

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

**JIAXING SUPER LIGHTING
ELECTRIC APPLIANCE, CO., LTD.,
OBERT, INC.,**

Plaintiffs

-v-

**CH LIGHTING TECHNOLOGY CO.,
LTD., ELLIOTT ELECTRIC SUPPLY,
INC., SHAOXING RUISING
LIGHTING CO., LTD.,**

Defendants

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**W-20-CV-00018-ADA**

## CLAIM CONSTRUCTION ORDER

The Court held a Markman hearing on October 22, 2020, during which the Court orally provided the following claim constructions. The Court now enters those claim constructions.

| No. | Term                                                                                                                                                                    | Plaintiff's Proposed       | Defendant's Proposed                                                                                                                                                                               | Preliminary Construction   |
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| 1A  | “a power supply disposed in one or two end caps”<br><br>('125 Patent, claims 1, 29)                                                                                     | Plain and ordinary meaning | “a power supply located in the inner space formed by the lateral wall and the end wall of one or two end caps”                                                                                     | Plain and ordinary meaning |
| 1B  | “the power supply comprises a circuit board disposed inside one of the end caps”<br><br>('125 Patent, claim 14)                                                         | Plain and ordinary meaning | “the power supply comprises a circuit board located in the inner space formed by the lateral wall and the end wall of one or two end caps”                                                         | Plain and ordinary meaning |
| 1C  | “the first circuit board is disposed inside the first end cap”<br><br>('078 Patent, claim 23)                                                                           | Plain and ordinary meaning | “the first circuit board is located in the inner space formed by the lateral wall and the end wall of the first end cap”                                                                           | Plain and ordinary meaning |
| 1D  | “the first electronic component, the second electronic component and the heat dissipating element are disposed inside the first end cap”<br><br>('078 Patent, claim 41) | Plain and ordinary meaning | “the first electronic component, the second electronic component and the heat-dissipating element are located in the inner space formed by the lateral wall and the end wall of the first end cap” | Plain and ordinary meaning |

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| 1E | <p>“the circuit board disposed inside one of the rear end regions and one of the end caps”</p> <p>(’540 Patent, claim 13)</p> | Plain and ordinary meaning                         | <p>“the circuit board located in the inner space of one of the rear end regions and in the inner space formed by the lateral wall and the end wall of one of the end caps”</p>                                                       | Plain and ordinary meaning                                                               |
| 1F | <p>“a power supply in one or both of the end caps / a power supply in the end cap”</p> <p>(’003 Patent, claims 1, 23)</p>     | Plain and ordinary meaning                         | <p>“a power supply located in the inner space formed by the lateral wall and the end wall of one or both of the end caps”/“a power supply located in the inner space formed by the lateral wall and the end wall of the end cap”</p> | Plain and ordinary meaning                                                               |
| 2  | <p>“opening”</p> <p>(’003 Patent, claims 1, 23; ’078 Patent, claims 23, 41)</p>                                               | Plain and ordinary meaning                         | <p>“hole in the end wall other than that used to hold a conductive pin”</p>                                                                                                                                                          | Plain and ordinary meaning                                                               |
| 3  | <p>“resistor”</p> <p>(’989 Patent, claims 1, 6; ’003 Patent, claim 4)</p>                                                     | “component that provides an electrical resistance” | <p>“component whose primary purpose is to introduce resistance into an electric circuit”</p>                                                                                                                                         | Plain and ordinary meaning.                                                              |
| 4  | <p>“heat-dissipating element”</p> <p>(’078 Patent, claims 23, 41)</p>                                                         | Plain and ordinary meaning                         | <p>“element that causes a non-incidental decrease in the amount of heat in a region”</p>                                                                                                                                             | Plain and ordinary meaning.                                                              |
| 5  | <p>“recognizing mark”</p> <p>(’125 Patent, claim 29)</p>                                                                      | Plain and ordinary meaning                         | <p>“reference mark for a soldering machine”</p>                                                                                                                                                                                      | Plain and ordinary meaning wherein the plain and ordinary meaning is a “reference point” |

