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8 Attorneys for Plaintiff,
9 *SEASONAL SPECIALTIES, LLC*

10
11 **UNITED STATES DISTRICT COURT**
12 **CENTRAL DISTRICT OF CALIFORNIA, WESTERN DIVISION**
13

14 SEASONAL SPECIALTIES, LLC,

Case No. 2:23-cv-06318-KK-AS

15 Plaintiff,

16 vs.

17 LEDUP MANUFACTURING GROUP
18 LTD.

19 Defendant.

20
21 **PLAINTIFF'S RESPONSES TO DEFENDANT'S**
22 **FIRST SET OF INTERROGATORIES**

23 Plaintiff Seasonal Specialties, LLC ("Seasonal" or "Plaintiff"), by and through
24 its counsel, hereby objects and responds to Defendant LEDup Manufacturing Group
25 Ltd.'s ("LEDup" or "Defendant") First Set of Interrogatories as follows:
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1. Seasonal objects to the interrogatories to the extent they seek information protected by the attorney/client privilege, the work product doctrine or another applicable privilege.

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RESPONSES TO INTERROGATORIES

INTERROGATORY NO. 1: Identify for each invention described in the Claims-in-Suit the dates of conception, reduction to practice, testing, prototyping, first offer to sell, and first production of product incorporating the invention, and identify all material and substantive witnesses and participants, documents and other evidence that supports Your claimed dates. Provide, for each witness, the relevant information they have.

OBJECTION: In addition to its general objections, Seasonal specifically objects to this interrogatory as seeking information protected by the attorney-client privilege and/or protected by the work product doctrine. Seasonal further objects to this interrogatory as seeking legal conclusions and theories as opposed to discovery of factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly burdensome, and as seeking information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence.

RESPONSE: Subject to the above general objections, and without waiving any objection, Seasonal states:

Steady-On Patents¹

The Steady-On Patents claim priority to Provisional Application No. 62/061,836, filed on October 9, 2014. See '437 patent, Related U.S. Application Data. LEDup has not identified how dates of conception, reduction to practice, testing, prototyping, first offer to sell, and first production of product incorporating the invention are relevant to infringement, validity, damages, or other issues in this case.

¹ U.S. Patent No. 9,554,437 and U.S. Patent No. 10,080,265. Together the '437 and '265 patents are referred to as the "Steady-On Patents." See 1st Am. Compl. [Dkt. 19] ¶ 22.

1 **Resistive Bypass Patent²**

2 The Resistive Bypass Patents claim priority to Provisional Application No.
3 62/876,868, filed on December 22, 2006. However, Seasonal identifies the declarations
4 of Steven Altamura submitted during prosecution of the Resistive Bypass Patents. Mr.
5 Altamura’s declaration states that his first written documentation of the Resistive
6 Bypass invention was dated January 12, 2006, and that he built a functioning prototype
7 in “the early spring of 2006.” See Paragraphs 2 and 7 of the Declaration of Mr.
8 Altamura, dated August 26, 2020. (SS00001153-1154)

9 Mr. Altamura submitted a revised declaration during prosecution of the ’794
10 patent. Mr. Altamura’s revised declaration states that he built a functioning prototype
11 at least as early as January 15, 2006. See Paragraphs 2 and 7 of the Declaration of Mr.
12 Altamura, dated September 1, 2022. (SS00000974-975).

13 Discovery continues. Seasonal reserves the right to supplement this response to
14 identify additional products or additional information responsive to this interrogatory

15 **INTERROGATORY NO. 2:** For each of the Claims-in-Suit provide the
16 factual basis of any disagreement or challenge to Defendant’s Preliminary Invalidity
17 Contentions based on Section 102 and 103 of the Patent Statute and the incorporated
18 or cited prior art claim charts, and describe each of the elements of the Claims-in-Suit
19 that You contend are missing from the cited prior art or any other basis contrary to the
20 Invalidity Contentions. Provide a description of all documents or opinions that support
21 Your claims, including the names of any witnesses that have relevant information and
22 a description of said information.

23 **OBJECTION:** In addition to its general objections, Seasonal specifically
24 objects to this interrogatory as seeking information protected by the attorney-client
25 privilege and/or protected by the work product doctrine. Seasonal further objects to this
26

27 _____
28 ² U.S. Patent No. 11,096,252 and U.S. Patent No. 11,533,794. Together the ’252 and
’794 patents are hereafter referred to the “Resistive Bypass Patents.” See 1st Am.
Compl. [Dkt. 19] ¶ 30.

1 interrogatory as seeking legal conclusions and theories as opposed to discovery of
2 factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly
3 burdensome, and as seeking information that is neither relevant nor reasonably
4 calculated to lead to the discovery of admissible evidence.

5 **RESPONSE:** Subject to the above general objections, and without waiving
6 any objection, Seasonal states

7 **Resistive Bypass Patents**

8 **U.S. Patent No. 7,963,670 to Yu**

9 (Filed July 31, 2006; Issued June 21, 2011)

10 Yu was made of record before the examiner during prosecution of the Resistive
11 Bypass Patents. See References Cited. Yu, however, does not qualify as prior art under
12 35 U.S.C. § 102 (pre-AIA) because date of invention for the Resistive Bypass Patents
13 predates the July 31, 2006, filing date of Yu. See Response to Interrogatory No. 1,
14 above.

15 Mr. Altamura’s declarations filed during prosecution of the Resistive Bypass
16 Patents establish diligence in the filing of an application for patent for patent protection
17 following conception of the invention. However, his actual reduction to practice—
18 before Yu’s filing date—renders irrelevant the issue of reasonable diligence. *Shindlear*
19 *v. Holdeman*, 628 F.2d 1337, 1341 (C.C.P.A. 1980); *Paulik v. Rizkalla*, 760 F. 2d 1270,
20 1273 (Fed. Cir. 1985).

