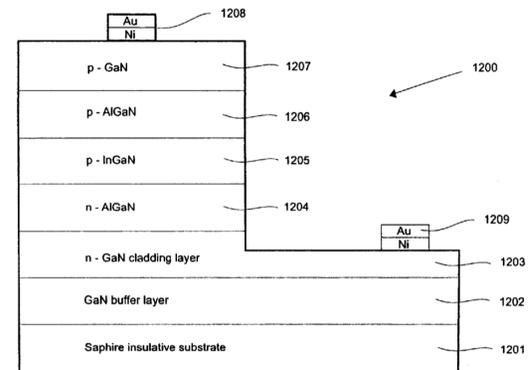
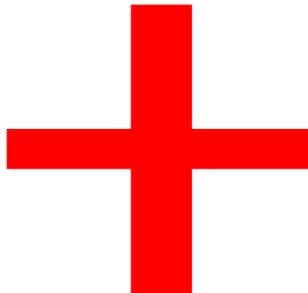


Fig. 3b, '961 Patent

Lynk Labs: Campaign #1 [2015-17]

Who: Lynk Labs

-versus-

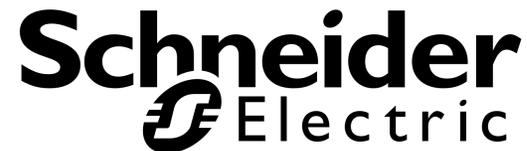
Acuity Brands; Juno Lighting; and Schneider Electric USA

What: 3 patents directed to AC-driven LEDs

Where: Northern Dist. Of Illinois

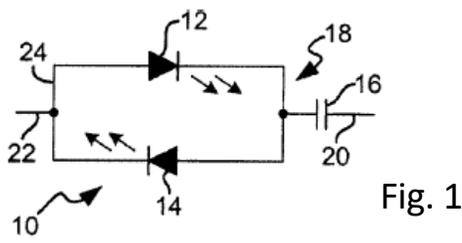
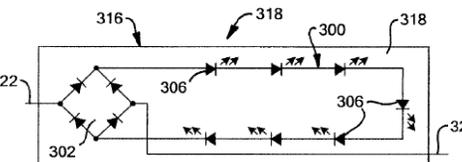
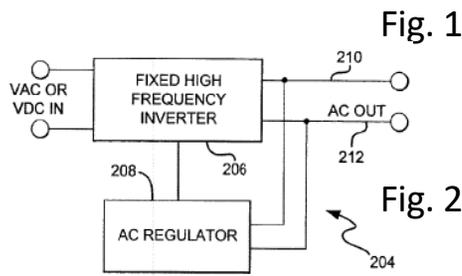
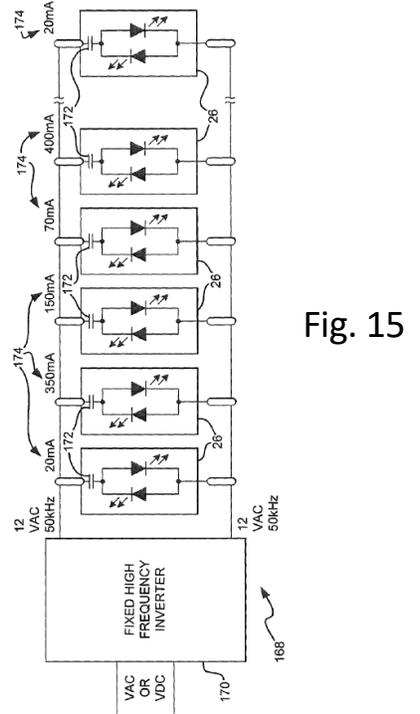
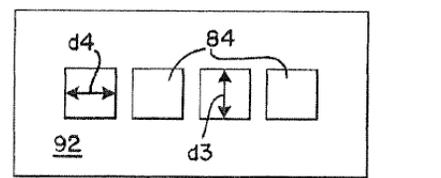
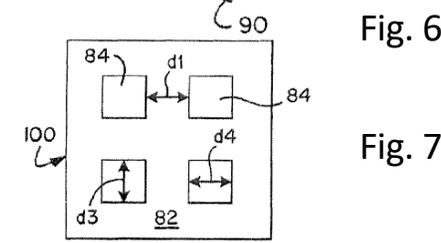
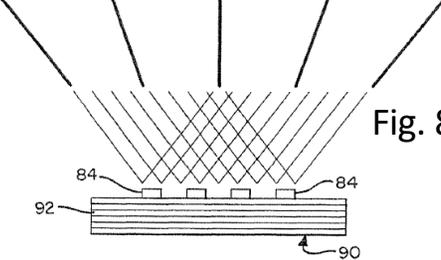
When: Jun. 2015 – Mar. 2017 [187 Docket Entries]

