

EXHIBIT 8

Invalidity Claim Chart Against U.S. Patent No. 10,739,916 Based on Prior Public Use and/or Commercial Offer for Sale of Defendant Promethean Inc.'s ActivPanel 4.5 Product

I. Introduction

Defendants assert that, based on the scope of the claims asserted by Plaintiff in its infringement contentions, the prior public use and commercial offers for sale and sales of Defendant Promethean Inc.'s ActivPanel 4.5 product ("AP4.5") are invalidating prior art under AIA 35 U.S.C. § 102(a)(1). The AP4.5 product was on sale and/or in public use at least as early as June, 2016. As described below, the AP4.5 anticipates all Asserted Claims of U.S. Patent 10,739,916 under AIA 35 U.S.C. § 102. Although Defendants reserve the right to rely on other portions of the prior art and/or other evidence to show the invalidity of the asserted claims, the citations below are representative of where specifically in the item of prior art each element of each Asserted Claim is found.

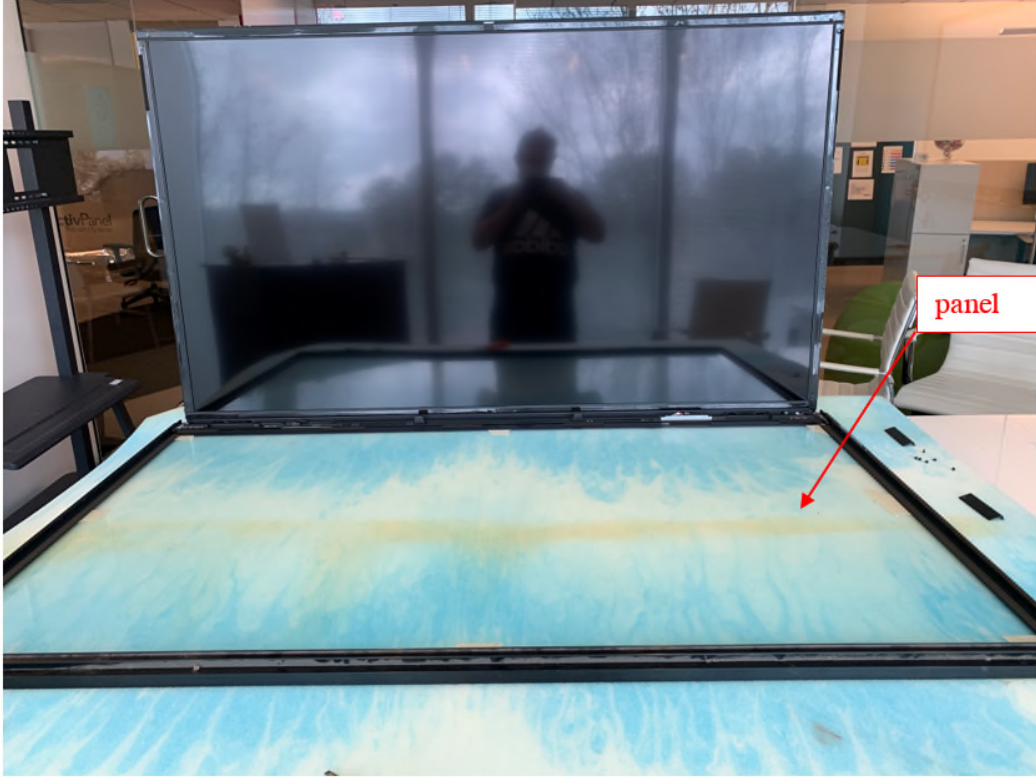
Exemplary evidence regarding knowledge of the person skilled in the art is provided in International App. Pub. No. WO 2017/099657 to Christiansson et al.; U.S. Patent No. 5,729,250 to Bishop et al.; Chinese Utility Model No. 203786707 U to Chen et al.; Chinese Pub. App. No. 104391611 A to Hu et al.; International Pub. App. No. WO 2014/131221 to Chen et al.; Chinese Utility Model 203786708 U to Cao et al.; Chinese Utility Model 204288179 U to Mo et al.; U.S. Patent No. 4,751,379 to Sasaki et al.; U.S. Pub. App. No. 2019/0004668 to Jeong et al.; Chinese Utility Model 203720812 U to Chen et al.; Japanese Pub. App. No. 2015-158831A to Yano et al.; U.S. Pub. App. No. 2014/0210793 to Eriksson et al.; and/or U.S. Pub. App. No. 2015/0131010 to Sugiyama et al. Defendants reserve the right to rely on other publications and to provide additional evidence, including expert testimony, regarding knowledge of the skilled person in this art.

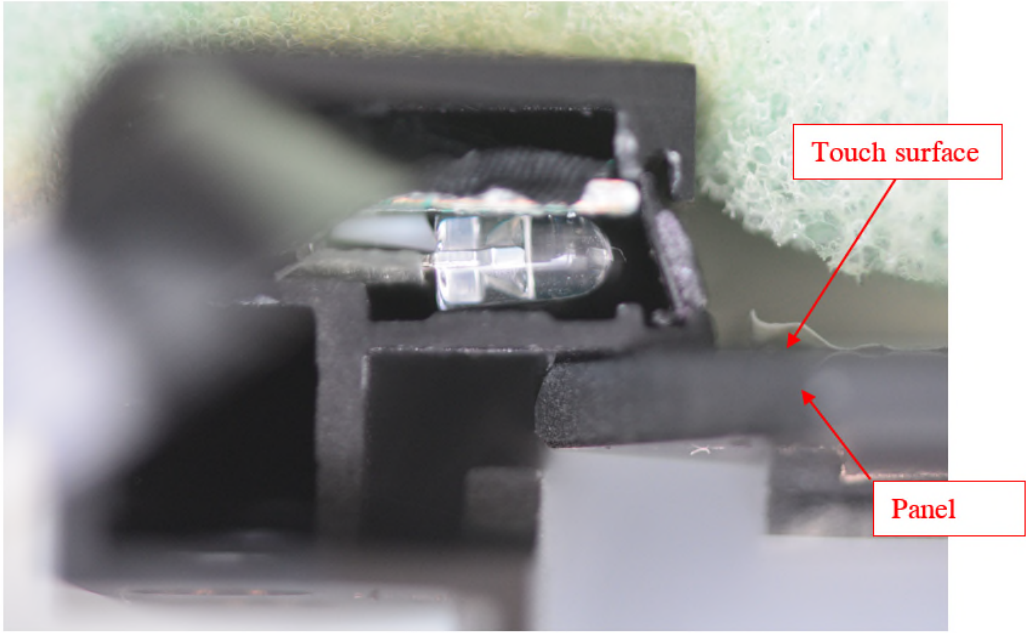
Further, Defendants may rely on one or more of the above-listed references, U.S. patent No. 9,983,626 to Cao et al.; Japanese Pub. App. No. 62-159213 to Sasaki et al.; German Pub. App. No. 102009003990 A1 to Kulik et al.; German Pub. App. No. 10025175 A1 to John; Japanese Pub. App. No. 2015-158831A to Yano et al.; U.S. Pub. App. No. 2019/0004668 to Jeong et al.; Chinese Utility Model No. 202887145 U to Quan; and/or Chinese Utility Model No. 203825586 U to Chen et al. to show the level of knowledge of one of ordinary skill in the art at the time of the alleged invention in the Asserted Claims and/or alternative structures.

