

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TCL MULTIMEDIA TECHNOLOGY HOLDINGS, LTD. and
TTE TECHNOLOGY, INC.,
Petitioners

v.

NICHIA CORP.,
Patent Owner

U.S. Patent No. 7,915,631

“Light Emitting Device and Display”

Inter Partes Review No. 2017-02000

**PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 7,915,631
UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. §§ 42.100 *et seq.***

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. OVERVIEW OF THE ‘631 PATENT	4
III. OVERVIEW OF THE <i>EVERLIGHT</i> LITIGATION.....	7
IV. PERSON OF ORDINARY SKILL IN THE ART	8
V. CLAIM CONSTRUCTION	8
A. “transparent material”	9
B. “diffuses”	10
VI. STATEMENT OF RELIEF REQUESTED FOR EACH CHALLENGED CLAIM	11
A. Identification of Challenge (37 C.F.R. §§ 42.104(b)).....	11
VII. GROUNDS OF CHALLENGE (37 C.F.R. § 42.204(b)(2)).....	11
VIII. TECHNOLOGY BACKGROUND.....	12
A. Principles of Color Mixing.....	12
B. Phosphors Are Commonly Used to Create White And Different Light Colors.....	13
C. In 1996, YAG Phosphors Were Well Known For Converting Blue Emissions To Yellow In Lighting Products, Especially Under Harsh Operating Conditions.....	14
D. Emergence of Commercially Viable Blue LEDs.....	15
E. The Blue Plus Yellow Approach to Making a White LED was a Natural And Obvious Progression	16
IX. SUMMARY OF THE CITED PRIOR ART	17
A. Baretz.....	18
B. Shimizu.....	18
C. Matoba.....	20
D. Pinnow	20
E. The 1995 Nakamura Reference.....	21

X.	IDENTIFICATION OF HOW THE CHALLENGED CLAIMS ARE UNPATENTABLE.....	22
A.	Ground 1: Baretz, Shimizu and Matoba Render Claims 1-2, 6, and 10-11 Obvious	22
1.	Independent Claim 1	23
(a)	Baretz Discloses 1.Pre.	23
(b)	Baretz Discloses 1a.....	24
(c)	Baretz Discloses 1b	25
(d)	Baretz and Shimizu Disclose 1c	26
(i)	Baretz.....	26
(ii)	Shimizu.....	29
(iii)	Motivation to combine Baretz and Shimizu	31
(e)	Baretz Discloses 1d	31
(f)	Matoba Discloses 1e	31
(g)	Baretz Discloses 1f	32
(h)	A POSITA Would have Been Motivated TO Combine Baretz, Shamizu and Matoba And Had A reasonable Expectation of Success In So Doing	34
2.	Baretz Discloses Claim 2	37
3.	Baretz Discloses Claim 6	37
4.	Baretz Discloses Claim 10	38
5.	Baretz Discloses Claim 11	38
B.	Ground 2: Baretz, Shimizu, Matoba, and Pinnow Render Claims 4 and 7-8 Obvious	39
1.	Baretz, Shimizu, and Pinnow Disclose Claim 3	40
(a)	Baretz discloses an LED chip that emits light having a spectrum with a peak in the range from 420 to 490 nm.	41
(b)	Pinnow discloses a phosphor with the claimed “peak” wavelength and “tail.”	41
(c)	Shimizu discloses that the spectrum of the light emitted from the phosphor and the spectrum of the	

	light emitted from the LED chip overlap with each other to make a continuous combined spectrum (single color).....	42
	(d) A POSITA Would Have Been Motivated To Combine Baretz, Shimizu, Matoba and Pinnow And Had A Reasonable Expectation Of Success In So Doing	43
	(e) Pinnow Discloses Claim 4	50
2.	Pinnow Discloses Claim 7	51
3.	Pinnow Discloses Claim 8	52
C.	Ground 3: Baretz, Shimizu, Matoba, and Nakamura Render Claim 9 Obvious.....	52
1.	Nakamura Discloses Claim 9	52
2.	A POSITA Would Have Been Motivated To Combine Baretz, Shimizu, Matoba, and Nakamura And Had a Reasonable Expectation of Success	53
D.	Ground 4: Matoba, Shimizu and Pinnow Render Claims 1, 4, 6-8, and 10-11 Obvious	55
1.	Independent Claim 1	56
	(a) Matoba Discloses 1.Pre.	56
	(b) Matoba Discloses 1a.....	57
	(c) Matoba Discloses 1b.....	57
	(d) Matoba, Shimizu and Pinnow Disclose 1c.....	58
	(i) <i>Matoba discloses the claimed phosphor, absorbing LED light, and emitting light of a different wavelength</i>	58
	(ii) <i>Shimizu discloses absorbing a “part” of the LED light.</i>	60
	(iii) <i>Pinnow discloses absorbing a “part” of the blue emission from the light source.</i>	60
	(iv) <i>A POSITA would have been motivated to combine Matoba, Shimizu and Pinnow with A reasonable expectation of success</i>	61

(e)	Shimizu Discloses 1d.....	67
(f)	Matoba Discloses 1e.....	68
(g)	Matoba Discloses 1f.....	68
2.	Matoba, Shimizu, and Pinnow Disclose Claim 4.....	71
(a)	Matoba, Shimizu, and Pinnow Disclose Claim 3.....	71
(b)	Pinnow Discloses Claim 4.....	72
3.	Shimizu Discloses Claim 6.....	72
4.	Pinnow Discloses Claim 7.....	72
5.	Pinnow Discloses Claim 8.....	72
6.	Shimizu Discloses Claim 10.....	72
7.	Matoba Discloses Claim 11.....	73
XI.	MANDATORY NOTICES.....	73
A.	Real Party-in-Interest (37 C.F.R. § 42.8(b)(1)).....	73
B.	Related Matters (37 C.F.R. § 42.8(b)(2)).....	74
1.	Related Patent Office Proceedings.....	74
2.	Related Litigation.....	74
C.	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)).....	74
D.	Payment of Fees (37 C.F.R. § 42.15(a)).....	75
XII.	REQUIREMENTS FOR INTER PARTES REVIEW (37 C.F.R §§ 42.101, 42.104, and 42.108).....	75
A.	Grounds for Standing (37 C.F.R. § 42.104(a); 37 C.F.R. §§ 42.101(a)-(c)).....	75
XIII.	CONCLUSION.....	75

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.