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UNITED STATES PATENT AND TRADEMARK OFFICE

Trademark Trial and Appeal Board

In re Phoseon Technology, Inc.

Serial No. 77963815

Hillary A. Brooks of Marger, Johnson & McCollom, PC for Phoseon Technology, Inc.

Kim Teresa Moninghoff, Trademark Examining Attorney, Law Office 113 (Odette Bonnet, Managing Attorney).

Before Quinn, Kuhlke and Bergsman,
Administrative Trademark Judges.

Opinion by Bergsman, Administrative Trademark Judge:

Phoseon Technology, Inc. ("applicant") filed a use-based application on the Principal Register for the mark SEMICONDUCTOR LIGHT MATRIX, in standard character form, for the following goods, as amended,

Light curing systems composed primarily of light emitting diodes for industrial applications; UV curing systems composed primarily of light emitting diodes, for commercial applications, namely, for curing inks, coatings, adhesives, and a variety of other materials, in Class 9.

The Trademark Examining Attorney refused to register applicant's mark under Section 2(e)(1) of the Trademark Act of

1946, 15 U.S.C. § 1052(e)(1), on the ground that applicant's mark is merely descriptive, and on the ground that applicant's mark as used on the specimen of record fails to function as a trademark under Sections 1, 2 and 45 of the Trademark Act, 15 U.S.C. §§ 1051, 1052 and 1127.

Whether applicant's proposed mark is merely descriptive?

The examining attorney argues that SEMICONDUCTOR LIGHT MATRIX merely describes applicant's goods as "a source of electromagnetic radiation provided by an array of semiconductor devices,"¹ in other words, a light emitting matrix utilizing semiconductors. "A term is merely descriptive if it immediately conveys knowledge of a quality, feature, function, or characteristic of the goods or services with which it is used." *In re Gyulay*, 820 F.2d 1216, 3 USPQ2d 1009, 1009 (Fed. Cir. 1987). Whether a particular term is merely descriptive is determined in relation to the goods or services for which registration is sought and the context in which the term is used, not in the abstract or on the basis of guesswork. *In re Abcor Development Corp.*, 588 F.2d 811, 200 USPQ 215, 218 (CCPA 1978); *In re Remacle*, 66 USPQ2d 1222, 1224 (TTAB 2002). In other words, the question is not whether someone presented only with the mark could guess the products listed in the description of goods. Rather, the question is whether someone who knows

¹ Examining Attorney's Brief, p. 3 (unnumbered).

what the products are will understand the mark to convey information about them. *In re Tower Tech, Inc.*, 64 USPQ2d 1314, 1316-1317 (TTAB 2002); *In re Patent & Trademark Services Inc.*, 49 USPQ2d 1537, 1539 (TTAB 1998); *In re Home Builders Association of Greenville*, 18 USPQ2d 1313, 1317 (TTAB 1990); *In re American Greetings Corp.*, 226 USPQ 365, 366 (TTAB 1985).

When two or more merely descriptive terms are combined, the determination of whether the composite also has a merely descriptive significance turns on the question of whether the combination of terms evokes a new and unique commercial impression. If each component retains its merely descriptive significance in relation to the goods or services, the combination results in a composite that is itself merely descriptive. *See In re Tower Tech, Inc.*, 64 USPQ2d 1314 (SMARTTOWER merely descriptive of commercial and industrial cooling towers); *In re Sun Microsystems Inc.*, 59 USPQ2d 1084 (TTAB 2001) (AGENTBEANS merely descriptive of computer programs for use in developing and deploying application programs); *In re Putman Publishing Co.*, 39 USPQ2d 2021 (TTAB 1996) (FOOD & BEVERAGE ONLINE merely descriptive of news and information services in the food processing industry). In this regard, we must consider the issue of descriptiveness by looking at the mark in its entirety. Common words may be descriptive when standing alone, but when used together in a composite mark, they

may become a valid trademark. *See Concurrent Technologies Inc. v. Concurrent Technologies Corp.*, 12 USPQ2d 1054, 1057 (TTAB (1989) (CONCURRENT TECHNOLOGIES CORPORATION found not merely descriptive of printed electronic circuit boards because, while "concurrent" had meaning in the computer field, "concurrent technologies" had no established meaning in relation to computer hardware or software).