21 Regardless of whether Yu qualifies as prior art under Section 102, Yu does not
22 render the asserted claims of the Resistive Bypass Patents unpatentable. Claim 1 of the
23 ’252 patent requires a “bypass resistor” “in current and conducting current at all times
24 when current is flowing through the circuit regardless of whether the LED light sources
25 are conducting current therethrough”. Yu lacks disclosure of a bypass resistor
26 conducting current at all times during operation.

27 LEDup’s invalidity chart contends that this claim limitation is an “inherent
28 design choice,” without identifying any specific disclosure in Yu as satisfying the

1 limitation. Yu describes the bypass component (318 in Fig. 3 & 4; 604 in Fig. 6; 806
2 in Fig. 8; and 1214 in Fig. 12) as having a resistor or diode having “a forward
3 breakdown voltage” that is higher than the twinkle LED 602, such that current does not
4 flow through the bypass component when current is flowing through the circuit in
5 normal operation. See Col. 5:61-67, 6:23-31, 7:42-53. Current flows through the
6 bypass component only when an LED burns out. Id. Therefore, Yu fails to disclose or
7 render obvious the invention of claim 1 because Yu lacks disclosure of a bypass resistor
8 in current and conducting current at all times when current is flowing through the
9 circuit.

10 Yu fails to render unpatentable the remaining asserted claims of the '252 patent,
11 and the asserted claims of the '794 patent, for the same reasons Yu fails to render
12 unpatentable claim 1 of the '252 patent.

13 **U.S. Patent No. 6,518,707 to Gershen**

14 (Filed June 22, 2001; Issued Feb. 11, 2003)

15 Claim 1 of the '252 patent requires “a plurality of serially connected LED light
16 sources”. Gershen discloses a string of conventional incandescent lights. See Figures
17 1-3, Col. 3:37-46, and miniature lamp 12. Gershen does not disclose use of LED lights.
18 LEDup offers no explanation or reason why, at the time of invention, a person of skill
19 in the art would be motivated to replace the incandescent lamp disclosed in Gershen
20 with an LED. Accordingly, Gershen fails to anticipate or render obvious claim 1 of the
21 '252 patent.

22 Claim 1 of the '252 patent also requires a “bypass resistor” “in current and
23 conducting current at all times when current is flowing through the circuit regardless
24 of whether the LED light sources are conducting current therethrough”. Gershen lacks
25 disclosure of a bypass resistor conducting current at all times during operation. Gershen
26 discloses a resistor 30 that draws only a “negligible” amount of current until the lamp
27 burns out, or, if the socket is defective causing the lamp to be “off,” at which point the
28 lamp increases to almost the full voltage. See Gershen 4:50-67. Gershen’s resistor 30

1 does not “conduct current at all times when current is flowing the circuit regardless of
2 whether the LED light sources are conducting current,” because the resistor is
3 substantially out of the circuit when the miniature lamp 12 is operative. Accordingly,
4 Gershen fails to disclose or render obvious the invention of claim 10 because it lacks a
5 bypass resistor in current and conducting current at all times when current is flowing
6 through the circuit.

7 Gershen fails to render unpatentable the remaining asserted claims of the ’252
8 patent, and the asserted claims of the ’794 patent, for the same reasons Gershen fails to
9 render unpatentable claim 1 of the ’252 patent.

10 **U.S. Patent No. 6,323,597 to Janning**

11 (Filed Jul. 10, 2000; Issued Nov. 27, 2001)

12 Janning was made of record before the examiner during prosecution of the
13 Resistive Bypass Patents. See References Cited. Claim 1 of the ’252 patent requires “a
14 plurality of serially connected LED light sources”. Janning discloses a string of
15 conventional incandescent lamps 1, 2, 3, 4, 5 in Fig. 1; it does not disclose use of LED
16 lights. See Janning 3:34, 4:40-43, 5:15-16, 5:45-46. LEDup offers no explanation or
17 reason why, at the time of the Resistive Bypass invention, a person of skill in the art
18 would be motivated to replace the incandescent lamp disclosed in Janning with an LED.
19 Accordingly, Janning fails to disclose or render obvious claim 1 of the ’252 patent.

20 Claim 1 of the ’252 patent requires a “bypass resistor” “in current and conducting
21 current at all times when current is flowing through the circuit regardless of whether
22 the LED light sources are conducting current therethrough”. Janning discloses a
23 “thermistor” shunt system, similar to prior art systems at the time, in which current
24 flow was “substantially zero,” until a lamp failed. Janning 2:29-31. Only a “small
25 amount of current will flow through the shunt” (51-55 in Figure 1), when the string is
26 operating normally. Janning 4:47-54. When “failure occurs in the shunted lamp, current
27 would start to flow through the thermistor, warming it, and lowering its electrical
28 resistance”. Id. 5:1-4. The shunt in Janning has a resistance value of at least twenty

1 times than the resistance of the lamp, when the lamp is operating under normal
2 conditions. Id. 5:19-25. Therefore, Janning’s shunt does not “conduct current at all
3 times when current is flowing the circuit regardless of whether the LED light sources
4 are conducting current,” because the shunt is substantially out of the circuit when the
5 lamp operative. Accordingly, Janning fails to disclose or render obvious the invention
6 of claim 10 because it lacks a bypass resistor in current and conducting current at all
7 times when current is flowing through the circuit.

8 Janning fails to render unpatentable the remaining asserted claims of the ’252
9 patent, and the asserted claims of the ’794 patent, for the same reasons that Janning
10 fails to render unpatentable claim 1 of the ’252 patent.