Each reference disclosing any limitation of an Asserted Claim can be combined with any other reference having disclosure for the same or any other limitation of that Asserted Claim to render that Asserted Claim obvious. In addition, in the event that any listed reference is found not to adequately disclose any listed element, any other references listing such elements may be relied upon to establish that element.

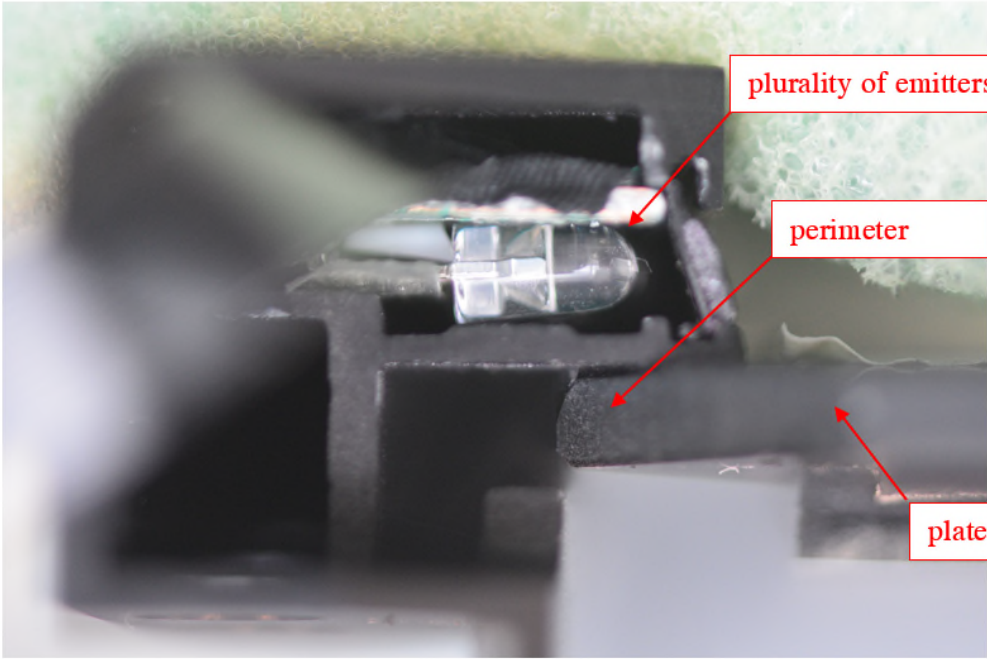
II. Invalidity of Asserted Claims 1-5 and 9

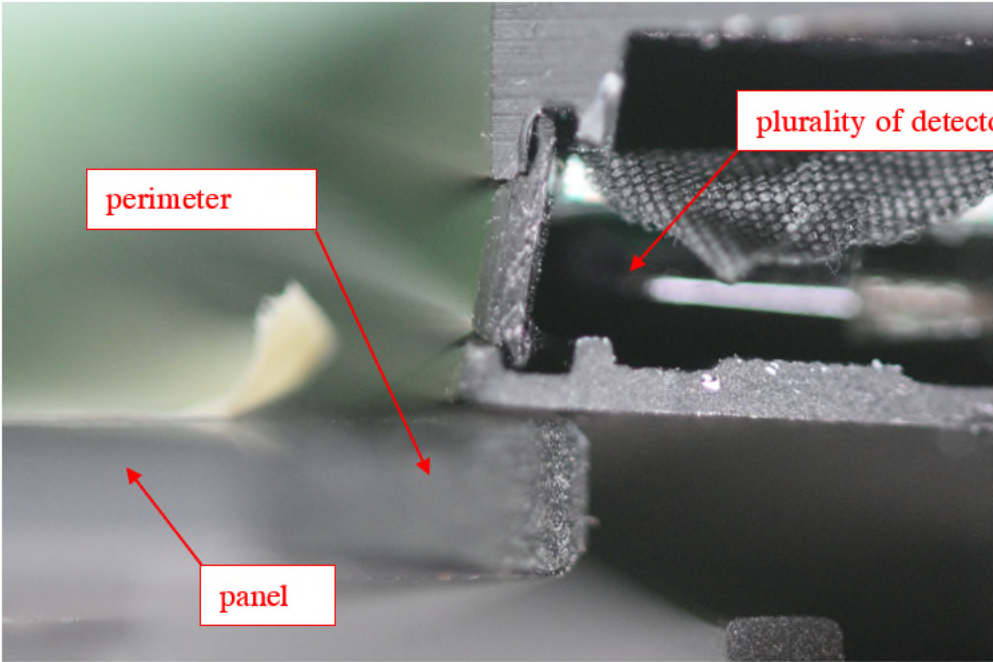
U.S. Patent No. 10,739,916 Claim 1	ActivPanel 4.5 Product
[1 P] A touch sensing apparatus, comprising:	Claim 1 is invalid as anticipated based on the AP4.5 product. To the extent the preamble is found to limit the claim, the AP4.5 product discloses a touch sensing apparatus, for example as depicted below: 
[1.1] a panel that defines a touch surface;	The AP4.5 product discloses a panel that defines a touch surface, for example as depicted below:

