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28 BOYD CORPORATION

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA**

22 AAVID THERMALLOY LLC,
23 Plaintiff,
24 v.
25 COOLER MASTER CO., LTD. and
26 CMI USA, INC.,
27 Defendants.

Case No. 4:17-cv-05363-JSW

**AAVID THERMALLOY LLC'S
PRELIMINARY PROPOSED CLAIMS
CONSTRUCTION PURSUANT TO PATENT
L.R. 4-2**

COOLER MASTER CO., LTD.,
Counter-Claim Plaintiff,
v.
AAVID THERMALLOY LLC and
BOYD CORPORATION,
Counter-Claim Defendants.

Pursuant to Patent L.R. 4-2, Plaintiff Aavid Thermalloy LLC (“Aavid”) hereby provides the below proposed preliminary claims constructions of the claim terms of U.S. Patent No. 7,066,240 (“’240 patent”), U.S. Patent No. 7,100,679 (“’679 patent”), and U.S. Patent No. 7,100,680 (“’680 patent”). At this time, Aavid does not contend that any of the claim terms should be governed by 35 U.S.C. § 112(6).

I. Claim Terms All Parties Agree Require Construction

Below are a list of claims and terms from each patent that both parties have agreed require construction as well as Aavid’s preliminary proposed claims construction for those agreed upon terms. Aavid reserves its right to amend or alter its proposed preliminary claims constructions in light of Defendants’ proposed constructions, including providing additional references to intrinsic and extrinsic evidence, including but not limited to expert opinion.

A. The ’240 Patent

Claim Nos.	Claim Terms Parties Agree Require Construction	Aavid’s Preliminary Proposed Claims Constructions
9-13	“vapor chamber”	A vacuum sealed chamber that utilizes a heat transfer fluid and capillary forces to spread heat. <i>See</i> preamble; title of invention; 1:41-44, 57-58, 61, 67; 2:2, 4-5, 11-25, 30-40; 3:30-35, 48-67; 4:1-5, 19-20, 41-48; and Figs. 1-3.
11-13	“lip”	Portion of the plate defined by the bonded region of the plate’s inner or interior confronting surface.

Claim Nos.	Claim Terms Parties Agree Require Construction	Aavid's Preliminary Proposed Claims Constructions
		<p>See references 22 and 24 in Figs. 1-3; 4:44-48; https://www.merriam-webster.com/dictionary/lip (last visited May 29, 2018): the edge of a hollow vessel or cavity; Merriam Webster's Collegiate Dictionary 10th ed. at 679 (1995): <u>lip</u> (4a): the edge of a hollow vessel or cavity.</p>
11	"spacer"	<p>A structure, apart from the separately claimed depression, that is configured to prevent the plates from bowing inward and provides support for a capillary wick.</p> <p>See 1:57-58; 2:7-11, 18-25; 3:36-47; 4:2-5; Fig. 2; https://www.merriam-webster.com/dictionary/spacer (last visited May 29, 2018): a device or piece used to create or maintain a desired amount of space (as between two parts); Merriam Webster's Collegiate Dictionary 10th ed. at 1125 (1995): <u>spaced</u>; <u>spacing</u>; <u>spacer</u>: to place at intervals or arrange with space between – often used with out ~.</p>

B. The '679 Patent

Claim Nos.	Claim Terms Parties Agree Require Construction	Aavid's Preliminary Proposed Claims Constructions
1, 2	"vapor chamber"	<p>A vacuum sealed chamber that utilizes a heat transfer fluid and capillary forces to spread heat.</p> <p>See preamble; title of invention; 1:43-46, 60-61, 64; 2:3, 5, 6-7, 14-29, 32-42; 3:34-38, 51-67; 4:1-8, 22-23, 43-50; and Figs. 1-3.</p>
5	"lip"	<p>Portion of the plate defined by the bonded region of the plate's inner or interior confronting surface.</p> <p>See references 22 and 24 in Figs. 1-3; 4:46-50; https://www.merriam-webster.com/dictionary/lip (last visited May 29, 2018): the edge of a hollow vessel or cavity; Merriam Webster's Collegiate Dictionary 10th ed. at 679 (1995): <u>lip</u> (4a): the edge of a hollow vessel or cavity.</p>
1	"spacer"	A structure, apart from the separately claimed depression, that