11 **U.S. Patent No. 2,870,377 to Ovrevik**

12 (Filed May 18, 1954; Issued Jan. 20, 1959)

13 Claim 1 of the ’252 patent requires “a plurality of serially connected LED light
14 sources”. Ovrevik discloses a lamp socket for an incandescent light bulb, not an LED
15 light source. See Figures 2-4. LEDup offers no explanation or reason why, at the time
16 of the invention, a person of skill in the art would replace the incandescent bulb
17 disclosed in Ovrevik with an LED. Accordingly, Ovrevik fails to disclose or render
18 obvious claim 1 of the ’252 patent.

19 Claim 1 of the ’252 patent requires a “bypass resistor” “in current and conducting
20 current at all times when current is flowing through the circuit regardless of whether
21 the LED light sources are conducting current therethrough”. Ovrevik discloses a
22 “heating element [12] of relatively high impedance is shunted across each low
23 impedance [filamentary] element and is substantially out of the circuit when the low
24 impedance element is operative.” Ovrevik 1:70-2:2. When one lamp in the string burns
25 out, all the lamps in the string go dark and become cool. Id. 2:42-61. Current to the
26 heating element 12 allows the burned-out lamp to be readily identified in the string,
27 amongst the dark lamps. Id. Ovrevik’s heating element 12—identified by LEDup as a
28 “bypass resistor”—does not “conduct current at all times when current is flowing the

1 circuit regardless of whether the LED light sources are conducting current,” as required
2 by claim 1. The heating element is “substantially out of the circuit when the low
3 impedance element is operative.” Ovrevik 2:1-2. Accordingly, Ovrevik fails to disclose
4 or render obvious the invention of claim 1 because it lacks a bypass resistor in current
5 and conducting current at all times when current is flowing through the circuit.

6 Ovrevik fails to render unpatentable the remaining asserted claims of the ’252
7 patent, and the asserted claims of the ’794 patent, for the same reasons Ovrevik fails to
8 render unpatentable claim 1 of the ’252 patent.

9 **U.S. Patent No. 2,760,120 to Fisherman**

10 (Filed Oct. 26, 1955; Issued Aug. 21, 1956)

11 Fisherman is discussed in the specification of the Resistive Bypass Patents and
12 of record during examiner. See ’252 patent, Col. 1:46-64; see also References Cited.
13 Claim 1 of the ’252 patent requires a “plurality of serially connected LED light
14 sources”. Fisherman discloses a series circuit for a light set with individual
15 incandescent bulbs. See Fisherman 2:9-17 describing lighting filament 11 and lamp 10.
16 LEDup offers no explanation or reason why, at the time of the Resistive Bypass
17 invention, a person of skill in the art would replace the incandescent bulb disclosed in
18 Fisherman with an LED. Accordingly, Fisherman fails to disclose or render obvious
19 claim 1.

20 Claim 1 of the ’252 patent requires a “bypass resistor” “in current and conducting
21 current at all times when current is flowing through the circuit regardless of whether
22 the LED light sources are conducting current therethrough”. Fisherman discloses that
23 the lighting filament 11 of lamp 10 is shunted by resistance 13. See Fisherman 1:39-
24 40, 2:9-20. Fisherman also discloses that the “resistance 13 are so dimensioned that
25 when the system functions normally, the electrical current will flow through the
26 filaments 11 of the lamps 10, so that all the lamps 10 will be illuminated.” Id. 2:18-21.
27 Therefore, Fisherman discloses that the resistance 13 is largely non-conducting current,
28 until the bimetallic strip 12 overheats and moves away from the filament. Id. 2:23-32.

1 The lamp then ceases to be illuminated, the electrical current is diverted to the shunt
2 13, but all the remaining lamps continue to be illuminated. Id. Accordingly, Fisherman
3 fails to disclose or render obvious the invention of claim 1 because it lacks a bypass
4 resistor in current and conducting current at all times when current is flowing through
5 the circuit.

6 Claim 1 of the '252 patent requires a bypass resistor capable of operating on a
7 one hundred percent duty cycle. The operation of the Fisherman light set is limited to
8 bulbs that flash on and off, a duty cycle of less than 100%. See '252 patent 1:50-51.
9 Accordingly, Fisherman fails to disclose or render obvious claim 1 for this additional
10 reason.

11 Fisherman fails to render unpatentable the remaining asserted claims of the '252
12 patent, and the asserted claims of the '794 patent, for the same reasons Fisherman fails
13 to render unpatentable claim 1 of the '252 patent.

14 **U.S. Patent No. 2,484,596 to Waltz**

15 (Filed Sept. 27, 1947; Issued Oct. 11, 1949)

16 Claim 1 of the '252 patent requires “a plurality of serially connected LED light
17 sources”. Waltz discloses a lamp socket for an incandescent light bulb, not an LED
18 light source. Waltz 1:1-3. LEDup offers no explanation or reason why, at the time of
19 the invention, a person of skill in the art would replace the incandescent bulb disclosed
20 in Waltz with an LED. Accordingly, Waltz fails to disclose or render obvious claim 1
21 of the '252 patent.

22 Claim 1 of the '252 patent requires a “bypass resistor” “in current and conducting
23 current at all times when current is flowing through the circuit regardless of whether
24 the LED light sources are conducting current therethrough”. Waltz discloses a disc 16
25 supporting a central contact 12. Waltz 2:27-44 and depicted in Figure 1. “[O]n rupture
26 of the circuit through the lamp an increased electromotive force is impressed across the
27 disc causing an increase in the normally minute current flowing therethrough. The
28 increased current flow increases the rate of heat generation within the disc such ... and

1 a corresponding decrease of the resistance of the disc to a point limited by the resistance
2 of the circuit where the resistance of the disc again stabilizes.” *Id.* Waltz disclosures
3 makes clear that the disc only conducts current when the incandescent bulb fails, the
4 disc heats up and overcomes the resistance otherwise present when the bulb is
5 functioning normally in the socket. Thus, Waltz fails to disclose or render obvious the
6 invention of claim 1 because its lacks a bypass resistor in current and conducting
7 current at all times when current is flowing through the circuit.