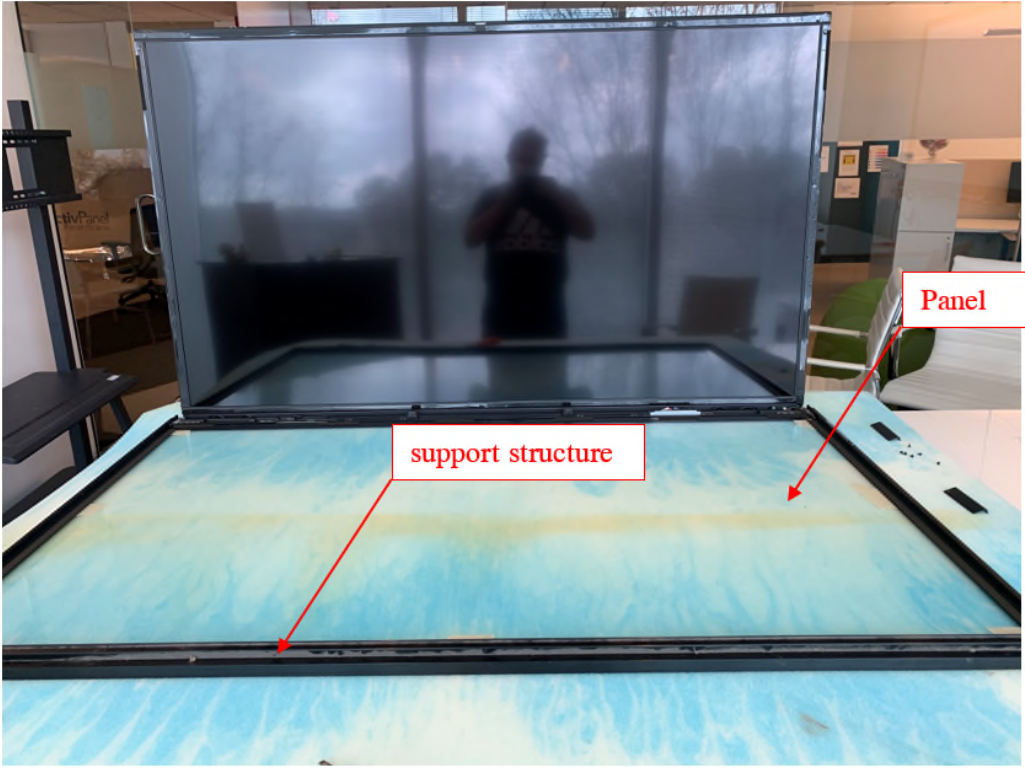
U.S. Patent No. 10,739,916 Claim 1	ActivPanel 4.5 Product
	

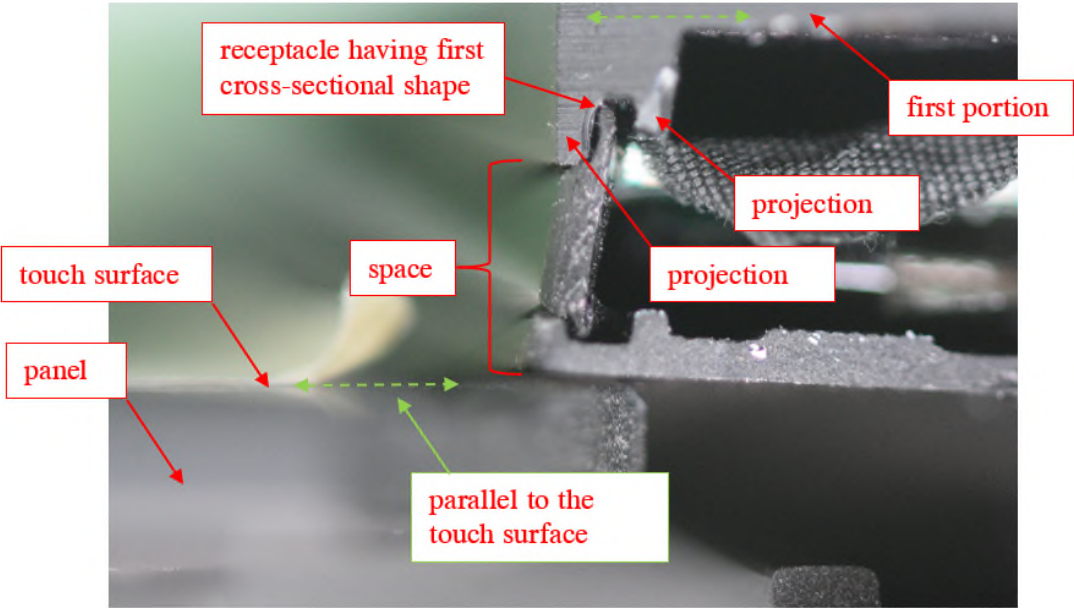
U.S. Patent No. 10,739,916 Claim 1	ActivPanel 4.5 Product
	
[1.2] a plurality of light emitters and detectors arranged along a perimeter of the panel;	The AP4.5 product discloses a plurality of light emitters and detectors arranged along a perimeter of the panel, for example as depicted below. The AP4.5 product includes a plurality of emitters and detectors:

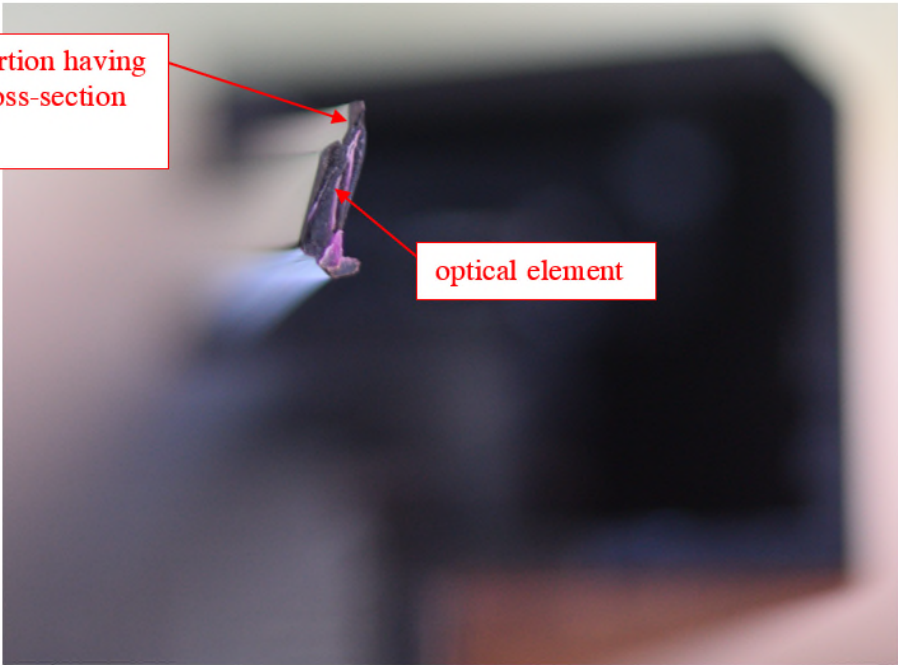
U.S. Patent No. 10,739,916 Claim 1	ActivPanel 4.5 Product
	 plurality of emitters  plurality of detectors In the AP4.5 product, the emitters and detectors are arranged along a perimeter of the panel:

U.S. Patent No. 10,739,916 Claim 1	ActivPanel 4.5 Product
	 A microscopic photograph of a device component, likely a microchip or sensor array. The image shows a dark, rectangular structure with a central, lighter-colored, cross-shaped feature. Three red arrows point to specific areas: one to the top right corner labeled "plurality of emitters", one to the central cross-shaped feature labeled "perimeter", and one to the bottom right corner labeled "plate".

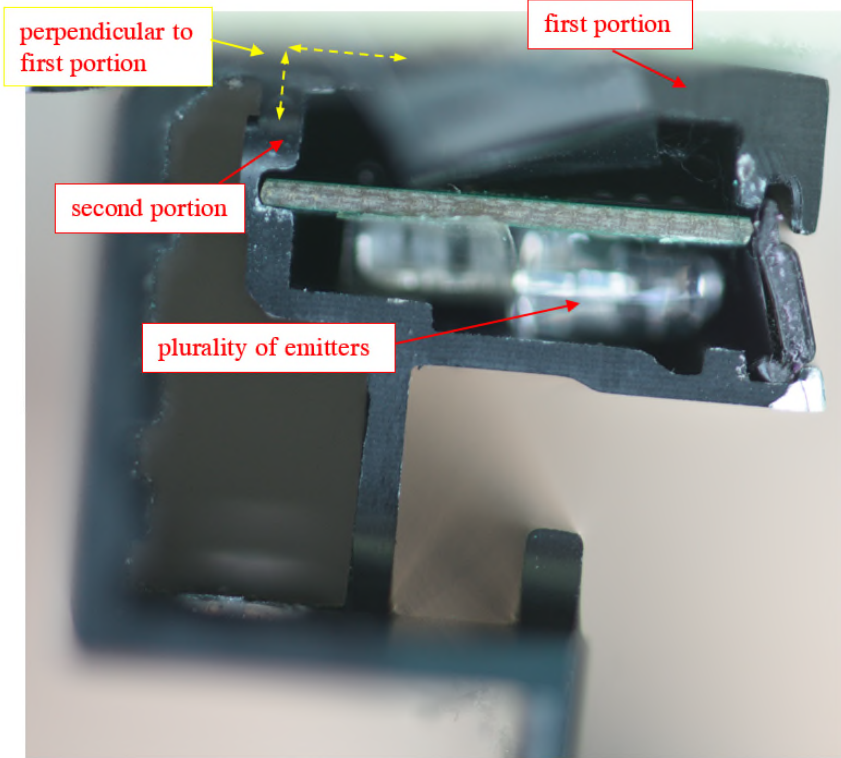
U.S. Patent No. 10,739,916 Claim 1	ActivPanel 4.5 Product
	
[1.3] a support structure comprising a first portion that is parallel to the touch surface and separated by a space from the panel, said first portion including a first projection extending downwards from said first portion and a second projection extending downwards from said first portion, wherein a gap between the first projection and the second projection forms a receptacle having a first cross-sectional shape, for example as depicted below.	The AP4.5 product discloses a support structure comprising a first portion that is parallel to the touch surface and separated by a space from the panel, said first portion including a first projection extending downwards from said first portion and a second projection extending downwards from said first portion, wherein a gap between the first projection and the second projection forms a receptacle having a first cross-sectional shape, for example as depicted below.

U.S. Patent No. 10,739,916 Claim 1	ActivPanel 4.5 Product
between the first projection and the second projection forms a receptacle having a first cross-sectional shape; and	 The photograph shows the ActivPanel 4.5 Product in a laboratory setting. It consists of a large, rectangular, flat panel that is light blue with a yellowish-green center. The panel is resting on a support structure. A person is visible in the background, standing behind the panel. Red arrows point from labels 'Panel' and 'support structure' to the respective parts of the device.

