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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

12 APPLIED OPTOELECTRONICS, INC.,
13 Plaintiff,
14 vs.
15 CAMBRIDGE INDUSTRIES USA, INC.,
16 Defendant.

Case No.: 3:24-cv-01010-JD

**PLAINTIFF APPLIED
OPTOELECTRONICS, INC.’S
DISCLOSURE OF ASSERTED CLAIMS
AND INFRINGEMENT CONTENTIONS**

19 Plaintiff Applied Optoelectronics, Inc. (“AOI” or “Plaintiff”) hereby makes its Patent L.R.
20 3-1 Disclosure of Asserted Claims and Infringement Contentions and Patent L.R. 3-2 document
21 production (collectively, “Disclosures”) to Defendant Cambridge Industries USA, Inc. (“CIG
22 USA” or “Defendant”) as follows:
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1 **I. PRELIMINARY STATEMENT**

2 AOI makes these Disclosures based on its review and analysis of public information, but
3 without the benefit of discovery or any document production yet in this action. Accordingly, these
4 Disclosures are necessarily preliminary as discovery is still in its earliest stages. AOI expressly
5 reserves the right to amend, modify, augment, and/or supplement its Disclosures based on
6 additional information obtained through discovery, document production, after claim construction,
7 or on any other permissible ground.

8 Subject to these reservations, AOI discloses the following information:

9 **II. DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS**

10 **a) Identification of Asserted Claims**

11 AOI contends that Defendant infringes and has infringed at least the following claims of
12 the asserted patents (collectively, the “Asserted Patents”) all under 35 U.S.C. §271(a) as follows:

- 13 • Claims 1-4, 7, 8, 10-12, and 14-17 of U.S. Patent No. 10,313,024 (the “’024
14 Patent”), entitled “Transmitter optical subassembly with trace routing to provide electrical
15 isolation between power and RF traces,” and issued on June 4, 2019;
- 16 • Claims 1-7 of U.S. Patent No. 9,523,826 (the “’826 Patent”), entitled “Pluggable
17 optical transceiver module,” and issued on December 20, 2016;
- 18 • Claims 1-3 of U.S. Patent No. 10,466,432 (the “’432 Patent”), entitled “High speed
19 optical transceiver module” and issued on November 5, 2019;
- 20 • Claims 1,2, and 5-8 of U.S. Patent No. 9,170,383 (the “’383 Patent”), entitled
21 “Multi-channel optical transceiver module including dual fiber type direct link adapter for
22 optically coupling optical subassemblies in the transceiver module,” and issued on October 27,
23 2015;
- 24
- 25

1 • Claims 1, 3, 4, 10-13, 15, and 16 of U.S. Patent No. 10,042,116 (the “116 Patent”),
2 entitled “Techniques for direct optical coupling of photodetectors to optical demultiplexer outputs
3 and an optical transceiver using the same,” and issued on August 7, 2018;

4 • Claims 1-6 and 8-16 of U.S. Patent No. 10,175,431 (the “431 Patent”), entitled
5 “Optical transceiver with a multiplexing device positioned off-center within a transceiver housing
6 to reduce fiber bending loss,” and issued on January 8, 2019;

7 • Claims 1-4 and 7 of U.S. Patent No. 10,379,301 (the “301 Patent”), entitled
8 “Multi-channel parallel optical receiving device,” and issued on August 13, 2019; and

9 • Claims 1-8 of U.S. Patent No. 10,788,690 (the “690 Patent”), entitled “Optical
10 isolator array for use in an optical subassembly module,” and issued on September 29, 2020 (all
11 collectively, the “Asserted Claims”).
12

13 AOI notes the claims identified reflect the Asserted Claims in this case, and the absence of
14 a claim from the list does not imply that the claim is not infringed. AOI reserves the right to
15 amend, modify, augment and/or supplement its identification of asserted claims based on
16 additional information obtained through discovery, document production, after claim construction,
17 or on any other permissible ground.