Claim Nos.	Claim Terms Parties Agree Require Construction	Aavid's Preliminary Proposed Claims Constructions
		<p>is configured to prevent the plates from bowing inward and provides support for a capillary wick.</p> <p><i>See</i> 1:61-62; 2:10-13, 21-28; 3:39-50; 4:5-8; Fig. 2; https://www.merriam-webster.com/dictionary/spacer (last visited May 29, 2018): a device or piece used to create or maintain a desired amount of space (as between two parts); Merriam Webster's Collegiate Dictionary 10th ed. at 1125 (1995): <u>spaced</u>; <u>spacing</u>; <u>spacer</u>: to place at intervals or arrange with space between – often used with out ~.</p>

C. The '680 Patent

Claim Nos.	Claim Terms Parties Agree Require Construction	Aavid's Preliminary Proposed Claims Constructions
1-3, 5	"vapor chamber"	<p>A vacuum sealed chamber that utilizes a heat transfer fluid and capillary forces to spread heat.</p> <p><i>See</i> preamble; title of invention; 1:49-52, 66-67; 2:3, 9, 11, 12-13, 20-32, 36-46; 3: 37-41, 54-67; 4:1-11, 25-26, 46-53; and Figs. 1-3.</p>
1-3, 5	"lip"	<p>Portion of the plate defined by the bonded region of the plate's inner or interior confronting surface.</p> <p><i>See</i> references 22 and 24 in Figs. 1-3; 4:49-53; https://www.merriam-webster.com/dictionary/lip (last visited May 29, 2018): the edge of a hollow vessel or cavity; Merriam Webster's Collegiate Dictionary 10th ed. at 679 (1995): <u>lip</u> (4a): the edge of a hollow vessel or cavity.</p>
1	"spacer"	<p>A structure, apart from the separately claimed depression, that is configured to prevent the plates from bowing inward and provides support for a capillary wick.</p> <p><i>See</i> 1:66-67; 2:16-20, 26-35; 3:42-53; 4:8-11; Fig. 2; https://www.merriam-webster.com/dictionary/spacer (last visited May 29, 2018): a device or piece used to create or maintain a desired amount of space (as between two parts); Merriam Webster's Collegiate Dictionary 10th ed. at 1125</p>

Claim Nos.	Claim Terms Parties Agree Require Construction	Aavid's Preliminary Proposed Claims Constructions
		(1995): <u>spaced</u> ; <u>spacing</u> ; <u>spacer</u> : to place at intervals or arrange with space between – often used with out ~.

Aavid reserves the right to add to or modify these preliminary proposed claims constructions prior to submission to the Court based on the claims constructions proposed by Defendants and/or additional information revealed during discovery.

II. Additional Claim Terms Defendants Believe Require Construction

Below is a list of additional terms, and the claims in which those terms are found, that Defendants contend require construction. While Aavid disagrees with Defendants' contention that the below claim terms require construction, Aavid has provided proposed preliminary claims constructions regarding those claim terms without waiving its objection to having to construe those claim terms. Indeed, Aavid specifically reserves its objection to the below claim terms needing construction. Further, Aavid reserves its right to amend or alter its proposed preliminary claims constructions in light of Defendants' proposed constructions, including providing additional references to intrinsic and extrinsic evidence, including but not limited to expert opinion.

A. The '240 Patent

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
11	"Peripheral lip"	See above proposed construction of "lip." The adjective term "peripheral" should be given its plain and ordinary meaning. If the Court finds a construction is needed, Aavid proposes the same construction of "lip" as above and thus, it would mean "a lip on the periphery of the plate" https://www.merriam-webster.com/dictionary/peripheral (last visited May 29, 2018): of, relating to, involving, or forming a

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		<p>periphery or surface part; https://www.merriam-webster.com/dictionary/periphery (last visited May 29, 2018): the outward bounds of something as distinguished from its internal regions or center; Merriam Webster's Collegiate Dictionary 10th ed. at 865 (1995): <u>peripheral</u>: of, relating to, involving, or forming a periphery or surface part; <u>periphery</u>: the outward bounds of something as distinguished from its internal regions or center.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "peripheral lip" based on his/her skill and the patent specification and claims.</p>
12, 13	"circumferential edge lip"	<p>See above proposed construction of "lip." The adjective term "circumferential edge" should be given its plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes the same construction of "lip" as above and thus, it would mean "a lip on the edge of the plate that extends around the plate's circumference"</p> <p>https://www.merriam-webster.com/dictionary/circumferential (last visited May 29, 2018): the external boundary or surface of a figure or object: PERIPHERY; Merriam Webster's Collegiate Dictionary 10th ed. at 208 (1995): <u>circumference</u>: the external boundary or surface of a figure or object : PERIPHERY.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "circumferential edge lip" based on his/her skill and the patent specification and claims.</p>
12, 13	"mounting hole"	Plain and ordinary meaning.

