

豊田合成株式会社は、欧州 3 社 (Tridonic Jennersdorf GmbH [オーストリア]、Leuchtstoffwerk Breitung GmbH [ドイツ]、Litec GbR [ドイツ]) と共に青色 LED と新規黄色蛍光体 (珪酸塩系蛍光体) により白色光を構成する基本となる特許 (以下、「白色 LED 特許」) を多数の国に出願し、現在、オーストリア、欧州、日本、米国、韓国、台湾、中国、ロシア、マレーシア及びインドで特許権を保有しております。(白色 LED 特許一覧は、別紙参照)

また、下記企業に白色 LED 特許をライセンスしております<sup>1)、2)</sup>

国名	ライセンシー
日本	株式会社光波
	サンケン電気株式会社
	シャープ株式会社
	株式会社 HRD
	コーデンシ株式会社
	株式会社 トリコン
韓国	Dongbu LED Co., Ltd.
	LG Innotek Co., Ltd.
	Allix Co., Ltd.
	WOOREE E&L Co., Ltd.
	GLBTECH Co., Ltd.
台湾	Everlight Electronics Co., Ltd.
	Lextar Electronics Corp.
	Prolight Opto Technology Corporation
	Lite-On Technology Corporation
	Harvatek Corporation
	High-Toned Opto Technology Corporation.

国名	ライセンシー
中国	Zhejiang Ledison Optoelectronics Co., Ltd.
	Shenzhen Refond Optoelectronics Co., Ltd.
	Shenzhen Jufei Optoelectronics Co., Ltd.
	Shineon (Nanchang) Technology Co., Ltd.
	Suzhou Hexin Clean Electric Appliance Co., Ltd.
	Foshan Nationstar Optoelectronics Co., Ltd.
	Shenzhen Minghua Optoelectronics Co., Ltd.
	Shenzhen Suijing Optoelectronics Co., Ltd.
	Anhui Coreach Electronic Technology Co., Ltd.
	Jiangxi MTC Lighting Co., Ltd.
	Zhuhai HongGuang Semiconductor Co., Ltd.
	Hubei Sanxia Yifeng Optoelectronic Technology Co., Ltd.
	APT Electronics Co., Ltd.
	Henan Insoar Semiconductor Lighting Technology Co., Ltd.
	GMA Optoelectronic Technology Co., Ltd.
	Xuyu Optoelectronics (Shenzhen) Co., Ltd.
	GYX Optoelectronics Co., Ltd.
	Shenzhen Zhengdongming Opto-Electronics Co., Ltd.
	Guangzhou Hongli Display Electronics Co., Ltd.
	Shenzhen Shixinsheng Optoelectronics Co., Ltd.
	Shenzhen Teleserv Technology Co., Ltd.
Dongguan Ledstar Opto-electronic Technology Co., Ltd.	
Hua Tian MIC Optoelectronics Technology Co., Ltd.	
ShenZhen Jiakun Photoelectric Co., Ltd.	

現時点で、当社は、下記中国企業と B.O.S.E. 蛍光体特許に関してライセンス契約を締結し、B.O.S.E. 蛍光体の「認定サプライヤー」として認定しております<sup>1)、2)</sup>

国名	ライセンシー
中国	Jiangsu Bree Optronics Co. Ltd.

#### 注意事項

- 1) 上記企業以外にも、非開示のライセンシーが存在します
- 2) 本特許ライセンス先の開示は、当社が保有する GaN 系半導体に関する特許のライセンス先を示すものではありません。

## Licensee List for White LED Patents

July 19th, 2021

Toyoda Gosei Co., Ltd., together with Tridonic Jennersdorf GmbH (Austria), Leuchtstoffwerk Breitung GmbH (Germany), and Litec GbR (Germany), has filed joint applications for basic patents relating to a technology for forming white light using blue LEDs and new yellow (silicate) phosphors (hereinafter, "White LED Patents"). Patent rights have been granted in the Austria, Europe, Japan, U.S.A., Korea, Taiwan, China, Russia, Malaysia, and India. (Please see attached for list of granted White LED Patents).