18 **b) Identification of Infringing Instrumentalities**

19 Based on information presently available to it, AOI contends that at least the CIG 100G
20 QSFP28 CWDM4 Module Version 1, CIG 100G QSFP28 CWDM4 Module Version 2, CIG 100G
21 LR4 Module, CIG 400G QSFP-DD DR4 Module, CIG 100G QSFP28 CWDM4, CIG 400G
22 QSFP-DD FR4 Module, CIG 100G QSFP28 PSM4, and any other products manufactured, sold,
23 displayed, demonstrated, sold, offered for sale and/or promoted by CIG USA or entities under its
24 control or controlled by it that practice one or more claims of Asserted Patents infringe the
25 Asserted Claims of the Asserted Patents. These devices are referred to herein as the “Accused

Products.” The claim charts attached hereto as Exhibits 1 through 13 identify on a limitation-by-limitation basis where each limitation of the Asserted Claims are found within the respective Accused Products.

More complete information about the Accused Products that Defendant has sold is in the possession of Defendant and is expected to be obtained through discovery and document production. Any additional products sold by Defendant with the claimed features are included within the scope of “Accused Products,” regardless of whether listed above.

AOI reserves the right to amend, modify, augment and/or supplement its preliminary identification of infringing products based on additional information obtained through discovery, document production, after claim construction, or on any other permissible ground.

c) Claim Charts

AOI’s preliminary infringement charts are provided in attached Exhibits 1 through 13 and specifically identify where each limitation of each Asserted Claim is found within each respective Accused Product. In each claim chart, the discussion for dependent claims should be read as incorporating by reference the discussion corresponding to the claims from which they depend. In addition, the discussion for each row in each chart should be read within the context of the discussion for the entire claim to which that row pertains. Where the charts incorporate information or photographs of particular versions of the Accused Products, the reference to those versions is exemplary and not to the exclusion of any other versions of the Accused Products or any versions related to the Accused Products.

AOI reserves the right to amend, modify, augment, and/or supplement its preliminary claim charts based on additional information obtained through discovery, document production, after claim construction, or on any other permissible ground.

1 **d) Direct Infringement**

2 Based on information presently available to it, AOI contends that each Asserted Claim has
3 been directly infringed by the Accused Products. At the present time, AOI does not contend that
4 the Asserted Claims have been indirectly infringed by Defendant or that the alleged direct
5 infringement by Defendant is based on joint acts of multiple parties.

6 AOI reserves the right to amend, modify, augment, and/or supplement its direct and
7 indirect infringement contentions based on additional information obtained through discovery,
8 document production, after claim construction, or on any other permissible ground.

9 **e) Literal Infringement and Doctrine of Equivalents**

10 AOI presently asserts that each limitation of each Asserted Claim is literally present within
11 each of the Defendant's Accused Products.

12 To the extent any differences are alleged to exist between the Asserted Claims and the
13 Accused Products, such differences are insubstantial and Defendant's products perform
14 substantially the same function, in substantially the same way, to yield substantially the same
15 result, and therefore Defendant's Accused Products infringe under the doctrine of equivalents.

16 AOI reserves the right to amend, modify, augment, and/or supplement its disclosure
17 concerning literal infringement and/or the doctrine of equivalents based on additional information
18 obtained through discovery and/or based on the Court's claim construction.

19 **f) Priority Date**

20 Without prejudice to its right to assert other earlier dates, the Asserted Claims of the
21 Asserted Patents are entitled to at least the following claims of priority to an earlier application:
22

- 23 • the Asserted Claims of the '024 Patent claim priority to U.S. Patent Application
24 No. 15/963,246, filed April 26, 2018;

1 • the Asserted Claims of the '826 Patent claim priority to U.S. Patent Application
2 No. 14/504,500, filed October 2, 2014, which claims priority to an earlier filed Taiwan patent
3 application, TW App. No. 102135723 A, filed October 2, 2013;

4 • the Asserted Claims of the '432 Patent claim priority to U.S. Patent Application
5 No. 15/971,621, filed May 4, 2018, which claims priority to an earlier filed China patent
6 application, CN App. No. 2017 2 0846636 U, filed July 13, 2017;

