

UNITED STATES DISTRICT COURT  
DISTRICT OF VERMONT

U.S. DISTRICT COURT  
DISTRICT OF VERMONT  
FILED

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Trojan Technologies Group ULC,

Plaintiff,

v.

First Light Technologies, Inc.

Defendant.

Case No.:

2:21-cv-214

DEMAND FOR JURY TRIAL

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Trojan Technologies Group ULC (“Trojan”) files this Complaint for patent infringement against Defendant First Light Technologies, Inc. (“First Light”).

**THE PARTIES**

1. Trojan is a Canadian corporation with a principal place of business at 3020 Gore Road, London, Ontario, Canada N5V 4T7. Trojan is registered to transact business in the State of Vermont.

2. On information and belief, First Light is a corporation organized under the laws of the State of Vermont with its principal place of business at 212 Ideal Way, Poultney, Vermont, 05764.

**JURISDICTION, VENUE AND PARTIES**

3. This action arises under the Patent Act, 35 U.S.C. § 1 *et seq.* As such, this Court has original jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over First Light because First Light resides in this District and has a regular and established place of business in this District.

5. Venue is proper in this District and before this Court under 28 U.S.C. §§ 1391(b) and (c) because First Light resides in this District and has committed acts of infringement in this District.

6. Venue is proper in this District and before this Court under 28 U.S.C. § 1400(b) because First Light has committed acts of infringement and has a regular and established place of business in this District.

### **FACTUAL BACKGROUND**

7. On May 1, 2012, the United States Patent and Trade Office (“USPTO”) duly and legally issued U.S. Patent No. 8,167,654 (the “’654 patent”), to Joseph Elku et al., entitled *Radiation Lamp and Radiation Source Module Incorporating Same*. A true and correct copy of the ’654 Patent is attached as **Exhibit A**.

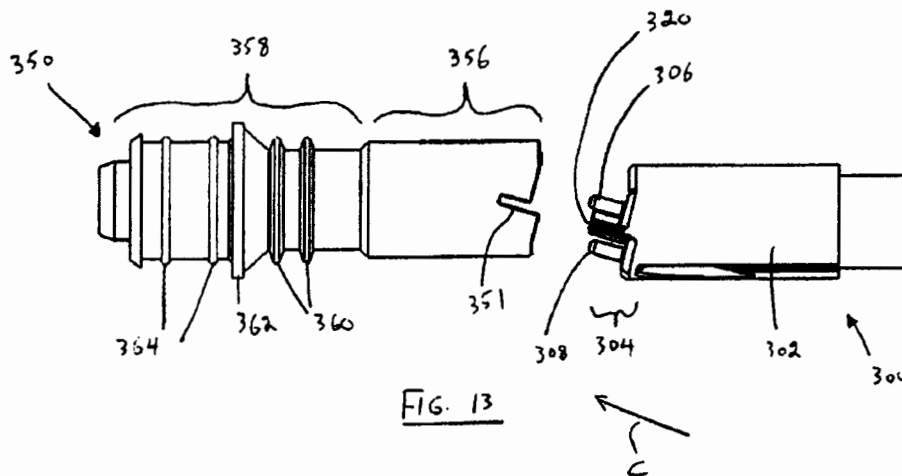
8. Trojan is the owner by assignment of the ’654 Patent, and holds all rights, title and interest in this patent.

9. Trojan is a leading innovator and producer of Ultra-violet (“UV”) water treatment systems and UV lamps that are used in UV water treatment systems. Trojan’s UV water treatment systems perform the essential task of disinfecting water, without disadvantageous chemical treatments. Trojan’s UV water treatment systems have applications in municipal drinking water treatment, municipal wastewater treatment, industrial water treatment, and residential drinking water treatment.

10. Trojan identified a problem that, in many applications, the UV lamps are immersed in a flow of water, and turbulence created by the water flow imparts a vibratory motion to the lamps. This motion frequently results in lamps being vibrated or shaken loose of their electrical connection to their respective base or socket, thereby causing the lamps to be

rendered completely or intermittently inoperative. When such an event occurs, the water being treated may not be fully disinfected.