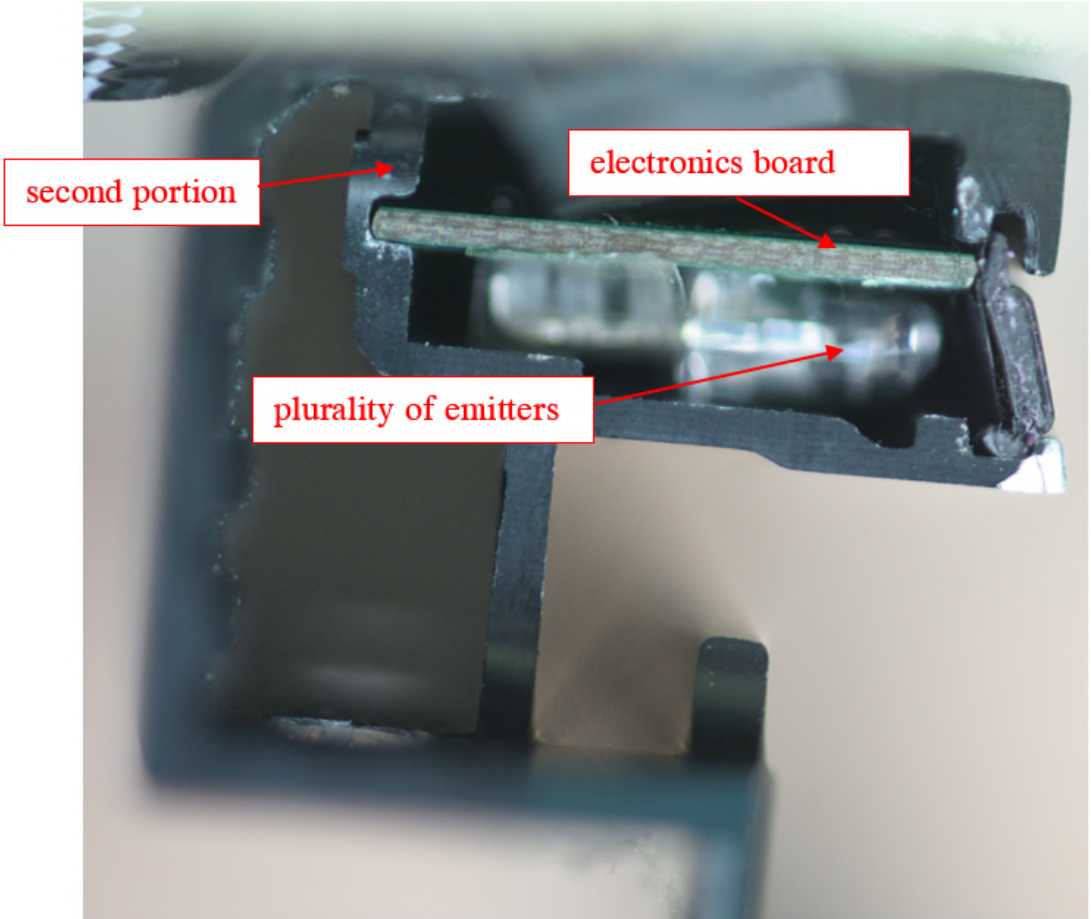
U.S. Patent No. 10,739,916 Claim 1	ActivPanel 4.5 Product
	
[1.4] an optical element fitted in the space between the panel and the first portion and configured to seal the plurality of light emitters from contaminants from the touch surface, said optical element comprises a mating portion having a second cross-section shape that is substantially reciprocal to the first cross-sectional shape, said mating portion engaged with the receptacle of the first portion, for example as depicted below. The image below, for example, is a side view of the optical element after it has been slid partially outward from the receptacle of the support structure first portion.	

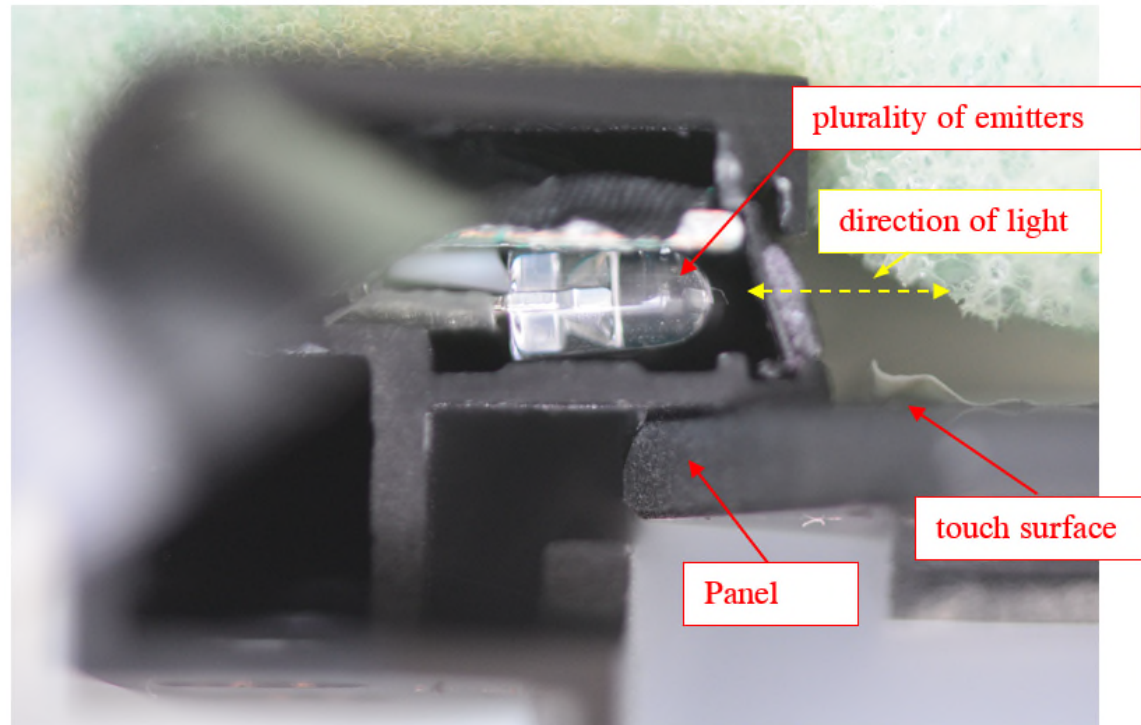
U.S. Patent No. 10,739,916 Claim 1	ActivPanel 4.5 Product
portion engaged with the receptacle of the first portion.	 mating portion having second cross-section shape optical element