7 • the Asserted Claims of the '383 Patent claim priority to U.S. Patent Application
8 No. 13/709,195, filed December 10, 2012;

9 • the Asserted Claims of the '116 Patent claim priority to U.S. Patent Application
10 No. 15/137,823, filed April 25, 2016;

11 • the Asserted Claims of the '431 Patent claim priority to U.S. Patent Application
12 No. 15/242,005, filed August 19, 2016;

13 • the Asserted Claims of the '301 Patent claim priority to U.S. Patent Application
14 No. 15/432,242, filed February 14, 2017, which claims priority to an earlier filed China patent
15 application, CN App. No. . 2016 1 03460078, filed May 23, 2016; and

16 • the Asserted Claims of the '690 Patent claim priority to U.S. Patent Application
17 No. 16/257,635, filed January 25, 2019.
18

19 AOI reserves the right to amend, modify, augment, and/or supplement its asserted priority
20 dates based on additional information obtained through discovery and investigation and/or based
21 on the Court's claim construction.

22 **g) AOI's Products**

23 AOI contends that at least some of its products that practice the Asserted Patents are
24 identified in Exhibits 14-24 attached to these Disclosures, which specifically identify where each
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1 limitation of various claims of the Asserted Patents are found within the identified exemplary AOI
2 products, respectively.

3 AOI's investigation is still ongoing as to which of its products use the inventions claimed
4 in the Asserted Patents. AOI reserves the right to amend and/or supplement these Disclosures,
5 including without limitation based on further information obtained during investigation and
6 discovery, once Defendant has served its invalidity contentions, after claim construction, or on any
7 other permissible ground.

8 **h) Date of First Infringement**

9 Based on information presently available to it, and without prejudice to its right to assert
10 other earlier dates, AOI contends the date of first infringement and the start of claimed damages is
11 the date of the first sale of the Accused Products, and the end of claimed damages is the earlier of
12 the date of the last sale of the Accused Products or the last expiration date of the Asserted Claims.

13 AOI reserves the right to amend, modify, augment, and/or supplement its disclosure
14 concerning the date of first infringement and damages and/or the end of claimed damages based
15 on additional information obtained through discovery and/or AOI's investigation.

16 **i) Willful Infringement**

17 Based on information presently available to it, and without prejudice to its right to assert
18 other earlier dates, AOI contends that Defendant had actual knowledge of and an intent to infringe
19 at least the '301 Patent, '383 Patent, '116 Patent, '431 Patent, '690 Patent, and '024 Patent
20 (collectively, "Previously Identified Patents") as of at least October 20, 2023, and that Defendant
21 has willfully infringed one or more claims of the Previously Identified Patents since at least that
22 date.
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1 AOI reserves the right to amend, modify, augment, and/or supplement its disclosure
2 concerning Defendant's willful infringement based on additional information obtained through
3 discovery and/or AOI's investigation.

4 **III. DOCUMENT PRODUCTION**

5 AOI's document production pursuant to Patent L.R. 3-2 accompanying these Disclosures
6 bears Bates Nos. AOI_NDCal24cv01010_0000000001 - AOI_NDCal24cv01010_0000003664.
7 AOI's identification of such documents is not an admission that any such document evidences a
8 disclosure of any claimed invention, that any such document predates any application, or that any
9 such document evidences or is prior art under 35 U.S.C. § 102.

10 AOI reserves the right to supplement these productions and identifications, if necessary, in
11 the event additional responsive information is identified.

12 The undersigned certifies that, based on the information reasonably available to AOI, the
13 above disclosure is complete and correct as of the time it is made.