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
	<ul style="list-style-type: none"> • “mounting hole that extends through said first plate and said second plate and is isolated from said vapor chamber” (12) • “mounting hole that extends through said first plate depression and said second plate and is isolated from said vapor chamber” (13) 	<p>If the Court finds a construction is needed, Aavid proposes “a hole configured for mounting purposes.” In the context of claim 12, the “mounting hole” penetrates the vapor chamber but is located within the sealingly bonded region of the hollow column and the second plate and thus sealed off from the vapor chamber. In the context of claim 13, the “mounting hole” penetrates the vapor chamber but is located within the sealingly bonded region of the first plate depression and the second plate and thus sealed off from the vapor chamber.</p> <p><i>See</i> title of invention; abstract; reference 12 in Figs. 1 and 2; reference 50 in Fig. 2; 1:60; 2:30-31, 37-40; 3:2-3, 21-24; 4:19-24, 4:36-44.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of “mounting hole” based on his/her skill and the patent specification and claims.</p>
11	“defined through”	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes “defined by and extending through.”</p> <p><i>See</i> title of invention; Figs. 1 and 2; 1:60; 2:30-31, 37-40; 3:2-3, 21-24; 4:24-25, 52.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of “defined through” based on his/her skill and the patent specification and claims.</p>
12, 13	“bounding”	Plain and ordinary meaning.