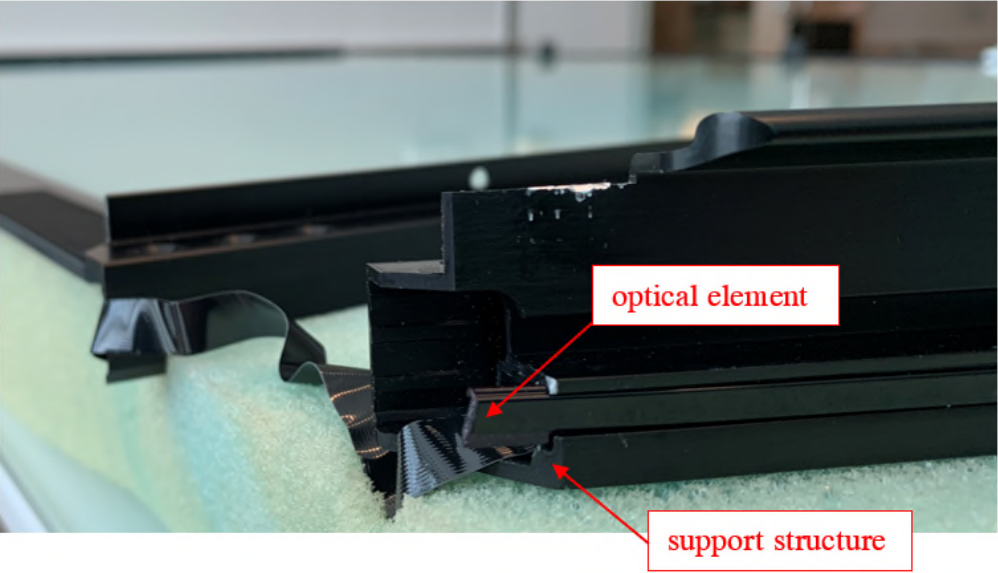
U.S. Patent No. 10,739,916 Claim 1	ActivPanel 4.5 Product
	The skilled person would understand that the structure of the AP4.5 product is configured to seal the plurality of light emitters from contaminants from the touch surface. <i>See, e.g.</i>, German Pub. App. No. 102009003990 A1 to Kulik et al., at ¶¶ 0011, 0054, Figs. 3, 5; German Pub. App. No. 10025175 A1 to John, at ¶¶ 0003, 0012-14, 0021, Fig. 1; U.S. Pub. App. No. 2019/0004668 to Jeong et al., at ¶ 0115, Figs. 6-8, 11, 20; Japanese Pub. App. No. 2015-158831A to Yano et al., at ¶¶ 0028-36, Fig. 2.

U.S. Patent No. 10,739,916 Claim 2	ActivPanel 4.5 Product
[2] The touch sensing apparatus according to claim 1, wherein the support structure further comprises a second portion extending from the first portion, wherein the second portion is configured to enable mounting of the plurality of emitters and wherein the second portion is oriented perpendicular to the first portion.	The AP4.5 product discloses that the support structure further comprises a second portion extending from the first portion, wherein the second portion is configured to enable mounting of the plurality of emitters and wherein the second portion is oriented perpendicular to the first portion. 

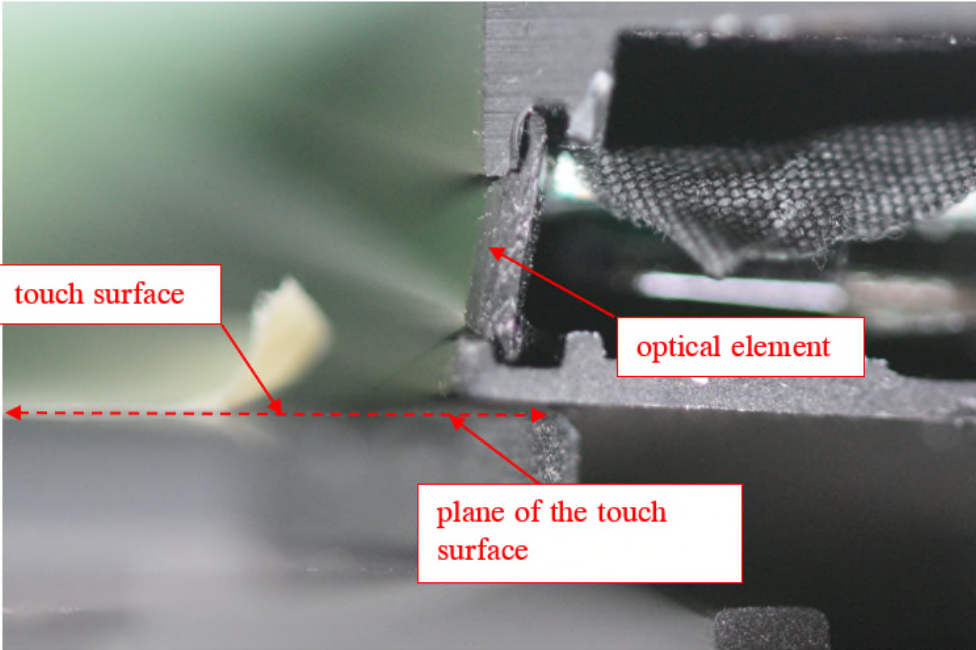
U.S. Patent No. 10,739,916 Claim 3	ActivPanel 4.5 Product
[3] The touch sensing apparatus according to claim 2, wherein the plurality of emitters are mounted on an	The AP4.5 product discloses that the plurality of emitters are mounted on an electronics board that is supported by the second portion, said plurality of emitters configured to emit light above the touch surface.