14 Dated: June 6, 2024

WEINTRAUB TOBIN CHEDIAK COLEMAN GRODIN

16 By: /s/ Jo Dale Carothers

17 Attorneys for Plaintiff Applied Optoelectronics, Inc.

EXHBIT 1 - Representative Claim Charts for U.S. Patent No. 10,313,024

CIG 100G QSFP LR4

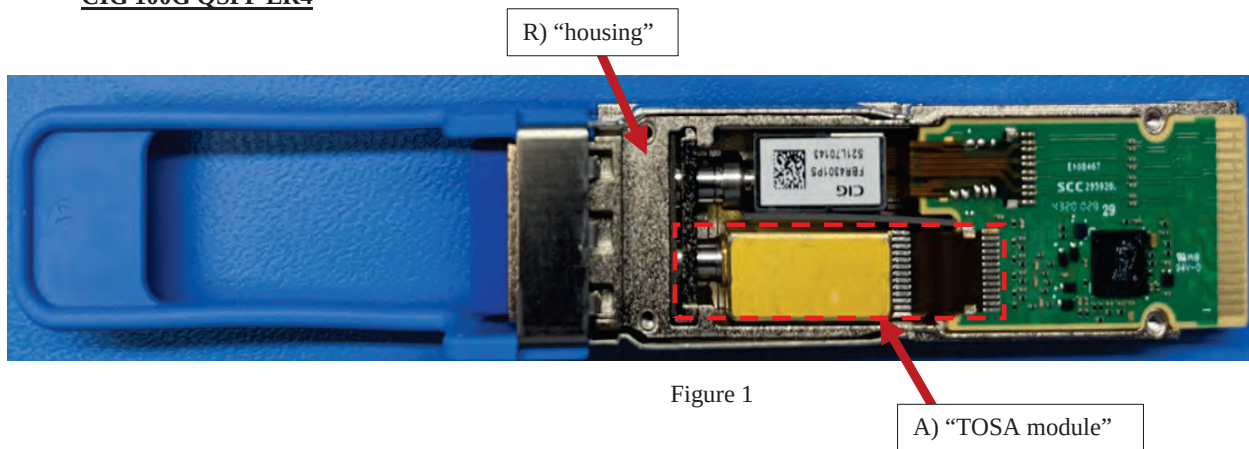


EXHIBIT 1 - Representative Claim Charts for U.S. Patent No. 10,313,024

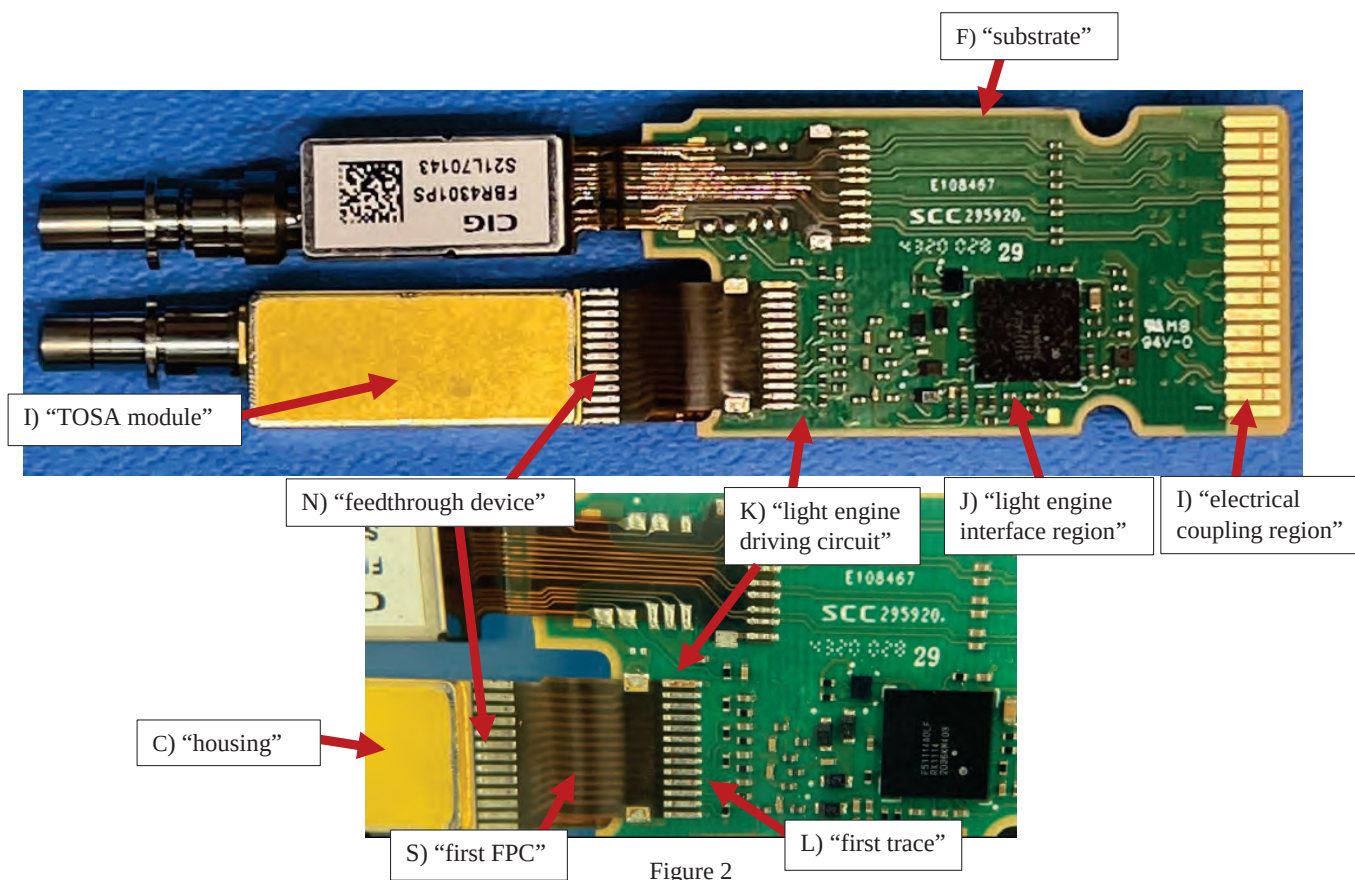


EXHIBIT 1 - Representative Claim Charts for U.S. Patent No. 10,313,024

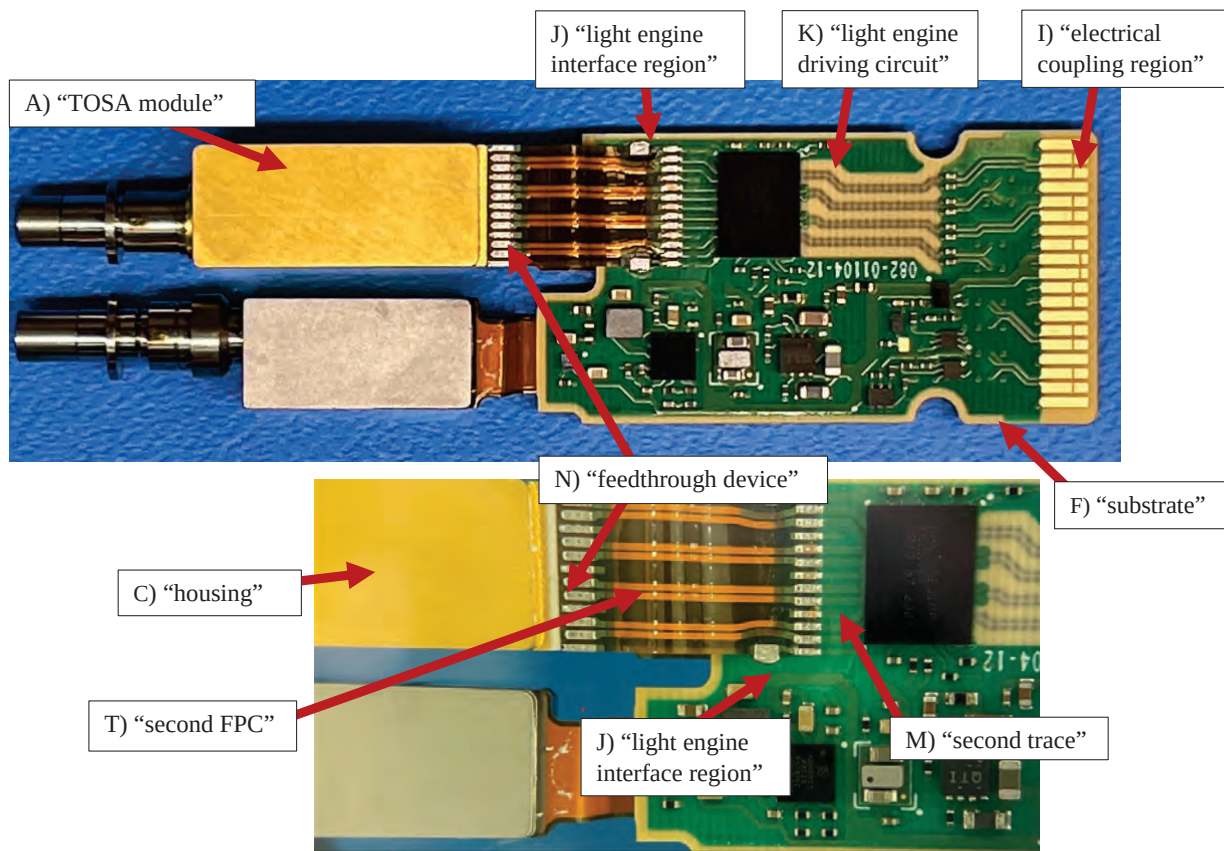


Figure 3

EXHBIT 1 - Representative Claim Charts for U.S. Patent No. 10,313,024

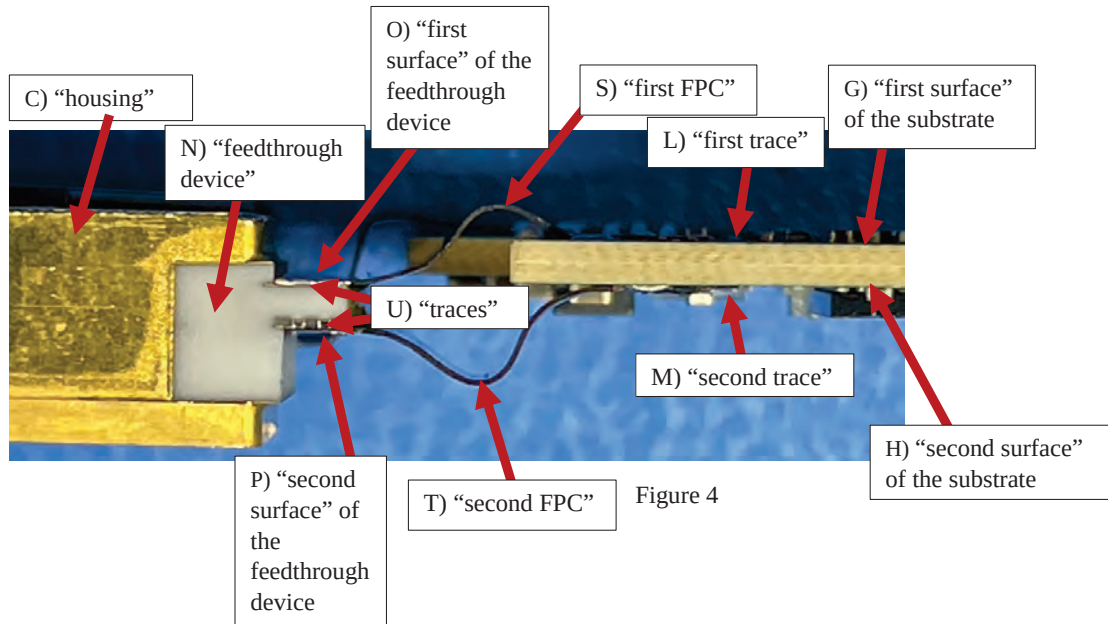


EXHIBIT 1 - Representative Claim Charts for U.S. Patent No. 10,313,024

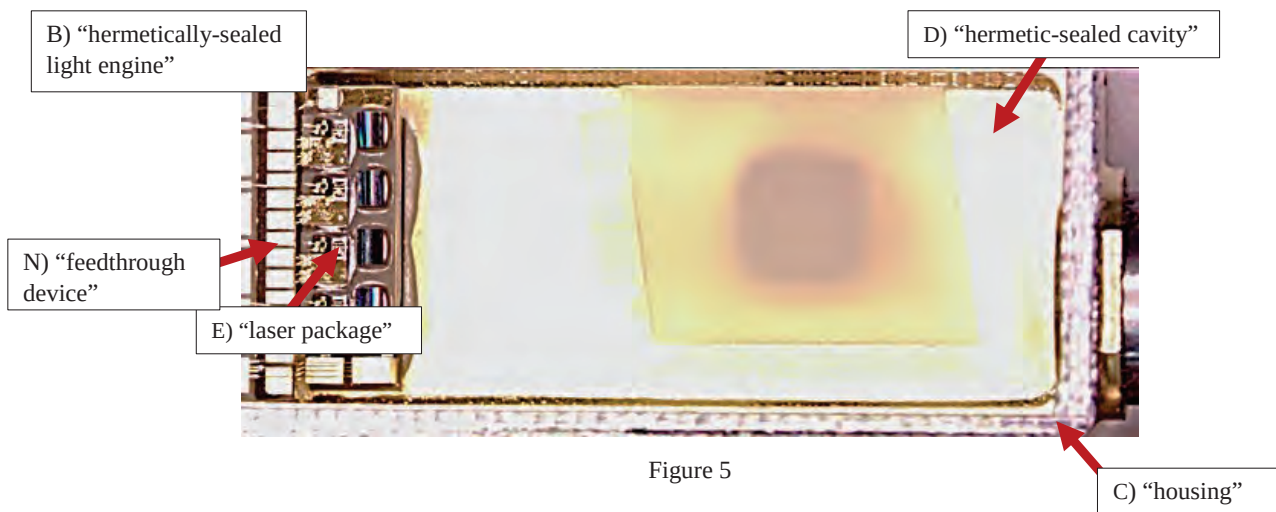


EXHIBIT 1 - Representative Claim Charts for U.S. Patent No. 10,313,024

U.S. Patent No. 10,313,024 Claim 1	CIG 100G QSFP LR4
A transmitter optical subassembly (TOSA) module comprising:	A TOSA module (A) of an optical transceiver. See FIG. 1.