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		<p>If the Court finds a construction is needed, Aavid proposes "marking the boundary of."</p> <p>https://www.merriam-webster.com/dictionary/bound (last visited May 29, 2018): (transitive verb) (1) to set limits to; (2) to form a separating line or the boundary of; Merriam Webster's Collegiate Dictionary 10th ed. at 134 (1995): (transitive verb) <u>bound</u>: to set limits or bounds to; (2) to form the boundary of.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "bounding" based on his/her skill and the patent specification and claims.</p>
9, 11	"boundary structure"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "structure(s) forming a boundary, including"</p> <p><i>See</i> 2:6-7; 3:25-27; 5:21-24.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "boundary structure" based on his/her skill and the patent specification and claims.</p>
9-13	<p>"surface"</p> <ul style="list-style-type: none"> • "inner surface" (12, 13) • "outer surface" (11, 13) • "edge surface" (11) • "an annular outer 	<p>Plain and ordinary meaning.</p> <p><i>See</i> references 28 and 34 in Figs. 1 and 2; 2:9-15; 3:41, 64-67; 4:43, 61; 6:12-7:24.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
	<p>surface . . . a corresponding annular edge surface" (11)</p> <ul style="list-style-type: none"> • "interior surface" (10, 11) • "exterior surface" (9, 10) 	<p>spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "surface", including "inner surface," "outer surface," "edge surface," "interior surface" "exterior surface", and "an annular outer surface . . . a corresponding annular edge surface" based on his/her skill and the patent specification and claims.</p>
11, 13	"depression"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "a portion of an object lower than the surrounding area"</p> <p><i>See</i> references 26 in Figs. 1-3; 2:9-11; 3:38-46; 4:3, 30-32, 41-44.</p> <p>https://www.merriam-webster.com/dictionary/depression (last visited May 29, 2018) a place or part that is lower than the surrounding area : a depressed place or part; Merriam Webster's Collegiate Dictionary 10th ed. at 311 (1995): <u>depression</u>: a depressed place or part; <u>depressed</u>: (b) having a central part lower than the margin.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "depression" based on his/her skill and the patent specification and claims.</p>
9-11	"hollow column"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "an unfilled or empty space defined by structure forming a column"</p> <p><i>See</i> title of invention; reference 44 in Figs. 1-3; 1:60; 2:10; 2:30-31, 37-40; 3:2-3, 21-24; 4:21-25, 35-36, 52.</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "hollow column" based on his/her skill and the patent specification and claims.
12	"integral with said first plate"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "formed as one unit with said first plate"</p> <p>https://www.merriam-webster.com/dictionary/integral (last visited May 29, 2018) (c) formed as a unit with another part; Merriam Webster's Collegiate Dictionary 10th ed. at 607 (1995): <u>integral</u>: (c) formed as a unit with another part.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "integral with said first plate" based on his/her skill and the patent specification and claims.</p>
11-13	<p>"projects"</p> <ul style="list-style-type: none"> • "projects outwardly relative to said inner surface" (12, 13) • "projects into said vapor chamber" (11) 	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "protrudes." In the context of Claims 12 and 13, "projects" refers to the hollow column protruding outwardly relative to said inner surface. In the context of Claim 11, "projects" refers to the depression protruding into the vapor chamber.</p> <p>https://www.merriam-webster.com/dictionary/project (last visited May 29, 2018) (intransitive verb) to jut out : PROTRUDE; Merriam Webster's Collegiate Dictionary 10th ed. at 932 (1995): <u>project</u>: (1) to jut out : PROTRUDE.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "projects", including "projects outwardly relative to said inner surface" and "projects into said vapor chamber" based on his/her skill and the patent specification and claims.
9-13	"confronting"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "opposite facing"</p> <p><i>See</i> Figs. 1 and 2.</p> <p>https://www.merriam-webster.com/dictionary/confront (last visited May 29, 2018) (2) to cause to meet: bring face-to-face; Merriam Webster's Collegiate Dictionary 10th ed. at 243 (1995): <u>confront</u>: (2a) to cause to meet : bring face-to-face.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "confronting" based on his/her skill and the patent specification and claims.</p>
10, 11	"wick"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "material that by capillary attraction draws liquid condensed at the cooler condenser of a heat pipe toward the heat source."</p> <p><i>See</i> reference 30 in Figs. 1-3; 2:11-17, 21-28, 56-63, 3:48-54, 59-62; 4:33-34; 61-67; 5:1-5.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		"wick" based on his/her skill and the patent specification and claims.
13	"tubular cross-section"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "a cross-section having the form of a tube"</p> <p>https://www.merriam-webster.com/dictionary/tubular (last visited May 29, 2018) having the form of or consisting of a tube; Merriam Webster's Collegiate Dictionary 10th ed. at 1270 (1995): tubular: having the form of or consisting of a tube.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "tubular cross-section" based on his/her skill and the patent specification and claims.</p>