8 Waltz fails to render unpatentable the remaining asserted claims of the ’252
9 patent, and the asserted claims of the ’794 patent, for the same reasons Waltz fails to
10 render unpatentable claim 1 of the ’252 patent.

11 **U.S. Patent No. 2,461,962 to Carlson**

12 (Filed Aug. 26, 1947; Issued Feb. 15, 1949)

13 Claim 1 of the ’252 patent requires “a plurality of serially connected LED light
14 sources”. Carlson discloses a plurality of incandescent lamps 13 connected in series; it
15 does not disclose use of LED lights. See Carlson 1:3, 1:11, 1:24-28 and Figures 1-3.
16 LEDup offers no explanation or reason why at the time of the Resistive Bypass
17 invention, a person of skill in the art would be motivated to replace the incandescent
18 lamp disclosed in Carlson with an LED. Accordingly, Carlson fails to disclose or render
19 obvious claim 1 of the ’252 patent.

20 Claim 1 of the ’252 patent requires a “bypass resistor” “in current and conducting
21 current at all times when current is flowing through the circuit regardless of whether
22 the LED light sources are conducting current therethrough.” Carlson discloses resistors
23 14 by-passing the small incandescent lamp 13. Carlson 1:23-27. Resistors 14 having
24 resistance “sufficiently great that insufficient current normally flows through” a glow
25 tube 15 in the bypass circuit used to indicate failure of the lamp. *Id.* However, if the
26 filament in the incandescent lamp 13 ruptures or burns out, current travels through the
27 bypass circuit, illuminate the glow tube, and indicate which specific lamp in the circuit
28 is inoperative. Carlson 1:27-33. Thus, Carlson discloses that the resistors 14 are largely

1 non-conducting, until lamp 13 burns out or becomes inoperative. Accordingly, Carlson
2 fails to disclose or render obvious the invention of claim 1 because it lacks a bypass
3 resistor in current and conducting current at all times when current is flowing through
4 the circuit.

5 Carlson fails to render unpatentable the remaining asserted claims of the '252
6 patent, and the asserted claims of the '794 patent, for the same reasons Carlson fails to
7 render unpatentable claim 1 of the '252 patent.

8 **U.S. Patent No. 2,072,337 to Kamm**

9 (Filed May 5, 1936; Issued May 5, 1939)

10 Claim 1 of the '252 patent requires "a plurality of serially connected LED light
11 sources". Kamm discloses a plurality of incandescent lamps 5 connected in series; it
12 does not disclose use of LED lights. Kamm 1:4, and Figs. 1 and 2. LEDup offers no
13 explanation or reason why, at the time of the invention, a person of skill in the art would
14 be motivated to replace the incandescent lamp disclosed in Kamm with an LED.
15 Accordingly, Kamm fails to disclose or render obvious claim 1 of the '252 patent.

16 Claim 1 of the '252 patent requires a "bypass resistor" "in current and conducting
17 current at all times when current is flowing through the circuit regardless of whether
18 the LED light sources are conducting current therethrough." Kamm discloses shunt
19 member 26 arranged to complete the circuit in the event the incandescent lamp
20 becomes burned out. See Kamm 2:54-3:1. As shown in Figure 3, shunt 26 comprises
21 an insulating tube 27 provided with metal plugs 28 inserted in it opposed ends and
22 respectively connect to the lead wires 24 and 25. Id. 2:5-9. The cavity between the
23 inner plugs 28 is partially filled with minute metallic clips which tend to oxidize. Id.
24 2:19-21. The oxidation increases the resistance to electrical flow through the chips,
25 preventing any appreciable flow of electrical current between the plugs 28, and causing
26 current to take the easier path through a lamp. Id. 2:25-32. If lamp D burns out, the
27 current flow will pass through the metallic chips with the metal plugs 28 connected to
28 the lead wires 24 and 25. Kamm 2:38-41. Kamm does not disclose current passing

1 through the shunt member 26, unless the lamp is burned out or otherwise inoperable.
2 Accordingly, Kamm fails to disclose or render obvious the invention of claim 1 because
3 it lacks a bypass resistor in current and conducting current at all times when current is
4 flowing through the circuit.

5 Kamm fails to render unpatentable the remaining asserted claims of the '252
6 patent, and the asserted claims of the '794 patent, for the same reasons Carlson fails to
7 render unpatentable claim 1 of the '252 patent.

8 **U.S. Patent No. 1,510,847 to Holler**

9 (Filed April 18, 1922; Issued Oct. 7, 1924)

10 Claim 1 of the '252 patent requires "a plurality of serially connected LED light
11 sources". Holler discloses a plurality of incandescent lamps 5 connected in series; it
12 does not disclose use of LED lights. See Holler 1:42-43 and Figures 4-5. LEDup offers
13 no explanation or reason why, at the time of the invention, a person of skill in the art
14 would be motivated to replace the incandescent lamp disclosed in Holler with an LED.
15 Accordingly, Holler fails to disclose or render obvious claim 1 of the '252 patent.

16 Claim 1 of the '252 patent requires a "bypass resistor" "in current and conducting
17 current at all times when current is flowing through the circuit regardless of whether
18 the LED light sources are conducting current therethrough." Holler discloses resistance
19 shunts 6 (see Fig. 2) with resistance at least equal to lamps 5 and approximately twice
20 the current carrying capacity. See Holler 2:96-102. However, when power is flowing
21 through the lamp 5, Holler does not disclose that the resistance shunts 6 conduct
22 current, until a lamp burns out. Id. Accordingly, Holler fails to disclose or render
23 obvious the invention of claim 1 because it lacks a bypass resistor in current and
24 conducting current at all times when current is flowing through the circuit.

25 Holler fails to render unpatentable the remaining asserted claims of the '252
26 patent, and the asserted claims of the '794 patent, for the same reasons Holler fails to
27 render unpatentable claim 1 of the '252 patent.