a hermetically-sealed light engine with a housing that defines a hermetic-sealed cavity and at least one laser package for emitting an associated channel wavelength disposed within the hermetic-sealed cavity;	A hermetically-sealed light engine (B) with a housing (C) that defines a hermetic-sealed cavity (D) and at least one laser package (E) for emitting an associated channel wavelength disposed within the hermetic-sealed cavity (D) . See FIGs. 1 and FIG. 5.
a substrate defined by first and second surfaces disposed opposite each other, the substrate including an electrical coupling region for electrically coupling with a transmit connecting circuit and a light engine interface region for electrically coupling with the hermetically-sealed light engine;	A substrate (F) is defined by a first surface (G) and a second surface (H) opposite each other. The substrate (F) includes an electrical coupling region (I) for electrically coupling with a transmit connecting circuit and a light engine interface region (J) for electrically coupling with the hermetically-sealed light engine (B) . See FIGs. 2-5.
a light engine driving circuit disposed on the substrate to provide a radio frequency (RF) signal and a power signal to drive the hermetically-sealed light engine to output one or more channel wavelengths;	A light engine driving circuit (K) is disposed on the substrate (F) to provide a radio frequency (RF) signal and a power signal to drive the hermetically-sealed light engine (B) to output one or more channel wavelengths. See FIGs. 2-3 and FIG. 5.
wherein the substrate includes at least a first trace disposed on the first surface to provide the power signal and at least a second trace disposed on the second surface to provide the RF signal, the first and second traces being disposed in an opposing arrangement to provide electrical isolation to reduce electrical interference between the power signal and the RF signal	The substrate (F) includes a first trace (L) disposed on the first surface (G) to provide the power signal and a second trace (M) disposed on the second surface (H) to provide the RF signal. See FIG. 2 through FIG. 4. The first and second traces (L, M) are disposed in an opposing arrangement to provide electrical isolation to reduce electrical interference between the power signal and the RF signal. See FIG. 4.
a feedthrough device to electrically couple the at least one laser package to the light engine driving circuit; and	A feedthrough device (N) to electrically couple the at least one laser package (E) to the light engine driving circuit (K) . See FIGs. 3 and 5.
wherein the feedthrough device is defined by at least a first surface disposed opposite a second surface, and wherein the first and second surfaces extend substantially parallel with the first and second surfaces of the substrate.	The feedthrough device (N) is defined by at least a first surface (O) disposed opposite a second surface (P) of the feedthrough device (N) , and the first and second surfaces (O, P) of the feedthrough device (N) extend substantially parallel with the