B. The '679 Patent

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
5	"Peripheral lip"	<p>See above proposed construction of "lip." The adjective term "peripheral" should be given its plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes the same construction of "lip" as above and thus, it would mean "a lip on the periphery of the plate"</p> <p>https://www.merriam-webster.com/dictionary/peripheral (last visited May 29, 2018): of, relating to, involving, or forming a periphery or surface part; https://www.merriam-webster.com/dictionary/periphery (last visited May 29, 2018): the outward bounds of something as distinguished from its internal regions or center; Merriam Webster's Collegiate</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		<p>Dictionary 10th ed. at 865 (1995): <u>peripheral</u>: of, relating to, involving, or forming a periphery or surface part; <u>periphery</u>: the outward bounds of something as distinguished from its internal regions or center.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "peripheral lip" based on his/her skill and the patent specification and claims.</p>
2, 3	"circumferential edge lip"	<p>See above proposed construction of "lip." The adjective term "circumferential edge" should be given its plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes the same construction of "lip" as above and thus, it would mean "a lip on the edge of the plate that extends around the plate's circumference"</p> <p>https://www.merriam-webster.com/dictionary/circumferential (last visited May 29, 2018): the external boundary or surface of a figure or object: PERIPHERY; Merriam Webster's Collegiate Dictionary 10th ed. at 208 (1995): <u>circumference</u>: the external boundary of surface of a figure or object : PERIPHERY.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "circumferential edge lip" based on his/her skill and the patent specification and claims.</p>
1	"defined through"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "defined by and extending through."</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		<p><i>See</i> title of invention; Figs. 1 and 2; 1:63; 2:32-33, 40-43; 3:25-28; 4:25-26, 55.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of “defined through” based on his/her skill and the patent specification and claims.</p>
1, 5	“boundary structure”	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes “structure(s) forming a boundary, including”</p> <p><i>See</i> 2:9-10; 3:29-31; 5:23-26.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of “boundary structure” based on his/her skill and the patent specification and claims.</p>
2-4	“surface” <ul style="list-style-type: none"> • “outer surface” (4) • “edge surface” (4) • “interior surface” (2-3) • “an annular outer surface . . . a corresponding annular edge surface” (4) 	<p>Plain and ordinary meaning.</p> <p><i>See</i> references 28 and 34 in Figs. 1-2; 2:14-18; 3:45; 4:1, 45, 61; 5:40-6:14.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of “surface”, including “outer surface,” “edge surface,” “interior surface” and “annular outer surface . . . a corresponding annular edge surface”, based on his/her skill and the patent specification and claims.</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
1, 2, 4	"depression"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "a portion of an object lower than the surrounding area"</p> <p><i>See</i> references 26 in Figs. 1-3; 2:12-14; 3:42-50; 4:6, 33-35, 43-46.</p> <p>https://www.merriam-webster.com/dictionary/depression (last visited May 29, 2018) a place or part that is lower than the surrounding area : a depressed place or part; Merriam Webster's Collegiate Dictionary 10th ed. at 311 (1995): <u>depression</u>: a depressed place or part; <u>depressed</u>: (b) having a central part lower than the margin.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "depression" based on his/her skill and the patent specification and claims.</p>
1	<p>"projects"</p> <ul style="list-style-type: none"> • "projects into said vapor chamber" (1) 	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "protrudes." In the context of Claim 1, "projects" refers to the depression protruding into the vapor chamber.</p> <p>https://www.merriam-webster.com/dictionary/project (last visited May 29, 2018) (intransitive verb) to jut out : PROTRUDE; Merriam Webster's Collegiate Dictionary 10th ed. at 932 (1995): <u>project</u>: (1) to jut out : PROTRUDE.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "projects," including "projects into said vapor chamber" based</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		on his/her skill and the patent specification and claims.
2	"confronting"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "opposite facing"</p> <p>https://www.merriam-webster.com/dictionary/confront (last visited May 29, 2018) (2) to cause to meet: bring face-to-face; Merriam Webster's Collegiate Dictionary 10th ed. at 243 (1995): <u>confront</u>: (2a) to cause to meet : bring face-to-face.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "confronting" based on his/her skill and the patent specification and claims.</p>
2	"wick"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "material that by capillary attraction draws liquid condensed at the cooler condenser of a heat pipe toward the heat source."</p> <p><i>See</i> reference 30 in Figs. 1-3; 2:14-20, 24-31, 59-66, 3:51-57, 62-65; 4:35-36; 63-67; 5:1-7.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "wick" based on his/her skill and the patent specification and claims.</p>