28

1 **Steady-On Patents**

2 The independent claims of the Steady-On Patents require a first circuit that
3 controls power to a bulb, causing the bulb to produce a predetermined special visual
4 lighting effect. See generally '437 patent claims 1 and 11 and '265 patent claim 1. A
5 second circuit allows a user to periodically and repeatedly interrupt current to the first
6 circuit. The repeating interruption frequency is sufficient to cause the first circuit to
7 remain in a steady-on state so long as power continues to be interrupted. The special
8 lighting effect bulb remains steady-on until the user discontinues the power
9 interruption, thereby returning the first circuit to its preprogrammed special lighting
10 effect cycle.

11 Among other deficiencies, none of the four prior art references identified in
12 LEDup's Invalidity Contentions regarding the Steady On patents discloses sending an
13 interruption frequency to a circuit controlling power to a special light effect bulb,
14 sufficient to cause the circuit to reset, and remain in a steady-on state so long as power
15 continues to be interrupted.

16 **U.S. Patent No. 7,015,825 to Callahan**

17 (Filed April 14, 2004; Issued March 21, 2006)

18 Callahan discloses a decorative lighting system that uses Pulse Width
19 Modulation (PWM), controlled by an integrated circuit, to create blink rates
20 undetectable to the human eye, to control of brightness and otherwise vary the lighting
21 display. Callahan 4:17-22, 4:29-35, 4:41-45. The portions of Callahan that LEDup
22 contends disclose an interruption frequency disclose use of an integrated circuit to
23 create PWM waveforms and "prescaler registers 36, 38 that combine to permit blink
24 rates of the LEDs to be selected. The prescalers 36, 38 generate the period the PWM
25 signal from a high frequency oscillator." Callahan 4:17-20. Callahan discloses that
26 brightness is also controlled by brightness registers generating a high frequency PWM
27 signal. Id. 4:41-45.
28

1 All the disclosures in Callahan identified by LEDup are directed to using PWM
2 to vary the lighting display. None of the disclosures in Callahan cited by LEDup
3 address sending a separate signal to the circuit creating the light display to reset the
4 circuit to stay steady on. Callahan lacks any disclosure, or suggestion, for sending an
5 interruption frequency sufficient to cause a circuit for controlling power to a special
6 light effect bulb, to reset, and remain in a steady-on state so long as power continues
7 to be interrupted. Moreover, LEDup fails to offer any rational as to why a person of
8 ordinary skill in the art would have been motivated to modify the any of the identified
9 prior references to include the missing interruption signal, how a person of skill would
10 have modified the prior art to do so, or why a person of skill would have expected to
11 achieve success in doing.

12 **U.S. 6,424,096 to Lowe**

13 (Filed April 18, 2000; Issued July 23, 2006)

14 Lowe discloses light strings using Triac, also known as a Bi-directional
15 Thyristor, switches that conduct current when a trigger signal is applied to their control
16 terminal. Lowe 5:30-44. LEDup identifies the Thyristor as the “first switching circuit”
17 used to produce lighting effects. See claim charts. Lowe discloses that the appearance
18 of the lighting can be changed over time by ramping up and delaying the triac triggers
19 and, thereby, causing the lights to fade from light to dark, or modifying brightness over
20 time. Lowe 6:35-54. Lowe, however, lacks any disclosure, or suggestion, for sending
21 an interruption frequency, sufficient to cause a circuit for controlling power to a special
22 light effect bulb, to reset, and remain in a steady-on state so long as power continues
23 to be interrupted.

24 **German DE27299466 A1 to Soell**

25 (Published Jan. 18, 1979)

26 Soell discloses a system for controlling the visual appearance of incandescent
27 lamps used in artificial combustion candles, e.g., varying the brightness of the lamps.
28 See Soell Abstract. Soell discloses use of a circuit generating different levels and

1 frequencies, modulated by the logic of the circuit, to vary the visual appearance of the
2 lights. See Soell [0016], [0021] and Fig. 1. LEDup identifies circuit 6 as constituting a
3 “first switching circuit.” See claim chart citing [0021]. LEDup identifies the “pulse
4 shaper circuit 12” shown in Fig. 2 as constituting the second circuit, and allegedly
5 sending an interruption frequency to the first circuit. See claim chart citing [0022].
6 However, the square wave depicted in shaper circuit 12 is not a separate wave form
7 sent to circuit 6 (shown in Fig. 1). The shaper circuit 12 is the pulsed signal used to
8 generate the brightness levels in the lamp. Soell [0022]. Soell lacks any disclosure, or
9 suggestion, of a second switching circuit sending an interruption frequency, sufficient
10 to cause a first circuit for controlling power to a special light effect bulb (e.g., circuit 6
11 as shown Fig. 1), to reset, and remain in a steady-on state so long as power continues
12 to be interrupted.

13 **U.S. Pat. Pub. 2009/0121651 A1 to Gandhi**

14 (Priority Sept. 16, 2005; Published May 14, 2009)

15 Gandhi discloses “a color-changing light array powered by a driver circuit, the
16 driver circuit responsive to a controller circuit, and the controller circuit configured to
17 change display lighting patterns or colors based on modes of operation and off-on
18 power cycle intervals.” Gandhi, Abstract. The lights are configured to change display
19 lighting patterns or colors based on modes of operation and off-on power cycle
20 intervals. Id. Brightness is changed using pulse width modulation. Id. [0016] The
21 resulting illumination may be controlled by a computer/micro-controller program to
22 provide pre-designed patterns of light in various environments. Id.; see also [0041].
23 LEDup’s claim charts do not identify any specific component constituting a second
24 switching circuit sending an interruption frequency, sufficient to cause a first circuit
25 for controlling power to a special function light, causing the circuit to reset, and for the
26 light to remain in a steady-on state so long as power continues to be interrupted.
27 Brightness of the of the changed using PWM but in Gandhi discloses sending a square
28

1 wave signal to the controller circuit to cause it to reset and maintain the light in a steady-
2 on state.

