

**UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD**

LOWE'S COMPANIES, INC.,
LOWE'S HOME CENTERS, LLC AND L G SOURCING, INC.,
Petitioners

v.

NICHIA CORPORATION,
Patent Owner

U.S. Patent No. 9,490,411

**PETITION FOR INTER PARTES REVIEW OF
UNITED STATES PATENT NO. 9,490,411**

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	MANDATORY NOTICES (§ 42.8).....	4
III.	LEAD AND BACK-UP COUNSEL (37 C.F.R. § 42.8(B)(3)) AND SERVICE INFORMATION (37 C.F.R. § 42.8(b)(3)-(4))	6
IV.	STANDING (§ 42.104(a)).....	6
V.	GROUNDINGS (§§ 42.22 AND 42.104(b)).....	6
VI.	THE '411 PATENT	7
	A. Overview of '411.....	7
	B. '411 Prosecution History.....	10
VII.	DETAILED REASONS FOR RELIEF	11
	A. Claim Construction.....	11
	B. Level of Ordinary Skill	12
	C. Summary of Cited Prior Art.....	13
	1. U.S. Patent Publication No. 2008/0012036 (“Loh”)	13
	2. U.S. Patent Publication No. 2005/0211991 (“Mori”).....	16
	3. U.S. Patent Publication No. 2008/0073662 (“Wang”).....	18
	4. U.S. Patent Publication No. 2005/0280017 (“Oshio”).....	19
	D. Claims 1-3, 5-8, 13, 15, and 19-20 are unpatentable under §§ 102 and 103 over Loh (Grounds 1 and 2).....	21
	1. Invalidity of Claim 1 Over Loh	21
	2. Invalidity of Claim 2 Over Loh: “The light emitting device according to claim 1, wherein a portion of the resin part above the upper surface of the metal part is formed integrally with a portion of the resin part below the upper surface of the metal part”	33
	3. Invalidity of Claim 3 Over Loh: “The light emitting device according to claim 1, wherein the each of the at least two metal plates is substantially flat”	35

4.	Invalidity of Claim 5 Over Loh: “The light emitting device according to claim 1, wherein all upper edges of the metal part are coplanar”	37
5.	Invalidity of Claim 6 Over Loh: “The light emitting device according to claim 1, wherein a lower surface of the metal part is exposed from the resin part in a region directly under the light emitting element”	38
6.	Invalidity of Claim 7 Over Loh: “The light emitting device according to claim 1, wherein the resin part is made using a thermosetting resin”	39
7.	Invalidity of Claim 8 Over Loh: “The light emitting device according to claim 1, wherein the metal part has a step portion, a concave portion, and/or a convex portion”	39
8.	Invalidity of Claim 13 Over Loh: “The light emitting device according to claim 1, wherein the metal part comprises surfaces at two or more different levels”	41
9.	Invalidity of Claim 15 Over Loh: “The light emitting device according to claim 1, wherein at least a portion of the light emitting element is exposed from the resin part”	42
10.	Invalidity of Claim 19 Over Loh: “The light emitting device according to claim 1, wherein the resin part contains a light reflecting material”	43
11.	Invalidity of Claim 20 Over Loh: “The light emitting device according to claim 19, wherein the light reflecting material is titanium dioxide”	43
E.	Claim 10 is obvious under § 103 over Loh and Mori (Ground 3)	44
1.	Invalidity of Claim 10 Over Loh and Mori: “The light emitting device according to claim 1, wherein the light emitting device further comprises a sealing member that contains two or more kinds of phosphors”	44
2.	Motivation to Combine Loh and Mori	46
F.	Claims 16-18 are obvious under § 103 over Loh and Wang (Ground 4), and, alternatively, Loh, Wang and Oshio (Ground 5)	47

1.	Invalidity of Claim 16 Over Loh and Wang, and, alternatively, Loh, Wang and Oshio: “The light emitting device according to claim 1, wherein the metal part includes a base portion and a metal layer disposed on each of an upper surface and a lower surface of the base portion, the metal layers being made of a material that is different from that of the base portion”	47
2.	Invalidity of Claim 17 Over Loh and Wang, and, alternatively, Loh, Wang and Oshio: “The light emitting device according to claim 16, wherein the metal layer is disposed at all surfaces of the metal part except a portion of an outer lateral surface of the metal part”	50
3.	Invalidity of Claim 18 Over Loh and Wang, and, alternatively, Loh, Wang and Oshio: “The light emitting device according to claim 16, wherein: the resin part is disposed over a first portion of the metal layer at the upper surface of the metal part, and a second portion of the metal layer at the upper surface of the metal part is exposed from the resin part”	53
4.	Motivation to Combine Loh and Wang	57
5.	Motivation to Combine Loh, Wang and Oshio	62
G.	No Secondary Considerations of Nonobviousness	66
VIII.	CONCLUSION.....	68

TABLE OF AUTHORITIES

	Page(s)
Federal Cases	
<i>Agrizap, Inc. v. Woodstream Corp.</i> , 520 F.3d 1337 (Fed. Cir. 2008)	66
<i>Amneal Pharms., LLC v. Supernus Pharms., Inc.</i> , IPR2013-00368, Paper 8 (PTAB Dec. 17, 2013)	67
<i>Blue Coat Sys, Inc. v. Finjan, Inc.</i> , IPR2016-00480, Paper 9 (PTAB Jun. 24, 2016)	1
<i>ClassCo, Inc. v. Apple, Inc.</i> , 838 F.3d 1214 (Fed. Cir. 2016)	67
<i>Dell, Inc. v. Network-1 Sec. Sols., Inc.</i> , IPR2013-00385, Paper 17 (PTAB July 29, 2013)	1
<i>Koios Pharms. LLC v. Medac Gesellschaft Für Klinische Spezialpräparate, MBH</i> , IPR2016-01370, Paper 13 (PTAB Feb. 8, 2017).....	67
<i>KSR Int’l Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007).....	61, 66
<i>Merck & Cie v. Gnosis S.P.A.</i> , 808 F.3d 829 (Fed. Cir. 2015)	68
<i>Newell Cos. v. Kenney Mfg. Co.</i> , 864 F.2d 757 (Fed. Cir. 1988)	68
<i>Petroleum Geo-Services Inc. v. WesternGeo LLC</i> , IPR2014-01477, Paper 18 (PTAB Mar. 17, 2015)	67
<i>ServiceNow, Inc. v. BMC Software, Inc.</i> , IPR2015-01176, Paper 10 (PTAB Nov. 16, 2015).....	67
<i>Vibrant Media, Inc. v. Gen. Elec. Co.</i> , IPR2013-00170, Paper 14 (PTAB Jul. 29, 2013).....	12

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.