C. The '680 Patent

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
1	"Peripheral lip"	<p>See above proposed construction of "lip." The adjective term "peripheral" should be given its plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes the same construction of "lip" as above and thus, it would mean "a lip on the periphery of the plate"</p> <p>https://www.merriam-webster.com/dictionary/peripheral (last visited May 29, 2018): of, relating to, involving, or forming a periphery or surface part; https://www.merriam-webster.com/dictionary/periphery (last visited May 29, 2018): the outward bounds of something as distinguished from its internal regions or center; Merriam Webster's Collegiate Dictionary 10th ed. at 865 (1995): <u>peripheral</u>: of, relating to, involving, or forming a periphery or surface part; <u>periphery</u>: the outward bounds of something as distinguished from its internal regions or center.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "peripheral lip" based on his/her skill and the patent specification and claims.</p>
5	"edge lip"	<p>See above proposed construction of "lip." The adjective term "edge" should be given its plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes the same construction of "lip" as above and thus, it would mean "a lip on the edge of the plate"</p> <p>https://www.merriam-webster.com/dictionary/edge (last visited May 29, 2018): a line or line segment that is the intersection of plane faces (as of a pyramid) or of two planes; Merriam Webster's Collegiate Dictionary 10th ed. at 366 (1995): <u>edge</u>: a line or line segment that is the intersection of plane faces (as of a pyramid) or of two planes.</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		<p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "edge lip" based on his/her skill and the patent specification and claims.</p>
2, 3	"circumferential edge lip"	<p>See above proposed construction of "lip." The adjective term "circumferential edge" should be given its plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes the same construction of "lip" as above and thus, it would mean "a lip on the edge of the plate that extends around the plate's circumference"</p> <p>https://www.merriam-webster.com/dictionary/circumferential (last visited May 29, 2018): the external boundary or surface of a figure or object: PERIPHERY; Merriam Webster's Collegiate Dictionary 10th ed. at 208 (1995): <u>circumference</u>: the external boundary of surface of a figure or object : PERIPHERY.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "circumferential edge lip" based on his/her skill and the patent specification and claims.</p>
2, 3	<p>"mounting hole"</p> <ul style="list-style-type: none"> • "mounting hole that extends through said first plate and said second plate and is isolated from said vapor chamber" (2) 	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "a hole configured for mounting purposes." In the context of claim 2, the "mounting hole" penetrates the vapor chamber but is located within the sealingly bonded region of the hollow column and the second plate and thus sealed off from the vapor chamber. In the context of claim 3, the "mounting hole" penetrates the vapor chamber but is located within the</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
	<ul style="list-style-type: none"> “mounting hole that extends through said first plate depression and said second plate and is isolated from said vapor chamber” (3) 	<p>sealingly bonded region of the first plate depression and the second plate and thus sealed off from the vapor chamber.</p> <p><i>See</i> title of invention; reference 12 in Fig. 1; reference 50 in Fig. 2; 2:2, 36-37, 43-46; 3:8-9, 28-31; 4:25-30.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of “mounting hole” based on his/her skill and the patent specification and claims.</p>
1	“defined through”	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes “defined by and extending through.”</p> <p><i>See</i> title of invention; Figs. 1 and 2; 2:2, 36-37, 43-46; 3:28-31; 4:22-23, 58.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of “defined through” based on his/her skill and the patent specification and claims.</p>
5	“bounds”	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes “marks the boundary of”</p> <p>https://www.merriam-webster.com/dictionary/bound (last visited May 29, 2018): (transitive verb) (1) to set limits to; (2) to form a separating line or the boundary of; Merriam Webster's Collegiate Dictionary 10th ed. at 134 (1995): (transitive verb) <u>bound</u>: to set limits or bounds to; (2) to form the boundary of.</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		<p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "bounding" based on his/her skill and the patent specification and claims.</p>
2, 3	"bounding"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "marking the boundary of"</p> <p>https://www.merriam-webster.com/dictionary/bound (last visited May 29, 2018): (transitive verb) (1) to set limits to; (2) to form a separating line or the boundary of; Merriam Webster's Collegiate Dictionary 10th ed. at 134 (1995): (transitive verb) <u>bound</u>: to set limits or bounds to; (2) to form the boundary of.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "bounding" based on his/her skill and the patent specification and claims.</p>
1	"boundary structure"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "structure(s) forming a boundary, including"</p> <p><i>See</i> 2:15-16; 3:32-34; 5:26-29.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		"boundary structure" based on his/her skill and the patent specification and claims.
1-3, 5-8	<p>"surface"</p> <ul style="list-style-type: none"> • "inner surface" (2,3) • "outer surface" (1,3) • "edge surface" (1) • "interior surface" (1) • "top surface" (5, 6) • "bottom surface" (5-8) • "an annular outer surface . . . a corresponding annual edge surface" (1) 	<p>Plain and ordinary meaning.</p> <p><i>See</i> references 28 and 34 in Figs. 1-2; 2:21-24; 3:48; 4:4-8, 48; 5:31-6:21; 6:43-7:11.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "surface", including "inner surface," "outer surface," "edge surface," "interior surface," "top surface," and "bottom surface", based on his/her skill and the patent specification and claims.</p>
1, 3	"depression"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "a portion of an object lower than the surrounding area"</p> <p><i>See</i> references 26 in Figs. 1-3; 2:18-20, 42; 3:45-53; 4:9, 36-38, 46-49.</p> <p>https://www.merriam-webster.com/dictionary/depression (last visited May 29, 2018) a place or part that is lower than the surrounding area : a depressed place or part; Merriam Webster's Collegiate Dictionary 10th ed. at 311 (1995): <u>depression</u>: a depressed place or part; <u>depressed</u>: (b) having a central part lower than the margin.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "depression" based on his/her skill and the patent specification and claims.
2, 5, 6, 8	"hollow column"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "an unfilled or empty space defined by structure forming a column"</p> <p><i>See</i> title of invention; reference 44 in Figs. 1-3; 2:2, 19, 36-37, 43-46; 3:28-31; 4:22-23, 27-30, 40-41, 58.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "hollow column" based on his/her skill and the patent specification and claims.</p>
2	"integral with said first plate"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "formed as one unit with said first plate"</p> <p>https://www.merriam-webster.com/dictionary/integral (last visited May 29, 2018) (c) formed as a unit with another part; Merriam Webster's Collegiate Dictionary 10th ed. at 607 (1995); <u>integral</u>: (c) formed as a unit with another part.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "integral with said first plate" based on his/her skill and the patent specification and claims.</p>
1-3	<p>"projects"</p> <ul style="list-style-type: none"> • "projects" 	Plain and ordinary meaning.