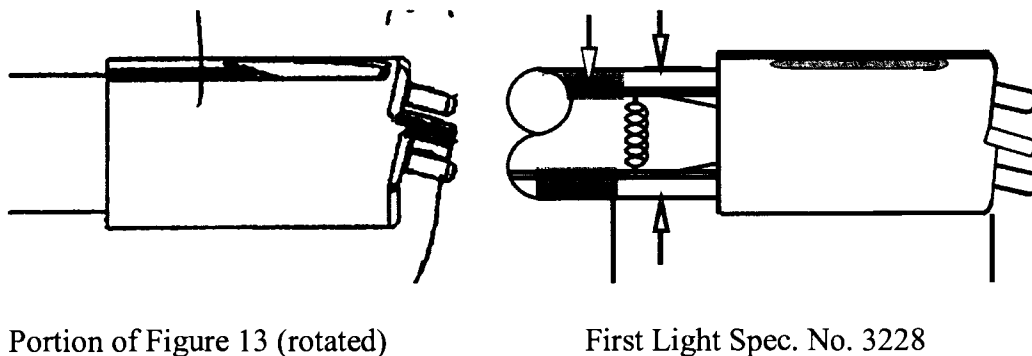
11. To solve this problem, Trojan developed a new UV lamp module and corresponding UV lamps. In this new arrangement, the electrical connectors for the lamps, and the corresponding electrical receptacles on the module, are angled at an oblique angle with respect to a lengthwise direction of the lamp. An illustration from the '654 patent of one embodiment of the invention is provided below:



**Exhibit A**, Figure 13. As the lamp is plugged into the receptacle, it moves in the direction C as indicated by the arrow. A quartz sleeve is then installed over the lamp and receptacle. Among other things, the sleeve prevents the lamp from traveling in a direction that is the reverse of direction C, which would be required to disengage the lamp, given the configuration of its electrical connectors. Thus, the lamp can no longer vibrate free from the connection to the receptacle. This makes the new module and lamp combination more reliable than previously known systems. The configuration of the lamp of this embodiment is protected by at least the independent claims of the '654 Patent.

12. First Light is in the business of making and selling replacement UV lamps. Archives of First Light's website reveal that First Light promoted a line of UV lamps intended to be replacement lamps for Trojan UV water treatment systems. See, for example, **Exhibit B**, which was archived by archive.org (the "Wayback Machine") on February 1, 2020. The page includes a list of Trojan part numbers and a corresponding list of First Light part numbers.

13. Among the part numbers listed are Trojan part number 794447-ORD and corresponding First Light part number 3228. A comparison of a portion of Figure 13 of the '654 patent and an illustration from the specification for First Light part number 3228 is provided below:



**Exhibit C** attached hereto is a copy of the First Light part number 3228 specification.

14. On May 26, 2020, through counsel, Trojan provided notice to First Light that the lamp corresponding to First Light's part number 3228 infringed at least claim 1 of the '654 Patent. On June 26, 2020 Trojan further put First Light on notice that First Light Lamp part nos. 4331, 4332, 4359 and 4360 also infringed Trojan's '654 Patent.

15. First Light has since removed from public view on First Light's website the listing of its replacement lamps and their corresponding specifications.

16. On information and belief, UV Superstore is a distributor for First Light. According to a capture of a portion of the UV Superstore website offering products associated with the Trojan UV3000Plus water treatment system, the First Light replacement UV lamp corresponding to 79447-0RD/3288 is “discontinued.” See **Exhibit D** (attached). However, it appears that the UV Superstore website continues to allow potential customers to request a quote on that lamp, suggesting that sales may yet be occurring.

17. On the same page relating to the Trojan UV3000Plus system, UV Superstore also offers for sale a UV lamp designated as “79447-MOD” with a “pigtail” electrical connection. These lamps are indicated as having a part number 4388. On information and belief, 4388 is First Light’s part number for the “79447-MOD” lamps.

18. Claim 1 of the ’654 Patent recites:

1. A lamp device having a longitudinal axis, and comprising:

a first elongate electrical connector and a second elongate electrical connector, the first elongate electrical connector and the second elongate electrical connector being aligned in a spaced relationship with respect to a line orthogonal to the longitudinal axis, each of the first elongate electrical connector and the second elongate connector configured to form an oblique angle with respect to the longitudinal axis, ends of all of the electrical connectors of the lamp device being in substantial alignment along a plane orthogonal to the longitudinal axis.