3 Discovery is ongoing. Seasonal reserves the right to supplement or amend this
4 interrogatory answer.

5 **INTERROGATORY NO. 3:** For each of the Claims-in-Suit provide the
6 factual basis of Your response and position with respect to the invalidity contentions
7 based on Section 112 of the Patent Statute contained in the Preliminary Invalidity
8 Contentions. Provide a description of all documents that support Your position and the
9 names of any witnesses with relevant information and a description of the relevant
10 information.

11 **OBJECTION:** In addition to its general objections, Seasonal specifically
12 objects to this interrogatory as seeking information protected by the attorney-client
13 privilege and/or protected by the work product doctrine. Seasonal further objects to this
14 interrogatory as seeking legal conclusions and theories as opposed to discovery of
15 factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly
16 burdensome, and as seeking information that is neither relevant nor reasonably
17 calculated to lead to the discovery of admissible evidence. Moreover, LEDup's
18 indefiniteness and lack of enablement allegation are unclear, and do not specifically
19 identify which specific claims and claim terms LEDup contends re invalid under 35
20 U.S.C. § 112.

21 **RESPONSE:** Subject to the above general objections, and without waiving
22 any objection, Seasonal denies that the asserted claims are invalid for failure to comply
23 with the written description and enablement requirements. After LEDup provides
24 sufficient detail as to the which specific claims and claim terms it contends are invalid
25 for lack of compliance with 35 U.S.C. 112, Seasonal will supplement this response.

26 **INTERROGATORY NO. 4:** For each Claims-in-Suit that the Preliminary
27 Invalidity Contentions assert would have been obvious in light of the cited prior art,
28 provide the factual basis for any counter-contention that it would have been non-

1 obvious in light of the cited prior art including a description of any evidence and
2 documents related to Second Considerations that You assert exist.

3 **OBJECTION:** In addition to its general objections, Seasonal specifically
4 objects to this interrogatory as seeking information protected by the attorney-client
5 privilege and/or protected by the work product doctrine. Seasonal further objects to this
6 interrogatory as seeking legal conclusions and theories as opposed to discovery of
7 factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly
8 burdensome, and as seeking information that is neither relevant nor reasonably
9 calculated to lead to the discovery of admissible evidence. LEDup has yet to identify a
10 basis for and alleged obviousness defense or make a prima facie showing of
11 obviousness, making proof of secondary considerations unnecessary and irrelevant.
12 Seasonal specifically objects to this interrogatory's demand that Seasonal identify
13 secondary considerations on a "claim-by-claim" basis as being contrary to law.

14 **RESPONSE:** Subject to the above general objections, and without waiving
15 any objection, Seasonal refers to its answer to Interrogatory No. 2 regarding the lack
16 of motivation or suggestion to combine prior art. Seasonal further states that non-
17 obviousness of the Asserted Patents is supported by at least the following relevant
18 secondary considerations:

19 **Resistive Bypass Patents**

20 Commercial Success. Seasonal will produce pursuant to Fed. R. Civ. P. 33(d)
21 non-privileged business records identifying products practicing the Resistive Bypass
22 Patents. Seasonal's products practicing the Resistive Bypass Patents have been
23 commercially successful due to inclusion of the patented invention. Other companies,
24 including at least LEDup and Inliten, have incorporated the Resistive Bypass invention
25 into their competing decorative lighting products, and have also enjoyed commercial
26 success due to inclusion of the invention.

27 Long Felt Need. Decorative lighting products are often connected in "series" in
28 a string of lights, whereby electrical current flows from one light to the next in the

1 circuit, end-to-end. A drawback to series connected decorative lighting strings is that
2 when a lighting source, e.g., a bulb, is removed from the circuit, is burnt out, defective,
3 or has a loose connection, the entire lighting circuit is rendered inoperable. See '252
4 patent at 1:26-45.

5 To address this drawback, lighting string manufactures utilize circuit bypasses
6 to permit electrical current to continue to flow through the circuit even though after one
7 or more bulbs in the lighting string have become inoperable. For example, U.S. Patent
8 No. 5,886,423 to Gershon discloses a lighting string containing incandescent bulbs
9 with a parallel solid state bypass circuit that conducts electricity only when the bulb
10 becomes inoperable. When one or more bulbs in the Gershon system become
11 inoperable, the bypass then permits current to bypass the inoperable lamp and flow to
12 the remaining bulbs.

13 Drawbacks remain, however, with circuit bypasses. The solid state bypass circuit
14 in Gershon creates no voltage load on the circuit, until engaged when a bulb in the
15 circuit fails. When engaged, the bypass circuits like those described in Gershon provide
16 insufficient resistance to that portion of the circuit bypassed. If enough bulbs fail, the
17 circuit current will increase causing early failure of the remaining bulbs as too much
18 current flows through the remaining bulbs, overheating them and causing them to
19 prematurely fail.

20 Seasonal's engineers developed an improved circuit bypass that addresses
21 problems in bypass circuits including a reduction in the cost, complexity, and size of
22 the solid state bypass circuits, i.e., the "Resistive Bypass Invention." The Resistive
23 Bypass Invention permits serially-connected LED lights to remain lit, after one or more
24 bulbs become defective, burnt out, loose, or removed, by conducting current at all times
25 when current is flowing through the circuit, regardless of whether the LED light sources
26 are conducting current therethrough.

1 **Steady-On Patents**

2 Commercial Success. Seasonal lighting products (781308-101 & 781309-101)
3 practice the patented Steady On invention. Seasonal's products have been
4 commercially successful due to inclusion of the patented invention. Other companies,
5 including Everstar, LEDup, National Tree and Holiday Designs, subsequently
6 incorporated the patented invention into their competing decorative lighting products,
7 and have also enjoyed commercial success due to inclusion of the invention.