Further, White LED Patents have been licensed to the following companies [see notes 1 and 2]

Country	Licensee
Japan	Koha Co., Ltd
	Sanken Electric Co., Ltd.
	Sharp Corporation
	HRD Co., Ltd
	Kodenshi Corp.
	Toricon Co., Ltd.
Korea	Dongbu LED Co., Ltd.
	LG Innotek Co., Ltd.
	Allix Co., Ltd.
	WOOREE E&L Co., Ltd.
	GLBTECH Co., Ltd.
Taiwan	Everlight Electronics Co., Ltd.
	Lextar Electronics Corp.
	Prolight Opto Technology Corporation
	Lite-On Technology Corporation
	Harvatek Corporation
	High-Toned Opto Technology Corporation

Country	Licensee
China	Zhejiang Ledison Optoelectronics Co., Ltd.
	Shenzhen Refond Optoelectronics Co., Ltd.
	Shenzhen Jufei Optoelectronics Co., Ltd.
	Shineon (Nanchang) Technology Co., Ltd.
	Suzhou Hexin Clean Electric Appliance Co., Ltd.
	Foshan Nationstar Optoelectronics Co., Ltd.
	Shenzhen Minghua Optoelectronics Co., Ltd.
	Shenzhen Suijing Optoelectronics Co., Ltd.
	Anhui Coreach Electronic Technology Co., Ltd.
	Jiangxi MTC Lighting Co., Ltd.
	Zhuhai HongGuang Semiconductor Co., Ltd.
	Hubei Sanxia Yifeng Optoelectronic Technology Co., Ltd.
	APT Electronics Co., Ltd.
	Henan Insoar Semiconductor Lighting Technology Co., Ltd.
	GMA Optoelectronic Technology Co., Ltd.
	Xuyu Optoelectronics (Shenzhen) Co., Ltd.
	GYX Optoelectronics Co., Ltd.
	Shenzhen Zhengdongming Opto-Electronics Co., Ltd.
	Guangzhou Hongli Display Electronics Co., Ltd.
	Shenzhen Shixinsheng Optoelectronics Co., Ltd.
	Shenzhen Teleserv Technology Co., Ltd.
Dongguan Ledstar Opto-electronic Technology Co., Ltd.	
Hua Tian MIC Optoelectronics Technology Co., Ltd.	
ShenZhen Jiakun Photoelectric Co., Ltd.	

As of the date above, Toyoda Gosei Co., Ltd. has entered into a license agreement regarding B.O.S.E. Phosphor patents with the following Chinese company, who have been granted the status of "Qualified Supplier" of B.O.S.E. Phosphors [see notes 1 and 2]

Country	Licensee
China	Jiangsu Bree Optronics Co. Ltd.

#### Notes

- 1) There exist licensees who are not disclosed in the list above
- 2) The list above is not a list of licensees for other patents held by TG, such as patents pertaining to LED chips or LED package design.

# White LED Patent List (Patented only)

Nov 6, 2013

Country	Application No.	Publication No.	
		Examined No.	Patent No.
Austria	AT A2154/2000	---	AT410266
Japan	JP2002-0554890	---	JP4048116
	JP2007-023598	---	JP4783306
	JP2002-554891	---	JP4045189
	JP2006-222051	---	JP4583348
USA	US10/250,435	---	US6809347
	US10/974,420	---	US7187011
	US11/499,589	---	US7259396
	US10/451,864	---	US6943380
	US10/952,937	---	US7157746
	US11/087,579	---	US7138660
	US11/606,170	---	US7679101
Europe	EP01027255.1	---	EP1352431
	EP10152099.7	---	EP2211392B1
	EP11155555.3	---	EP2357678B1
Russia	RU2003123094	---	RU2251761
China	CN01821467.3	CN1268009C	ZL01821467.3
	CN200510086006.6	CN1763982	ZL200510086006.6
	CN01820768.5	CN1291503C	ZL01820768.5
	CN200610142476.4	CN1941441	ZL200610142476.4
Korea	KR10-2003-7007442	---	KR10-0715580
	KR10-2005-7016223	---	KR10-0715579
	KR10-2003-7008704	---	KR10-0532638B
	KR10-2006-7027091	---	KR10-0849766
	KR10-2007-7027069	---	KR10-0867788
India	IN00862/DELNP/2003	---	IN222401B
Malaysia	MY PI20032394	---	MY139538
Taiwan	TW90130309	---	TW I297723B
	TW90132753	TW533604	TW I177666B