See **Exhibit A**. This claim does not require the electrical connectors to be physically disposed on an end of the lamp.

## COUNT I

### Direct Infringement of the ’654 Patent pursuant to 35 U.S.C. § 271(a)

19. Trojan incorporates by reference the allegations of Paragraphs 1 through 18.

20. First Light has infringed and, on information and belief, is now infringing the ’654 patent under 35 U.S.C. § 271(a), either literally or under the Doctrine of Equivalents,

through, among other activities, the manufacture, sale, offering for sale, and/or importing into the United States First Light part number 3228, 4331, 4332, 4359 and 4360 UV lamps.

21. UV lamps corresponding to First Light part numbers 3228, 4331, 4332, 4359 and 4360 incorporate each and every element of at least claim 1 of the '654 Patent.

22. First Light has had knowledge and notice of the '654 Patent, as well as of its own infringement of the '654 Patent, since at least May 27, 2020.

23. Trojan has suffered damages as a result of First Light's infringement of the '654 Patent.

## COUNT II

### Indirect Infringement of the '654 Patent pursuant to 35 U.S.C. § 271(b) and § 271(c)

24. Trojan incorporates by reference the allegations of Paragraphs 1 through 22.

25. First Light has infringed and is now infringing the '654 Patent under 35 U.S.C. § 271(b) and/or § 271(c), either literally or under the Doctrine of Equivalents, through, among other activities, the manufacture, sale, offering for sale, and/or importing into the United States First Light part number 4388 lamps.

26. First Light has had knowledge and actual notice of the '654 patent since at least May 27, 2020 and, on information and belief, during all sales of the First Light lamp part number 4388.

27. On information and belief, when the First Light part number 4388 lamps are installed in a Trojan UV3000Plus system, the electrical connectors and lengthwise direction of the lamp must be in the alignment as claimed in claim 1 of the '654 Patent.

28. On information and belief, First Light is actively inducing others to install First Light part number 4388 lamps in Trojan UV3000Plus systems, thereby satisfying every element

claimed in claim 1 of the '654 Patent and resulting in direct infringement by purchasers and users of the lamps.

29. On information and belief, First Light has knowledge that inducing others to install First Light part number 4388 lamps in Trojan UV3000Plus systems results in direct infringement of the '654 Patent.

30. The First Light part number 4388 lamps are specially adapted for use in Trojan UV3000Plus systems and have no reasonable commercial uses other than to install them in Trojan UV3000Plus systems.

31. The First Light part number 4388 lamps have no substantial non-infringing uses.

32. First Light's infringement of the '654 patent has been and continues to be willful.

33. First Light's infringement of the '654 patent renders this case exceptional within the meaning of 35 U.S.C. § 285.

34. As a result of First Light's infringement of the '654 patent, Trojan has suffered damages and those damages are ongoing.

**JURY TRIAL DEMANDED**

Under Fed. R. Civ. P. 38, Trojan demands a trial by jury on all issues triable of right by jury.

**PRAYER FOR RELIEF**

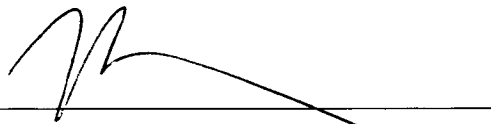
WHEREFORE, Plaintiff Trojan respectfully requests judgment against Defendant as follows:

A. an adjudication that First Light has infringed the '654 Patent in violation of 35 U.S.C. § 271;

- B. an adjudication that First Light's infringement of the '654 Patent was and is willful;
- C. an injunction against First Light as well as its officers, directors, agents, successors, and assigns, and all persons in concert with them, from further infringement of the '654 Patent pursuant to 35 U.S.C. § 283;
- D. an award of monetary damages to Trojan adequate to compensate Trojan for past and any continuing infringement of '654 Patent pursuant to 35 U.S.C. § 284, up to and including treble the amount of actual damages assessed for any willful infringement;
- E. a finding that Trojan is the prevailing party in this action and that, in the case of continued infringement of the '654 Patent, that this is an exceptional case as defined by 35 U.S.C. § 285 and award Trojan its reasonable attorneys' fees as allowed thereunder;
- F. an award to Trojan of its costs and prejudgment interest; and
- G. an award to Trojan of such other relief as this Court deems just and proper.

Dated: September 10, 2021

Respectfully submitted,

By: 

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