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
	<p>outwardly relative to said inner surface" (2-3)</p> <ul style="list-style-type: none"> • "projects into said vapor chamber" (1) 	<p>If the Court finds a construction is needed, Aavid proposes "protrudes." In the context of Claims 2 and 3, "projects" refers to the hollow column protruding outwardly relative to said inner surface. In the context of Claim 1, "projects" refers to the depression protruding into the vapor chamber.</p> <p>https://www.merriam-webster.com/dictionary/project (last visited May 29, 2018) (intransitive verb) to jut out : PROTRUDE; Merriam Webster's Collegiate Dictionary 10th ed. at 932 (1995): <u>project</u>: (1) to jut out : PROTRUDE.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "projects", including "projects outwardly relative to said inner surface" and "projects into said vapor chamber" based on his/her skill and the patent specification and claims.</p>
1-3	"confronting"	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes "opposite facing"</p> <p>https://www.merriam-webster.com/dictionary/confront (last visited May 29, 2018) (2) to cause to meet: bring face-to-face; Merriam Webster's Collegiate Dictionary 10th ed. at 243 (1995): <u>confront</u>: (2a) to cause to meet : bring face-to-face.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of "confronting" based on his/her skill and the patent specification and claims.</p>
1, 5	<p>"wick" (1)</p> <ul style="list-style-type: none"> • "capillary wick" (5) 	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes</p>

Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		<p>“material that by capillary attraction draws liquid condensed at the cooler condenser of a heat pipe toward the heat source.”</p> <p><i>See</i> reference 30 in Figs. 1-3; 2:20-25, 29-35, 62-67, 3:1-2, 54-60, 66-67; 4:1, 38-39; 66-67; 5:1-10.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of “wick,” including “capillary wick” based on his/her skill and the patent specification and claims.</p>
3	“tubular cross-section”	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes “a cross-section having the form of a tube”</p> <p>https://www.merriam-webster.com/dictionary/tubular (last visited May 29, 2018) having the form of or consisting of a tube; Merriam Webster's Collegiate Dictionary 10th ed. at 1270 (1995): tubular: having the form of or consisting of a tube.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of “tubular cross-section” based on his/her skill and the patent specification and claims.</p>
8	“a top shoulder disposed near a top end and bonded to a bottom surface of said top plate around one opening”	<p>Plain and ordinary meaning.</p> <p>If the Court finds a construction is needed, Aavid proposes “an area near a top end that abuts and is bonded to a bottom surface of said top plate around one opening.”</p> <p>https://www.thefreedictionary.com/shoulder (last visited May 29, 2018) the area of an item or object that serves as an</p>

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Claim Nos.	Claim Terms Defendants Believe Require Construction	Aavid's Preliminary Proposed Claims Constructions
		<p>abutment; anything that resembles a shoulder in shape or position.</p> <p>If necessary, Aavid would proffer Nelson Gernert to provide expert testimony and opinion regarding: (1) A person qualifying as one of ordinary skill in the art of heat pipe heat spreaders; and (2) how one of ordinary skill in the art of heat pipe heat spreaders would understand the plain meaning of “a top shoulder disposed near a top end and bonded to a bottom surface of said top plate around one opening” based on his/her skill and the patent specification and claims.</p>

1 Dated: May 29, 2018

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1 **CERTIFICATE OF SERVICE**

2 I hereby certify that on May 29, 2018, I caused a copy of **AAVID THERMALLOY**
3 **LLC'S PRELIMINARY PROPOSED CLAIM CONSTRUCTIONS PURSUANT TO**
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