Finally, "if one must exercise mature thought or follow a multi-stage reasoning process in order to determine what product or service characteristics the term indicates, the term is suggestive rather than merely descriptive." *In re Tennis in the Round, Inc.*, 199 USPQ 496, 498 (TTAB 1978). *See also, In re Shutts*, 217 USPQ 363, 364-365 (TTAB 1983); *In re Universal Water Systems, Inc.*, 209 USPQ 165, 166 (TTAB 1980).

At the outset, definitions of the relevant terms are helpful for determining whether the mark is merely descriptive.

1. A "semiconductor" is "a solid material that has electrical conductivity between that of a conductor and an insulator."² A light-emitting diode (also known as an LED)³ is a type of semiconductor which produces light.⁴

² MSN Encarta Dictionary attached to the June 28, 2010 Office action.

³ Applicant's website, "Frequently Asked Questions," attached to the June 28, 2010 Office action.

⁴ *Id.*

2. "Light" means, *inter alia*, "electromagnetic radiation: electromagnetic radiation that has wavelengths of any length."⁵

3. A "matrix" is "an array of circuit elements (as diodes and transistors) for performing a specific function."⁶ Thus, two or more LEDs can be joined together in a matrix or array to produce more light than an individual LED.

In view of the foregoing, the term "Semiconductor Light Matrix" would be understood as meaning a light emitting matrix utilizing semiconductors. We find that the evidence of record establishes that the words in the proposed mark SEMICONDUCTOR LIGHT MATRIX retain their dictionary meanings when used by applicant; and the proposed mark in its entirety is merely descriptive, because as the words are combined they do not create a meaning different from the individual elements.

Applicant's goods use a "'bulbless' Semiconductor Light Matrix (SLM) technology to produce UV light for curing applications. ... The result is a high intensity UV light system that offers an efficient, scalable, safe, long-life, and environmentally friendly alternative to traditional UV sources."⁷

⁵ MSN Encarta Dictionary attached to the June 28, 2010 Office action.

⁶ Merriam-Webster Online (Merriam-webster.com) attached to the June 28, 2010 Office action.

⁷ Applicant's pamphlet "What is Semiconductor Light Matrix Technology?" attached to the June 28, 2010 Office action. The fact that applicant uses initial upper-case letters when displaying the term SEMICONDUCTOR LIGHT MATRIX does not *ipso facto* mean that the term is not merely descriptive. See *Goodyear Tire & Rubber Co. v. Continental General Tire Inc.*, 70 USPQ2d 1067, 1076 (TTAB 2003) ("[T]he mere fact that

Applicant's product "combines a dense array of light emitting semiconductor devices" designed to optimize the thermal output, i.e., the emitted light.⁸ Applicant's product is used for, *inter alia*, UV curing of printing, coatings, and adhesives.⁹

Applicant's website further describes its SEMICONDUCTOR LIGHT MATRIX technology as follows:

Features: SLM technology is implemented with an array of light emitting semiconductors that are configured into a system which performs the following:

- The light is efficiently collected and directed at the target using micro optics.
- The heat generated by the array is managed with conductive packaging technology.
- Electronic control allows instant on/off and light intensity control.

applicant often capitalizes the term cannot salvage a term that the record shows otherwise to be a descriptive term."); *In re MetPath Inc.*, 223 USPQ 88, 89 (TTAB 1984) ("Further, we are not persuaded that the form of presentation of the term "P.A.P." in applicant's designation, i.e., the use of all capital letters, each followed by a period, would serve to dispel the probable significance of applicant's designation to consumers because we doubt that the average consumer would be aware of the derivation (and hence the proper form of presentation) of the term 'Pap test.'").

⁸ Applicant's website, "Technology," (phoseon.com) attached to the December 9, 2010 Office action.

⁹ Applicant's website attached to the June 28, 2010 Office action. The letters "UV" are the abbreviation for "ultraviolet" which means "beyond the violet in the spectrum, corresponding to light having wavelengths shorter than 4000 angstrom units." The Random House Dictionary of the English Language (Unabridged) p. 2051 (2nd ed. 1987). The Board may take judicial notice of dictionary evidence. *University of Notre Dame du Lac v. J. C. Gourmet Food Imports Co.*, 213 USPQ 594, 596 (TTAB 1982), *aff'd*, 703 F.2d 1372, 217 USPQ 505 (Fed. Cir. 1983).