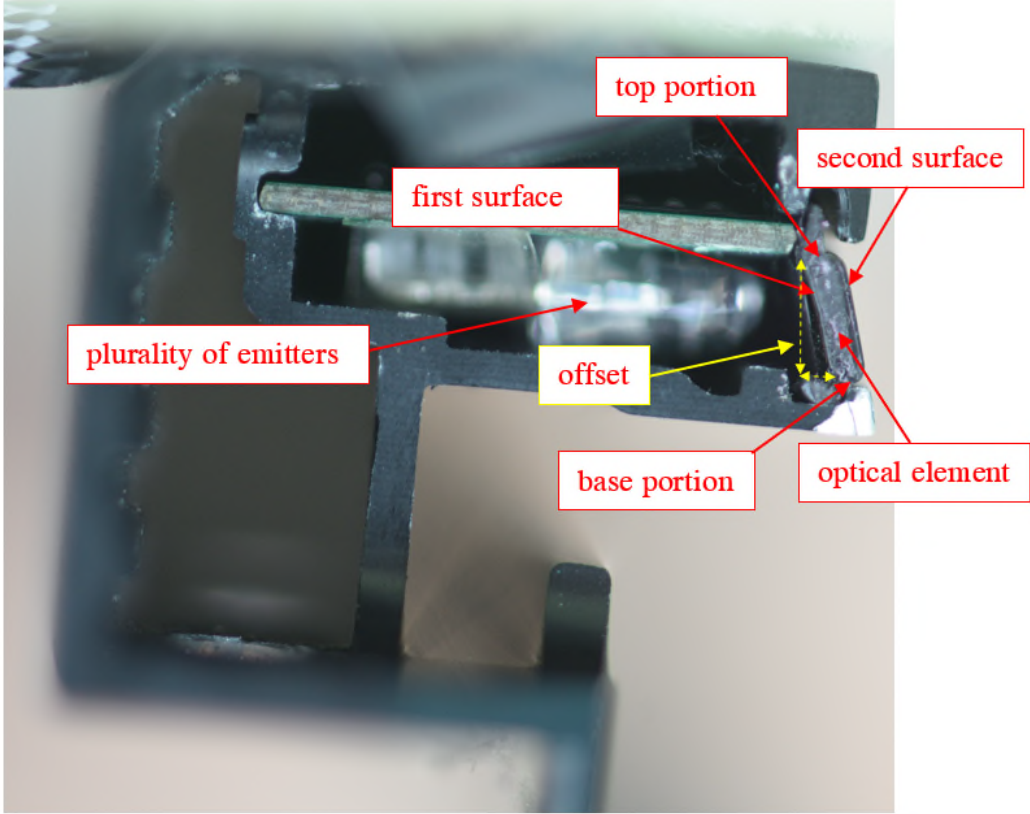
U.S. Patent No. 10,739,916 Claim 3	ActivPanel 4.5 Product
electronics board that is supported by the second portion, said plurality of emitters configured to emit light above the touch surface.	The plurality of emitters are mounted on an electronics board that is supported by the second portion, for example as depicted below:  The plurality of emitters are configured to emit light above the touch surface, for example as depicted below:

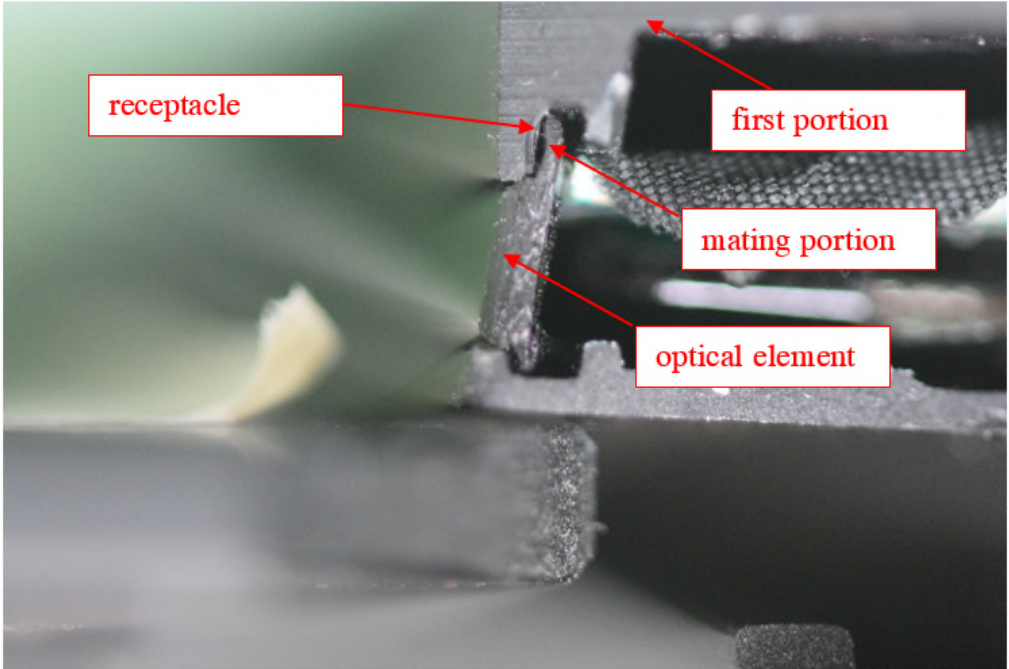


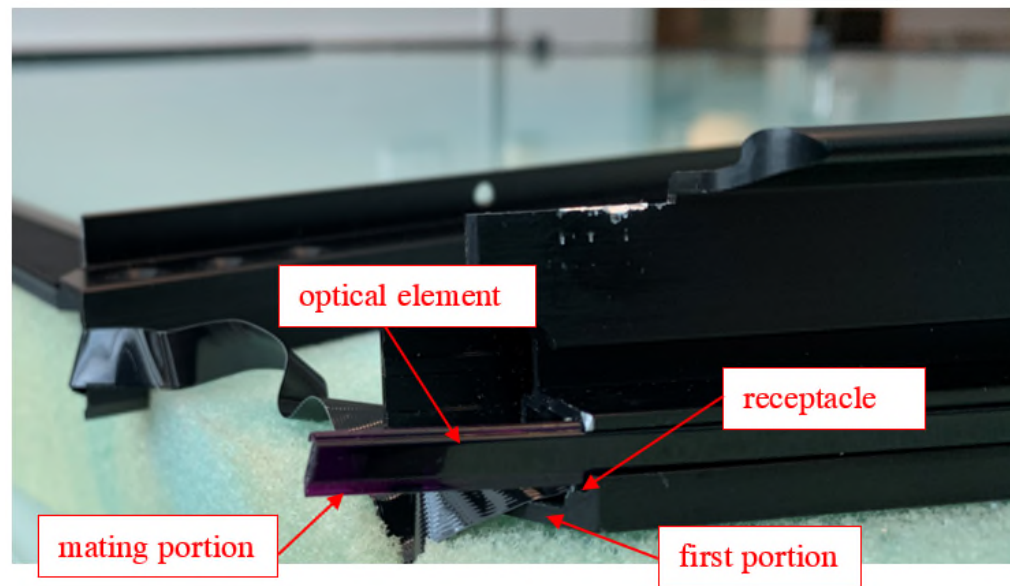
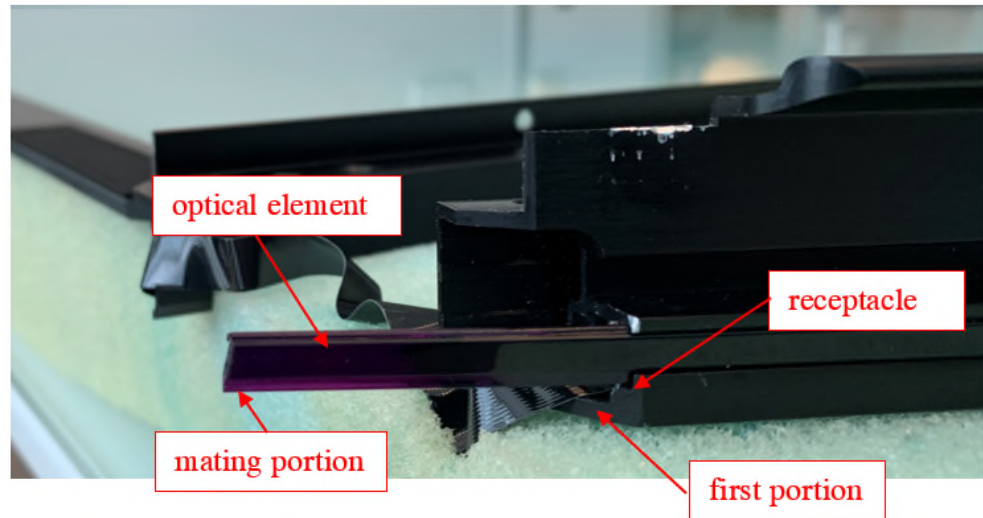
U.S. Patent No. 10,739,916 Claim 4	ActivPanel 4.5 Product
[4] The touch sensing apparatus according to claim 1, wherein the optical element is configured to slide in a direction parallel to a plane of the touch surface.	The AP4.5 product discloses that the optical element is configured to slide in a direction parallel to a plane of the touch surface. The images below show the optical element in three stages of sliding movement relative to the support structure. 