EXHBIT 1 - Representative Claim Charts for U.S. Patent No. 10,313,024

U.S. Patent No. 10,313,024 Claim 1	CIG 100G QSFP LR4
	first and second surfaces (G, H) of the substrate (F). See FIGs. 2-4.
U.S. Patent No. 10,313,024 Claim 7	CIG 100G QSFP LR4
The TOSA module of claim 1, wherein the electrical isolation is provided at least in part by a width of the substrate and/or material properties of a material that forms the substrate.	See claim 1. The electrical isolation between the second trace (M) and first trace (L) in an opposing arrangement is provided at least in part by material properties of the substrate (F). See FIGs. 2-4.
U.S. Patent No. 10,313,024 Claim 8	CIG 100G QSFP LR4
The TOSA module of claim 1, further comprising a plurality of electrical interconnects that brace the substrate to the housing of the hermetically-sealed light engine.	See claim 1. A plurality of electrical interconnects ((first FPC) (S) and second FPC (T)) that brace the substrate (F) to the housing (C) of the hermetically-sealed light engine (B). See FIGs. 2-5.
U.S. Patent No. 10,313,024 Claim 10	CIG 100G QSFP LR4
The TOSA module of claim 1, wherein the first and second surfaces of the feedthrough device are substantially coplanar with the first and second surfaces of the substrate when the feedthrough device and substrate are coupled together.	See claim 1. The first and second surfaces (O, P) of the feedthrough device (N) are substantially coplanar with the first and second surfaces (G, H) of the substrate (F) when the feedthrough device (N) and substrate (F) are coupled together. See FIGs. 2-4.

EXHBIT 1 - Representative Claim Charts for U.S. Patent No. 10,313,024

U.S. Patent No. 10,313,024 Claim 11	CIG 100G QSFP LR4
The TOSA module of claim 1, further comprising at least one trace for receiving the power signal from the light engine driving circuit disposed on the first surface of the feedthrough and	See claim 1. At least one trace (U) on the first surface (O) of the feedthrough device (N) is for receiving the power signal from the light engine driving circuit (K). See FIGs. 2-4.
at least one trace for receiving the RF signal from the light engine driving circuit disposed on the second surface.	The at least one trace (U) on the second surface (P) of the feedthrough device (N) is for receiving the RF signal from the light engine driving circuit (K). See FIGs. 2-4.

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PROOF OF SERVICE

I am a citizen of the United States, employed in the City and County of San Diego, California. I am over the age of 18 years and not a party to the within action. On today's date, I caused to be served the following:

**PLAINTIFF APPLIED OPTOELECTRONICS, INC.'S DISCLOSURE OF
ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS**

I am readily familiar with the firm's practice of collection and processing correspondence for mailing in the ordinary course of business. Under this practice, correspondence is collected, sealed, postage thereon fully prepaid, and deposited the same day with the U. S. Postal Service.

I caused the above documents to be served on the parties in this action by directing my assistant to place them in a sealed envelope in the designated area for outgoing mail, addressed as shown below.

I caused the above documents to be served on the parties in this action by transmitting them via email to the addressee(s) indicated below:

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Attorneys for Defendant
CAMBRIDGE INDUSTRIES USA, INC.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on June 6, 2024, in San Diego, CA.

/Eric Caligiuri/
Eric Caligiuri