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| 6 | <p>“properly installed”</p> <p>(’140 Patent, claims 1, 3, 4, 21, 22, 24, 30)</p> | Plain and ordinary meaning | “fully installed”                                                                                                                                                                         | Plain and ordinary meaning, <i>e.g.</i> , both ends of the LED tube lamp are correctly connected to conductive terminals of the lamp socket.                                                                                                                                                                                                                                                                                                                                                                          |
| 7 | <p>“pulse signals”</p> <p>(’140 Patent, claims 1, 3-4, 21-22, 24, 26, 30)</p>    | Plain and ordinary meaning | “sudden changes in current or voltage from one value to a higher or lower value and back to its original value in a specific time”                                                        | <p>Plain and ordinary meaning<sup>1</sup></p> <p><sup>1</sup> – Footnote not for the jury: The plain and ordinary meaning may include Defendant’s proposed construction, but it is not limited to Defendants’ proposed construction. For example, a POSITA would understand that the pulse width does not need to be perfectly consistent, nor does the interval between pulses need to be periodic. But a POSITA would also understand that the pulse width has to be long enough to turn on the switch circuit.</p> |
| 8 | <p>“sampling signal”</p> <p>(’140 Patent, claims 1, 3-4, 21-22, 24, 26, 30)</p>  | Plain and ordinary meaning | “discrete voltage or current generated from the external driving signal during the one or more pulse signals where the timing is independent of the level of the external driving signal” | “a signal that is based on a measurement of the power loop at a specific time”                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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| 9  | <p>“means for generating one or more pulse signals”<br/>(’140 Patent, claim 21)</p> | <p><b>Function:</b><br/>“generating one or more pulse signals”</p> <p><b>Structure:</b> “circuit of resistive, capacitive, and logic elements that are configured to output one or more pulses as demonstrated in Figs. 15B, 15C, 15G, and 15H, and 38:39-42:45, 47:7-49:35, 52:1-51, 53:4-51”</p>                                                                                                                 | <p><b>Function:</b><br/>“generating one or more pulse signals”</p> <p><b>Structure:</b> “The circuits depicted in Figs. 15C or 15H, or equivalents thereof”</p>                                                                                                                                   | <p>Subject to § 112, ¶ 6 (agreed)</p> <p><b>Function:</b> “generating one or more pulse signals” (agreed)</p> <p><b>Structure:</b> “module 2540 in Fig. 15B, module 2740 in Fig. 15G, circuits depicted in Figs. 15C and 15H, and corresponding text, and equivalents thereof.”</p>                                                                                                  |
| 10 | <p>“means for detecting”<br/>(’140 Patent, claim 21)</p>                            | <p><b>Function:</b><br/>“detecting a sample signal on the power loop during the one or more pulse signals to determine whether the LED tube lamp is properly installed”</p> <p><b>Structure:</b> “circuit that compares an input to a reference, and outputs a result of that comparison, as demonstrated in Figs. 15B, 15D, 15G, and 15K, and 38:39-42:16, 42:46-43:15, 47:7-48:67, 49:63-53:67, 55:30-56:35”</p> | <p><b>Function:</b> “detecting a sampling signal on the power loop during the one or more pulse signals for determining whether the LED tube lamp is properly installed on [a/the] lamp socket”</p> <p><b>Structure:</b> “The circuits depicted in Figs. 15D and 15K, or equivalents thereof”</p> | <p>Subject to § 112, ¶ 6 (agreed)</p> <p><b>Function:</b> “detecting a sampling signal on the power loop during the one or more pulse signals for determining whether the LED tube lamp is properly installed” (largely agreed)</p> <p><b>Structure:</b> “module 2570 in Fig. 15B, module 2770 in Fig. 15G, Figs. 15D and 15K, and corresponding text, and equivalents thereof.”</p> |

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| 11 | <p>“detection determining circuit”</p> <p>(’140 Patent, claims 1, 4, 24)</p>                                | <p>“circuit that detects a signal”</p>                                    | <p>Subject to § 112, ¶ 6</p> <p><b>Function:</b> “detecting a sampling signal on the power loop during the one or more pulse signals for determining whether the LED tube lamp is properly installed on [a/the] lamp socket”</p> <p><b>Structure:</b> “The circuits depicted in Figs. 15D and 15K, or equivalents thereof”</p> <p><b>Alternatively:</b> ““a circuit that detects a sampling signal and determines whether the LED tube lamp is properly installed.””</p> | <p>Not subject to § 112, ¶ 6.</p> <p>“detects a sampling signal on the power loop and generates a signal based on a whether the sampling signal is higher or lower than a reference value.”</p>                                           |
| 12 | <p>“detection result latching circuit”</p> <p>(’140 Patent, claims 4-5, 11-12, 15-16, 23-24, 31-32, 34)</p> | <p>“circuit that maintains a signal level based on a detected result”</p> | <p>“circuit that reverses its signal level when the detected result is applied and maintains its signal level based on the detected result”</p> <p><b>Alternatively:</b> “circuit that reverses its signal level when the detected result <u>for a proper installation</u> is applied and maintains its signal level based on the detected result.”</p>                                                                                                                  | <p>“circuit that stores the detected result and outputs a high logic value when either the stored detected result or the pulse signal output terminal (<i>e.g.</i>, inputs 2541 or 2741 in Figs. 15E and 15I) has a high logic value”</p> |

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| 13 | “control circuit”<br>(’479 Patent,<br>claims 31, 34,<br>36-37)                                                                               | Plain and ordinary<br>meaning | “circuit that controls<br>when the external<br>driving signal is from<br>an external lamp<br>driving circuit (such<br>as a ballast)”                            | Plain and ordinary<br>meaning |
| 14 | “when”<br>(’479 Patent,<br>claim 31)                                                                                                         | Plain and ordinary<br>meaning | “at the moment that”<br><br><b>Alternatively:</b><br>“immediately after”                                                                                        | Plain and ordinary<br>meaning |
| 15 | “the control<br>circuit controls<br>in a way that<br>prevents the<br>LED module<br>from emitting<br>light”<br><br>(’479 Patent,<br>claim 31) | Plain and ordinary<br>meaning | “the control circuit<br>cuts off the<br>conduction path to<br>the LED module<br>thereby preventing<br>the LED module<br>from emitting light”                    | Plain and ordinary<br>meaning |
| 16 | “active<br>component”<br><br>(’479 Patent,<br>claim 31)                                                                                      | Plain and ordinary<br>meaning | “a component that<br>can operate on an<br>applied electrical<br>signal as in<br>amplifying,<br>rectifying, or<br>switching, such as a<br>transistor or a diode” | Plain and ordinary<br>meaning |

**SIGNED** this 24th day of October, 2020.

  
 ALAN D ALBRIGHT  
 UNITED STATES DISTRICT JUDGE