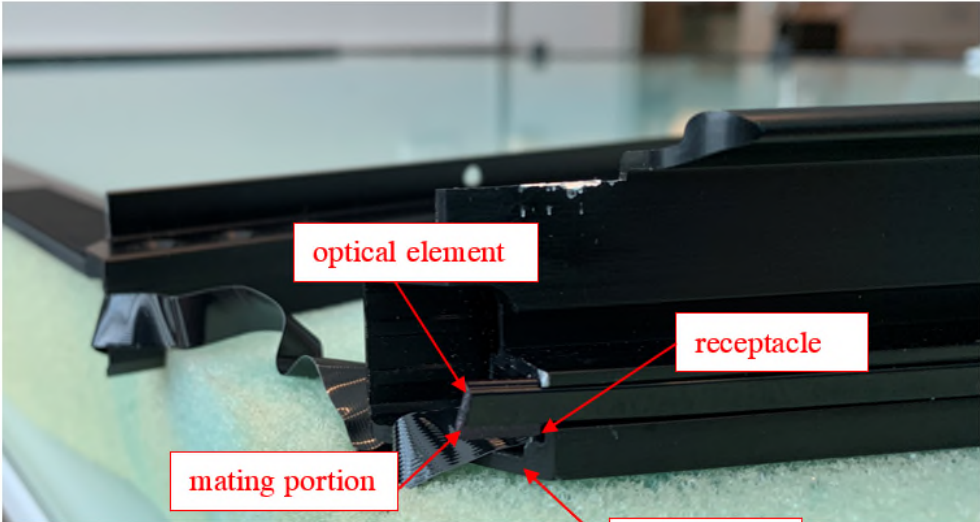
U.S. Patent No. 10,739,916 Claim 4	ActivPanel 4.5 Product
	 The image contains two photographs of the ActivPanel 4.5 Product, showing a close-up of the optical element and support structure. The top photograph shows the product from a slightly different angle than the bottom photograph. Both images feature a black, elongated support structure with a purple, rectangular optical element mounted on it. Red arrows point from the labels 'optical element' and 'support structure' to the respective components in both images. The background is a light green surface.

U.S. Patent No. 10,739,916 Claim 4	ActivPanel 4.5 Product
	As shown in the image below, the direction of movement (out of the page in the below image) is parallel to a plane of the touch surface: 

U.S. Patent No. 10,739,916 Claim 5	ActivPanel 4.5 Product
[5] The touch sensing apparatus according to claim 1, wherein the optical element comprises a first surface facing the plurality of light emitters and a second surface opposite the first surface, said first surface angled between a top portion of the optical element and a base portion of the optical element and configured to form an offset between a first end of the top portion and a second end of the base portion.	The AP4.5 product discloses that the optical element comprises a first surface facing the plurality of light emitters and a second surface opposite the first surface, said first surface angled between a top portion of the optical element and a base portion of the optical element and configured to form an offset between a first end of the top portion and a second end of the base portion.  The photograph shows a close-up of the ActivPanel 4.5 product. The optical element is a dark, rectangular component with a first surface facing the plurality of light emitters and a second surface opposite the first surface. The first surface is angled between a top portion and a base portion of the optical element. The top portion is angled upwards, and the base portion is angled downwards. The first surface is configured to form an offset between a first end of the top portion and a second end of the base portion. The plurality of light emitters are visible as small, bright, rectangular components arranged in a row. The offset is indicated by a yellow dashed line. The labels are: top portion, first surface, second surface, plurality of emitters, offset, base portion, and optical element.

U.S. Patent No. 10,739,916 Claim 9	ActivPanel 4.5 Product
[9] The touch sensing apparatus according to claim 1, wherein the mating portion is engaged with the receptacle responsive to the optical element slidably fitted in a direction parallel to the first portion during assembly.	The AP4.5 product discloses that the mating portion is engaged with the receptacle responsive to the optical element slidably fitted in a direction parallel to the first portion during assembly. As shown in the image below, the mating portion of the optical element is engaged with the receptacle during and after assembly of the optical element with the first portion:  The images below show three stages of assembly of the optical element with the first portion. As shown, the optical element mating portion is slidably fitted in the receptacle in a direction parallel to the first portion.



U.S. Patent No. 10,739,916 Claim 9	ActivPanel 4.5 Product
	 The photograph shows a close-up of a black plastic assembly. A red label 'optical element' points to a small, dark, rectangular feature. A red label 'receptacle' points to a larger, U-shaped component. A red label 'mating portion' points to a small, protruding feature on the left. A red label 'first portion' points to a small, protruding feature on the right. The assembly is resting on a green surface.