"UV Curing is the polymerization of UV sensitive materials, rather than drying through evaporation of solvents." "Frequently Asked Questions" from applicant's website (phoseon.com), attached to the June 28, 2010 Office action.

- Individual semiconductor devices are insensitive to failure of other devices in the array.
- SLM arrays produce uniform and high intensity UV output.¹⁰

An article published February 1, 2006 in the *Adhesives & Sealants Industry* magazine (highbeam.com) entitled "Semiconductor light matrix: a new UV technology for curing adhesives ultraviolet" corroborates the technology as described in applicant's website.¹¹ The article was written by Mark Owen who is identified as being associated with applicant. The term is used as follows in the article (emphasis added).

SEMICONDUCTOR LIGHT MATRIX (SLM) TECHNOLOGY
SLM technology is implemented with an array of thousands of light-emitting semiconductors ... configured into a system that performs the following functions:

* * * *

* Light is efficiently collected and directed at the target using tiny lenses.

* The heat generated by the array is managed with conductive packaging technology.

* Electronic control allows on/off, pulsing and light-intensity control, and is insensitive to failures of individual semiconductor devices.

* The uniformity, intensity and size of SLM arrays meet or exceed production requirements at acceptable cost.

¹⁰ December 9, 2010 Office action.

¹¹ Posted on the *High Beam Research* website (highbeam.com) and attached to the December 9, 2010 Office action.

Throughout the article, SEMICONDUCTOR LIGHT MATRIX is used to describe the technology, which uses "an array of thousands of light-emitting semiconductors." See *In re Gould Paper Corp.*, 834 F.2d 1017, 5 USPQ2d 1110, 1112 (Fed. Cir. 1987) (the Board properly relied on applicant's use of the term SCREENWIPE in its specimen of use to show that the term was generic); see also *In re Chamber of Commerce of the U.S.*, 675 F.3d 1297, 102 USPQ2d 1217, 1220 (Fed. Cir. 2012) (content of applicant's website and articles discussing the activities of chambers of commerce constituted substantial evidence supporting the Board's determination that NATIONAL CHAMBER is merely descriptive).

The term is used in a similar manner in an article published April 1, 2006 in the *Paintings & Coatings Industry* magazine entitled "UV curing: joins the solid-state world."¹² The article was written by Paul Mills who is also identified as being associated with applicant (emphasis added).

Now solid-state UV emitters, such as UV LEDs, UV laser diodes or **Semiconductor Light Matrix** (SLM) technology promise to alter the discussion of how UV materials are cured in a manner similar to the way the microwave oven has transformed the way we talk about cooking, just as a bowl of popcorn may look and taste identical when cooked either way, so will UV coatings look and perform identically whether cured with conventional medium-pressure mercury lamps or with solid-state devices.

¹² Posted on the *High Beam Research* website (highbeam.com) and attached to the December 9, 2010 Office action.

* * * *

A much more useful way of integrating the semiconductor light source is via "macro packaging" technology. One such technology is Semiconductor Light Matrix (SLM) which involves mounting hundreds or thousands of "chips" in a very close proximity on a substrate, with micro optics to collect and direct the UV light, and cooling via conductive packaging to manage the thermal issues associated with close integration of a large number of solid-state devices.

The use of SEMICONDUCTOR LIGHT MATRIX to identify a technology is further reinforced by two patent applications.¹³

1. U.S. Patent Application No. 2010018143, published July 22, 2010, shows descriptive use of the term "semiconductor light matrix." (Emphasis added).

Now referring to FIG. 6 a semiconductor light matrix 600 (manufactured by Phoseon Technology Inc., Beaverton, Oreg., www.phoseon.com) is illuminating the water 630. The output of the semiconductor light matrix 600 is coupled to focusing lens 610. The semiconductor light matrix 600 and focusing lens 610 combination is positioned at an angle 620 from the wafer 630 surface. The camera 640 takes images of waters 630 surface to detect areas of subtle delamination. The semiconductor light matrix 600 is positioned at various points 600 ... and at various angles 620 ... such that the entire surface may be inspected. The use of a semiconductor light matrix 600 can also be configured to illuminate the top of the water 630 for metal layer wafers or illuminate the bottom of the wafer 630 in

¹³ December 9, 2010 Office action.

the same manner as depicted in FIGS. 5A and 5B.