Status: Settled after IPR Institutions



Lynk Labs: Campaign #1 [2015-17]

- Asserted 3 patents against AC-driven LEDs:

 <p>Fig. 1</p>  <p>Fig. 16</p>  <p>Fig. 29</p>	 <p>Fig. 15</p>	 <p>Fig. 6</p>  <p>Fig. 7</p>  <p>Fig. 8</p>	 <p>Juno Trac 12/25 Product Systems</p>  <p>Juno Trac 12® LED Mini-Flood</p>  <p>Flex 12 Product Systems</p>  <p>Solo-Task Product Systems</p>
<p>AC-driven LED driver circuit ('118 patent)</p>	<p>AC-driven LED driver circuit ('905 patent)</p>	<p>Discretely-packaged AC-driven LEDs ('855 patent)</p>	<p>Exemplar Accused Products</p>

Lynk Labs: Campaign #1 [2015-17]

- Jun 2016: Acuity filed IPRs against '855 and '118 patents [eve of 1-year deadline for IPRs]
- Dec. 2016: Institution decisions in both IPRs **Instituted** based on anticipation and obviousness grounds in both IPRs
- Feb/March 2017: **Settlement**

TOGGLED/iLumisys

Who: TOGGLED/iLumisys
-versus-
Philips and Forest Lighting



What: ~10 patents directed to LED T8/T5 Tubes

Where: Eastern Dist. Of Michigan; Southern Dist. Of Texas

When: Dec. 2013– Sept. 2017

Status: Litigations Settled



University of California Filament LED Enforcement Campaign: Two ITC Rounds

UC SANTA BARBARA | Filament LED Lighting Patents



First ITC campaign in July 2019 on “portfolio of patents that cover filament LED light bulbs.” **[Dropped]**

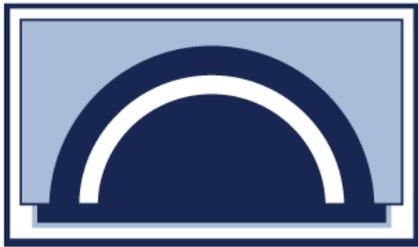


Second ITC campaign launched in Aug 2020

Funded by Longford Capital

5. Non-Practicing Entity Update

Bench Walk: Campaign #2



**BENCH WALK
ADVISORS**



LITEON®

**Who: Bench Walk Lighting
-versus-
Lite-On, LG Innotek, Everlight and Lextar**

What: 14 patents directed to LED lighting and LED packaging

Where: District of Delaware

When: Jan. 2020 – Present

Status: Pending motions to dismiss filed by Lite-On, Lextar, and LG

EVERLIGHT

Lextar
Lextar Electronics

Heavy Duty Lighting



Who: Heavy Duty Lighting

-versus-

Kichler Lighting, Acuity Brands

What: 10 patents originally assigned to Sharp, directed to LED lighting and LED packaging

Where: Northern Dist. Of Ohio; Northern Dist. Of Georgia

When: Sept. 2020– Present

Status: Complaints filed



LedComm

Who: LedComm LLC

-versus-

Anker, Lowe's, Sengled and TP-Link

What: 8 patents originally assigned to Sharp, directed to LED chips and packaging

Where: Central Dist. of Calif, Northern Dist. Of Georgia; Western Dist. Of Texas

When: Mar. 2020 - Present

Status: Pending motion to dismiss filed by Anker; answers not filed by Sengled, Lowe's; settlement with TP-Link



Lexington Luminance: Campaign #2

- Six recent suits filed against
 - Lowe's, Feit, 1000 Bulbs, RAB Lighting and others
- One patent directed to LED chip fab employing “inclined lower portions” in substrate of LED chip to guide defects away from active layer

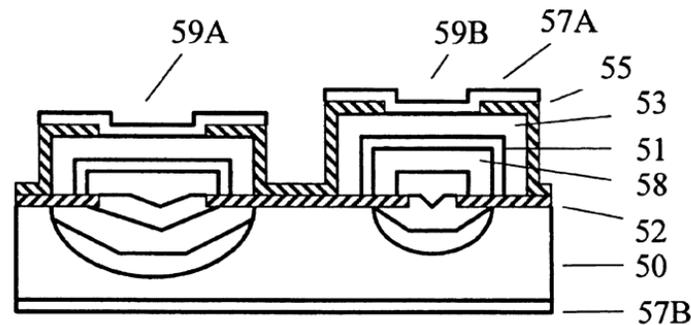


Fig. 5C, '851 patent



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646-502-5951



Radulescu **LLP**

Patent
Litigators