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# LEXTAR 2018 ANNUAL REPORT

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# Message to our Shareholders

With slow growth of global economy in 2018, plus the impact of China-US trade war, the investors and consumers tended to be more conservative. However, in terms of the mainstream development trend of new technologies in the future, such as: Internet of Things (IoT), Artificial Intelligence (AI), Advanced Driver Assistance System (ADAS), 5G expected to realize smart connection of things, AR/VR providing immersive experience, and revolutionary display technologies, these new technologies will show overturning influence on human life continuously. Therefore, the optoelectronic semiconductor applications will be further extended by “sensing”, “display monitor” and “5G communication”. Looking back at the LED industry, the high capacity of the LED chip plants in China brought price stress, while the globally large plants focused on the development of advanced parts and integrated products, which built the technical barriers. With the history of 11 years since its establishment, Lextar Electronics insists on the operation model of integrating optoelectronic semiconductor vertically, and focuses on the chip, package, and integrated optoelectronic module, which has revived in the market of new applications. While optimizing the backlight and lighting application market continuously, Lextar also actively strengthens the deployment in the new technical fields such as automotive lighting, sensing, Mini/Micro LED and UV, which even steps from Blu-ray to red-ray technology to provide the customer with “light” solution. In terms of the production management over the past year, we quickly completed the difficult task to put the plant in Chuzhou, China into mass production, integrated the production sites, optimized the supply chain management and improved the operation efficiency. Under the efforts of all employees, Lextar achieved the stable development, adjusted the structure and maintained the profitability in 2018:

- The consolidated revenue in 2018 was NT\$11.06 billion, dropping by 8.2% comparing with that in the previous year.
- Net after-tax profit was NT\$49 million.
- The after-tax EPS was NT\$0.1
- ROE was 0.43 %

Reviewing the market of the main applications in 2018, the Mini LED developed by Lextar for a long time was commercialized successfully. The backlight application was shipped earlier than the competitors, which took the leading position in the market, and was applied in the advanced notebooks and gaming monitor. At the meantime, it also publically released the UFP I-Mini RGB display module and the Micro LED technology, so Lextar took up a critical place in Mini / Micro LED field. Besides, the key products of backlight application also include the backlight products of High Dynamic Range (HDR), Wide Color Gamut (WCG) and super narrow border panel. As the market showed diversified demands for the display monitor, Lextar was actively engaged in the market of Fine Pitch RGB Display, which could be applied in the market of shopping malls, conference halls and game machines. With the improvement of capability in manufacturing red-ray chips, Lextar would strengthen the advantages of core technologies in terms of LED chip, package, drive circuit and module design.

In the market of lighting application, with the price decline in the consumer lighting market, Lextar greatly adjusted the lighting products in 2018, reduced the manufacturing of lighting products, and focused on the development of medium and high-power parts and the design and manufacturing of photoelectric module. Moreover, it continuously promoted the high CRI LED technology and the RGBWW packaging products applied in landscape and plant lighting. Besides, we also developed the special lighting modules: including the applications of medical lighting, building lighting, stage lighting and industrial lighting, and provided the customized photoelectric design service for the customer, so as to bring value added for the products.

Lextar Electronics actively deployed in the automotive lighting, 3D sensing component, UV and the products in other new application fields in 2018. In the part of automotive lighting, the chips applied in the head light were shipped successfully; and package and module products were sold to the first-class electric motorcycle brand in Taiwan, the famous heavy motorcycle and the head light of the train in Europe, and the market of head light parts in Japan. At the meantime, Lextar took the lead in releasing the I-Mini Square tail light module and ADB smart head light system. In addition, we also made some achievements in the 3D sensing application and the development of VCSEL component, which were introduced in the big mobile phone plants successfully in 2018, and could be applied in 3D facial recognition and AR/VR. The IR LED products were also shipped to a globally-renowned sport bracelet brand. Besides, the UV products were also widely applied in the markets of UV curing, medical care and sterilization.

In the past, Lextar constantly invested into the development of new technologies, new processes and new products, strengthened the key technologies and intensified the layout of patents. More than 2,100 patents in total have been obtained globally (including the cases approved and pending). With the R&D fund reaching NT\$ 660 million, the technology achievements have been recognized by important customer globally.

In 2018, Lextar Electronics achieved the key development achievements as listed below:

- Completed the construction of Chuzhou Plant in Anhui Province, passed the ISO certification and put into mass production successfully
- Released the Micro / Mini LED products and technologies, and took the leading position in the industry
- Applied Mini LED in the backlight module and became the first one for shipment
- Released two Micro LED technologies, namely, R/G/B and color conversion type
- Applied I-Mini LED products in the automotive tail light, and promoted the concept of individualized tail light.

- Released ADB smart head light system
- Released VCSEL package and module products of 3D sensing application, and shipped to a famous mobile phone brand smoothly
- Took the lead in the industry to release RGBWW lighting application package applicable to landscape and plant lighting.
- Shipped IR LED products to a globally renowned smart doorbell brand, and surveillance & control application.
- Shipped Vertical Flip Chip (VFC) products applicable to automotive light.