2. U.S. Patent Application No. 201000259187, published October 14, 2010, shows descriptive use of the term "semiconductor light matrix" (emphasis added):

The subarrays may consist of individual semiconductor light emitting devices arranged in an x-y grid. An "array" will refer to a collection of subarrays into a larger x-y grid. The array is then packaged with its thermal and power controls, which will be referred to here as a lighting product or device. The subarrays and the array may be referred to as a **semiconductor light matrix**, or SLM™. The lighting device may be referred to as containing or consisting of SLM™ technology.

The examining attorney attached an excerpt from a third-party website displaying the term "Semiconductor Light Matrix" used descriptively. The Integration Technology website (uvintegration.com) describes that company's use of SLM (Semiconductor Light Matrix) technology in connection with UV LEDs in the inkjet market as part of a curing system.¹⁴ There is no indication on the website that SLM (Semiconductor Light Matrix) has any relationship with applicant.

The examining attorney also attached an abstract of a paper published on the SPIE website (spie.org) displaying the term

¹⁴ December 9, 2010 Office action.

"Semiconductor Light Matrix" used descriptively.¹⁵ The abstract provides the following information (emphasis added):

High power Ultraviolet Light-Emitting Diode (UV-LED) is currently in high demand for a variety of applications including lighting, printing, and polymer curing with its' [sic] advantages of durability, reliability, non-hazardous [sic] and safety. Recently, the technology of Semiconductor Light Matrix (SLM) by multiple individual LEDs mounted on panels was put forward to obtain higher power for curing application [sic].

Finally, the examining attorney submitted excerpts from articles in periodicals asserting that the applicant uses SEMICONDUCTOR LIGHT MATRIX to describe its technology, not as a trademark.¹⁶ The example below is representative.

Adhesives & Sealants Industry (January 1, 2010)

UV LED Curing System: Phoseon

This company has announced the introduction of the RX FireLine™ series - the next step in the evolution of its SEMICONDUCTOR LIGHT MATRIX (SLM) - based, high-power UV LED curing systems.

In view of the foregoing, we find SEMICONDUCTOR LIGHT MATRIX directly describes the technology featured in applicant's products and, therefore, is merely descriptive of a significant feature of the product. In particular, we note that in U.S. Patent Application No. 201000259187, the patent applicant stated that "[t]he subarrays and the array may be referred to as a

¹⁵ *Id.* The legend on the top of the website states that "SPIE is the international society for optics and photonics."

¹⁶ *Id.*

semiconductor light matrix," and that applicant itself describes its product "as a dense array of light emitting semiconductor devices."¹⁷

Applicant argues, *inter alia*, that SEMICONDUCTOR LIGHT MATRIX is incongruous because "the phrase 'semiconductor light' serves as a modifier for the term 'matrix,' and because 'semiconductor light' makes no sense as a modifier of 'matrix' such that any attempts to make sense of Applicant's mark requires a complex, multistage mental process."¹⁸ Applicant's argument is not persuasive. It fails because the record is clear that applicant's light curing system is a "matrix" (*i.e.*, an array) of light emitting elements (*i.e.*, "semiconductor lights"). The fact that applicant may be the first or only producer of such a matrix to call it a light matrix, rather than an array of light emitting elements, does not render the term "light matrix" incongruous or distinctive. *See In re Sun Microsystems, Inc.*, 59 USPQ2d at 1087; *In re Acuson*, 225 USPQ 790, 792 (TTAB 1985). Further, there is no support for applicant's argument that prospective purchasers of its systems would consider "semiconductor" as a modifier of "light," rather than as a modifier of "light matrix." Based on the record before us, we find that purchasers of the involved goods, being

¹⁷ Applicant's website attached to the June 28, 2010 Office action.

¹⁸ Applicant's Brief, p. 4 (unnumbered).

familiar with light curing systems, will view "light matrix" as the name of a light emitting system and "semiconductor" as a modifier of that term, indicating that semiconductors are used in the light matrix.

In view of the foregoing, we find that applicant's mark SEMICONDUCTOR LIGHT MATRIX is merely descriptive when used in connection with "light curing systems composed primarily of light emitting diodes for industrial applications; UV curing systems composed primarily of light emitting diodes, for commercial applications, namely, for curing inks, coatings, adhesives, and a variety of other materials."

Whether SEMICONDUCTOR LIGHT MATRIX fails to function as a mark?