8 Long Felt Need. The patented invention allows an LED bulb that normally has a
9 special lighting effect (e.g., turning on and off, i.e., "twinkling," or changing from dim
10 to bright, or changing color) when a power source is applied, to become a steady-on
11 bulb, by sending a pulsed signal to the IC in that special lighting effect LED, causing
12 the IC in the LED never to complete its program and cause the LED to stay steady on,
13 or steady on in a specific color. For the sake of this document, Seasonal will refer to
14 the special bulb to be of the random "twinkle" type, as that is what is used in the
15 infringing Accused Product.

16 Before the patented invention, there were two main types of "twinkle" or
17 specialty decorative lighting sets available, not including sets where each bulb was
18 independently addressable, which is much more costly. First, there were true random
19 twinkle sets, in which each specialty bulb independently turns on and off at its own
20 rate, not affecting the status rate of other bulbs. Second, standard bulbs where all the
21 bulbs in the same circuit turn on and off at the same time in a simulated rate to look
22 like they are twinkling or other effect by means of some sort of controller, turning on
23 and off that circuit, or dimming that circuit. For example, a non-electronic controller,
24 such as a flasher bulb, which turns on and off the whole circuit. This second type of
25 "twinkle" bulb was a "fake" twinkle, or fake effect, because all the bulbs turned on and
26 off (or some other specialty lighting variation) at the same time in the same circuit.
27 Prior to the patented invention, true random twinkle sets (where each bulb
28 independently turns on and off, unaffected by other bulbs), could not be made to easily

1 switch to a steady-on mode unless they were a much higher cost addressable bulb where
2 each or some bulbs were controlled independently.

3 Seasonal was contacted by customers requesting to be able to turn on or off the
4 twinkling mode, as it was sometime too distracting and desirable to switch from
5 “twinkle” (or some other special mode) to steady-on mode. Seasonal was able to
6 provide this feature with the patented invention because of the IC inside of the special
7 effect LED bulb. Instead of employing high-cost addressable LEDs and a complicated
8 controller, Seasonal took a low cost controller, and existing “semi-smart” LEDs (where
9 the IC inside of the specialty bulb simply turns on and off that one LED instead of
10 addressable and completely independently controllable) and created a set that could
11 switch from twinkling to steady-on mode by pulsing the IC on the specialty LED bulbs
12 to cause them to stop twinkling. The patented invention satisfied customers long-felt
13 need for a true random twinkle light set, without high-cost independently addressable
14 LEDs and a complicated controller, but could also switch from a twinkle (or other
15 specialty lighting) mode to steady-on.

16 Copying. Seasonal competitors, including Everstar, LEDup, National Tree and
17 Holiday Designs, had access to Seasonal products incorporating the claimed invention
18 due to the products presence in the marketplace and their commercial success. Seasonal
19 also began marking products using the patented invention with the numbers of the
20 Asserted Patents on products sold since at least September 2020. Thereafter, the
21 aforementioned competitors introduced decorative lighting products that infringed the
22 Asserted Patents by including the claimed twinkle to steady-on feature.

23 In at least one case, a competitor, Holiday Designs, offered decorative lighting
24 products containing the patented invention to a retailer (Home Depot) that had
25 committed to purchasing products containing the invention from Seasonal, resulting in
26 the retailer deciding to purchase products from the competitor instead of from Seasonal.
27 The aforementioned evidence creates a presumption of copying.

28

1 Licensing. At least one company has taken a license to the Steady-On Patents.
2 Evidence that competitors have licensed a patent may provide probative and cogent
3 evidence of non-obviousness of the claims at issue.

4 Discovery continues. Seasonal reserves the right to supplement this interrogatory
5 response to identify additional evidence and additional bases of secondary
6 considerations supporting non-obviousness of the patented invention.]

7 **INTERROGATORY NO. 5:** Describe all tests, inspections, evaluations,
8 analysis or comparisons conducted by You or on Your behalf on any of Defendant's
9 products, whether they are accused products or not, and describe the dates acquired and
10 the source for all such products, the dates of all tests, inspections, evaluations, analysis
11 or comparison, the persons and their employers who performed them, the documents
12 or recordings or other preservation of them, the product SKU or other identifier of the
13 products examined and the purpose and conclusions made. Describe all documents,
14 recordings, photos, test equipment, wiring diagrams of any test setup, the test methods
15 used, videos, or other means of recording them.

16 **OBJECTION:** In addition to its general objections, Seasonal specifically
17 objects to this interrogatory as seeking information protected by the attorney-client
18 privilege and/or protected by the work product doctrine. Seasonal further objects to this
19 interrogatory as overly broad, unduly burdensome, and as seeking information that is
20 neither relevant nor reasonably calculated to lead to the discovery of admissible
21 evidence.

22 **RESPONSE:** Subject to the above general objections, and without waiving
23 any objection, Seasonal will produce pursuant to Fed. R. Civ. P. 33(d) non-privileged
24 business records regarding third party testing of Seasonal products practicing the
25 Patents-in-Suit, made in the ordinary course of business, from which information
26 responsive to this interrogatory can be ascertained. Testing of the Accused Products
27 constitutes work product and expert testimony that will be produced in accordance with
28 Scheduling Order regarding disclosure of expert testimony.

1 **INTERROGATORY NO. 6:** Describe on a week-by-week basis from Your
2 earliest date of conception of the invention of the Claims-in-Suit of the ‘252 and ‘794
3 patents, what actions, research, analysis, testing, written descriptions, disclosures,
4 drafts of patent applications, evaluation of options or of patentability, or efforts You or
5 anyone on Your behalf that led up to and contributed to Your filing Your December
6 22, 2006 patent application Ser. No. 60/876,868. Identify all documents, persons or
7 things that corroborate or otherwise support Your answer.