The examining attorney also refused to register applicant's mark because, as used on the specimen of record, SEMICONDUCTOR LIGHT MATRIX fails to function as a trademark to identify applicant's goods and distinguish them from the goods of others. The essence of the refusal is that the term "Semiconductor Light Matrix," as used by applicant in the specimen of record, identifies a technology, not the source of the UV curing system. In its application, applicant identified the specimen of use, shown below, as a "photo showing use of the mark in association with the goods at a trade show."



In opposition to the refusal, applicant argues that the photograph "demonstrates the trademark prominently."¹⁹

¹⁹ Applicant's Brief, p. 15 (unnumbered).

The critical question in determining whether SEMICONDUCTOR LIGHT MATRIX, as used in the specimens of record, functions as a trademark is the commercial impression it makes on the relevant public (e.g., whether the term sought to be registered would be perceived as a mark identifying the source of the goods or merely as an informational phrase). *In re Aerospace Optico, Inc.*, 78 USPQ2d 1861, 1862 (TTAB 2006) ("the mark must be used in such a manner that it would be readily perceived as identifying the specified goods and distinguishing a single source or origin for the goods. ... The mere fact that a designation appears on the specimen of record does not make it a trademark. ... A critical element in determining whether matter sought to be registered as a trademark is the impression the matter makes on the relevant public." (Citations omitted)); *In re Volvo Cars of North America Inc.*, 46 USPQ2d 1455, 1459 (TTAB 1998); *In re Remington Products Inc.*, 3 USPQ2d 1714, 1715 (TTAB 1987); *In re Morganroth*, 208 USPQ 284, 287 (TTAB 1980). In this regard, we must look to the specimen to determine how consumers likely would perceive the subject matter sought to be registered. *In re Aerospace Optico, Inc.*, 78 USPQ2d at 1862; *In re The Signal Companies, Inc.*, 228 USPQ 956, 957 (TTAB 1986); *In re Wakefern Food Corp*, 222 USPQ 76, 77 (TTAB 1984).

The commercial impression engendered by the displays in the photograph is that applicant, Phoseon Technology, is

advertising/selling a UV curing system that uses semiconductor light matrix technology. The term SEMICONDUCTOR LIGHT MATRIX as used on the specimen identifies the technology of the UV curing system; it does not identify and distinguish the source of the goods, but instead it describes how the goods work. Applicant's use of the designation SEMICONDUCTOR LIGHT MATRIX to identify the technology used in applicant's product is similar to the use of the mark SPECTRUM in *In re Aerospace Optico, Inc.*, 78 USPQ2d 1861 (TTAB 2006). In *Aerospace Optico*, the Board found that consumers would not perceive the designation SPECTRUM to be a trademark because as used on the specimen of record, SPECTRUM was merely one of several terms identifying features of the product. Likewise, in this application, consumers will perceive the term SEMICONDUCTOR LIGHT MATRIX as identifying the technology used in applicant's product (*i.e.*, "UV Curing Systems Using Semiconductor Light Matrix (SLM) Technology For Optical Storage Media") and not as the source of the goods.

In the alternative, applicant argues that the webpages made of record by the examining attorney are acceptable specimens.²⁰ An examining attorney's submission of evidence into the record does not satisfy the requirement that an application filed under Section 1(a) of the Trademark Act include one specimen per class showing how the applicant actually uses the mark in

²⁰ Applicant's Brief, p. 15 (unnumbered).

commerce. 37 C.F.R. § 2.34(a)(1)(iv). If the applicant believed that these webpages showed use of its mark as a trademark, it had the opportunity during prosecution to submit the webpages as substitute specimens, supported by an affidavit or declaration pursuant to Trademark Rules 2.20 and 2.59. In any event, the use of SEMICONDUCTOR LIGHT MATRIX on the webpages does not show trademark use because such use does not identify a SEMICONDUCTOR LIGHT MATRIX brand UV curing system; the webpages show SEMICONDUCTOR LIGHT MATRIX used to identify the technology (e.g., "Phoseon's proprietary Semiconductor Light Matrix (SLM) technology for UV curing or drying combines a dense array of light emitting semiconductor devices, with micro optics and advances thermal technology in a cost-effective MOEMS (micro opto electro-mechanical system) package.").²¹

In view of the foregoing, we find that the term SEMICONDUCTOR LIGHT MATRIX as used on the specimen of record does not function as a trademark.

Decision: The refusals to register are affirmed.

²¹ December 9, 2010 Office action.