8 **OBJECTION:** In addition to its general objections, Seasonal specifically
9 objects to this interrogatory as seeking information protected by the attorney-client
10 privilege and/or protected by the work product doctrine. Seasonal further objects to this
11 interrogatory as seeking legal conclusions and theories as opposed to discovery of
12 factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly
13 burdensome, and as seeking information that is neither relevant nor reasonably
14 calculated to lead to the discovery of admissible evidence.

15 **RESPONSE:** Subject to the above general objections, and without waiving
16 any objection, please see Seasonal’s response to Interrogatory No. 1 and Interrogatory
17 No. 2 above regarding U.S. Patent No. 7,963,670 to Yu’s qualification as prior art
18 against the Resistive Bypass Patents, including reference to Mr. Altamura’s
19 declarations and documents contained within the patent file histories.

20 **INTERROGATORY NO. 7:** Describe what considerations were evaluated in
21 selecting the patent claims chosen for further prosecution as a divisional in Ser. No.
22 11/962,964, filed on December 21, 2007, instead of the resistor bypass claims (which,
23 for clarification, are those claims of the original patent application that were directed
24 toward the invention later claimed in the ‘252 patent), and describe all documents,
25 persons, opinions, and things that were considered or what documents went into Your
26 decision, including any prior art, patentability probability evaluations, or other factors.

27 **OBJECTION:** In addition to its general objections, Seasonal specifically
28 objects to this interrogatory as seeking information protected by the attorney-client

1 privilege and/or protected by the work product doctrine. Seasonal further objects to this
2 interrogatory as seeking legal conclusions and theories as opposed to discovery of
3 factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly
4 burdensome, and as seeking information that is neither relevant nor reasonably
5 calculated to lead to the discovery of admissible evidence.

6 **RESPONSE:** Subject to the above general objections, Seasonal's non-
7 privileged considerations and evaluations for selecting the patent claims chosen for
8 further prosecution in Ser. No. 11/962,964, are set forth in the file histories of the
9 Patent-in-Suit and the file histories of the other applications in the same family. Any
10 other considerations and evaluations for selecting patent claims is attorney work
11 product or otherwise privileged.

12 **INTERROGATORY NO. 8:** Do You contend that any of Defendant's
13 products infringe on any of the Claims-in-Suit under the Doctrine of Equivalents and
14 if so, set forth the factual basis for such claims as to each element to which it is applied
15 and describe all documents and things that support Your contentions.

16 **OBJECTION:** In addition to its general objections, Seasonal specifically
17 objects to this interrogatory as seeking information protected by the attorney-client
18 privilege and/or protected by the work product doctrine. Seasonal further objects to this
19 interrogatory as seeking legal conclusions and theories as opposed to discovery of
20 factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly
21 burdensome, and as seeking information that is neither relevant nor reasonably
22 calculated to lead to the discovery of admissible evidence.

23 **RESPONSE:** Subject to the above general objections, and without waiving
24 any objection, Seasonal states: LEDup has not identified any element of the Asserted
25 Claims missing from Seasonal's infringement allegations and on which Defendant
26 avoids infringement. LEDup has not refuted the evidence of infringement identified in
27 Seasonal's Infringement Contentions. Because LEDup has not identified any element
28 of the Asserted Claims missing from the accused products, Seasonal has no need to

1 rely upon the doctrine of equivalents to prove infringement. To the extent LEDup
2 identifies any element absent from Seasonal's Infringement Contentions, Seasonal
3 reserves the right to rely upon the doctrine of equivalents to prove infringement.

4 **INTERROGATORY NO. 9:** Identify all facts that support Your allegation
5 that Defendant willfully infringed any of the Patents-in-Suit or that this is an
6 exceptional case warranting additional relief under Sections 284 and 285 of the Patent
7 Statute.

8 **OBJECTION:** In addition to its general objections, Seasonal specifically
9 objects to this interrogatory as seeking information protected by the attorney-client
10 privilege and/or protected by the work product doctrine. Seasonal further objects to this
11 interrogatory as seeking legal conclusions and theories as opposed to discovery of
12 factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly
13 burdensome, and as seeking information that is neither relevant nor reasonably
14 calculated to lead to the discovery of admissible evidence.

15 **RESPONSE:** Subject to the above general objections, and without waiving
16 any objection, Seasonal states: LEDup undertook and continues its infringing actions
17 despite that it knew and/or should have known that its actions constituted an
18 unjustifiably high risk, and that its activities infringed the Patents-in-Suit, which were
19 duly issued and are presumed valid. For example, since at least receiving actual notice
20 of infringement from Seasonal, LEDup has been aware of the unjustifiably high risk
21 that its actions constituted and continue to constitute infringement of the Patents-in-
22 Suit, and that the Patents-in-Suit are valid. On information and belief, LEDup could
23 not reasonably, subjectively believe that its actions do not constitute infringement of
24 the Patents-in-Suit, and it could not reasonably, subjectively believe that the Patents-
25 in-Suit are invalid. Despite this knowledge and subjective belief, and the unjustifiably
26 high risk that its actions constitute infringement, LEDup has continued its infringing
27 activities.

Discovery continues and Seasonal reserves the right to supplement this answer after it receives discovery from LEDup.

Dated: June 24, 2024

SAUL EWING LLP

By /s/ Courtland C. Merrill

Courtland C. Merrill

Attorneys for Plaintiff

SEASONAL SPECIALTIES, LLC

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CERTIFICATE OF SERVICE

The undersigned certifies that on June 24, 2024, the foregoing **Plaintiff's Responses to Defendant's First Set of Interrogatories** were served on Defendant's counsel of record by electronic mail, as agreed upon by counsel, at the addresses identified below:

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