Aside from development of product technologies, Lextar also kept repaying the society. Through the three activities of “Reading Helps Dream Come True”, “Hope Reading” and “LED Magic Camp”, Lextar constantly shows care for the education of the schoolchildren in the rural areas. The program of “Reading Helps Dream Come True” has been implemented for six years consecutively, which renovated the library for Hsinchu Emei elementary school in 2018. It allowed the children to love reading in the bright library. In the 10th anniversary in the last year, we received the painting greetings from the elementary schoolchildren of Xinle village, Meihua village, Jinping village and Emei village. Also we invited them together with the principals, to participate in the 10th anniversary celebration activities. Lextar employees were immersed in the beautiful songs and aboriginal dances performed by these children. These activities further enhanced the bond between us and the schools and even the schoolchildren.

In the prospect of 2019, under the uncertainty of China-US trade war, and the stress of market competition due to the capacity expansion of China's LED plants, Lextar Electronics as the provider of photoelectric semiconductor solution, is dedicated to the integration of photo, mechanical, electric and thermal technologies and the product innovation. Besides maintaining the backlight and lighting application market with technical strength, it will be also dedicated to the development of automotive, sensing and RGB display products. Besides, it will continuously optimize the production efficiency, increase the capacity and yield rate of the new plant in Chuzhou, invest in smart manufacturing, and improve the self-manufacturing rate of SMT parts. Lextar Electronics will be continuously dedicated to the product development and design service of the semiconductor technologies to maintain the industrial place, which will also take advantage of vertical integration to realize the corporate vision of “Smart Innovation, Amazing Life”.

Sincerely,

David Su, Chairman and CEO

# Overview of Operations

## (A) Business scope

### (1) Major businesses

- InGaN Epi Wafer & Chips
- AlGaAs Epi Wafer & Chips
- AllnGaP Chips
- LED Package & Module
- LED lights, parts and applications

Systems and parts of the above products, with the main application scope as below:

- LCD backlight source industry
- Lighting industry
- Automotive lighting industry
- Sensing industry
- Invisible light industry
- RGB display industry

### (2) Major businesses and operation percentages in 2018

Unit: NT\$ thousand; %

Business	Revenue	Operation percentage
Backlight application products	7,921,930	71.66
Lighting application products	3,133,293	28.34
Total	11,055,223	100.00

### (3) Current products

The major products of the company and its subsidiaries are

- LED blue and green light chips
- LED UV chips
- LED red and yellow light chips
- Package parts and modules of backlight products
- Package parts, modules and finished products of lighting products
- Chips, package parts, modules and finished products of automotive lighting products
- Package parts and modules of invisible light (UV/IR) products
- Chips and package of Vertical-Cavity Surface-Emitting Laser (VCSEL)
- Modules of RGB display products

Development, production, manufacturing and sales of above products

### (4) New products to be developed in the future

The company and its subsidiaries plan to develop the new products based on the market demands, which are classified into six main categories:

#### 1. Backlight source products

- 1) Develop light source with high color saturation for the LED backlight module
- 2) Develop light source with high light efficiency for the LED backlight module
- 3) Develop wide color gamut applicable light source for the LED backlight module
- 4) Develop CSP light source for the LED backlight module

- 5) Develop local dimming light source for the LED backlight module
  - 6) Develop Blu-ray model type light source for the LED backlight module
  - 7) Develop ultrathin light source for the LED backlight module
  - 8) Develop LED new technology of Mini LED backlight
2. Professional lighting application products
    - 1) Develop colorful LED package parts for professional lighting application with high light efficiency, high CRI, anti-sulfuration feature
    - 2) Develop highly-flexible and highly-customized lighting modules applicable to professional lighting application
  3. Automotive light source products
    - 1) Develop quality automotive LED chips
    - 2) Develop quality automotive package parts
    - 3) Develop quality automotive LED light bar modules
  4. Sensing light source application products
    - 1) Develop sensing LED chips
    - 2) Develop sensing LED package parts
    - 3) Develop sensing LED modules
  5. Invisible light application products
    - 1) Develop IR/FIR LED package parts
    - 2) Develop biometric LED components and modules
    - 3) Develop UV LED chips, package parts and modular products applicable to curing
    - 4) Develop UV LED chips, package parts and modular products applicable to sterilization
  6. RGB display application products
    - 1) Develop new LED technologies for the small pitch and Mini LED display requirements
    - 2) Develop new LED technologies of ultrathin display light source applicable to the handheld electronic devices
    - 3) Develop new LED technologies for the Micro LED display requirements

## (B) Industrial overview

### (1) Current situation and development of the industry

With the development history of more than 30 years, Taiwan's LED industry has constructed complete value chain, and plays the role as a critical supplier in the global LED industry. With the features of small size, long life span, low driving voltage, power saving, and resistance to vibration, LED gradually substitutes the backlight sources such as CCFL and LCD.

Since NB changed to use the LED backlight source instead of CCFL in 2007, the relevant products such as the TV, display and other medium and small-sized products have turned to use LED successfully, which resulted in explosive growth of LED demands. After that, the LED advantages were expanded to the general lighting fields, such as the house lighting, outdoors lighting, industrial lighting and entertainment lighting. With fast expansion, the LED industry became a star industry that drew attention from the mass public.

However, in recent years, China's LED industry has benefited from the government subsidies to achieve rapid expansion of capacity, resulting in a significant increase in the supply of Blu-ray LED, which in turn led to price competition among competitors. As the current market is getting saturated, the LED industry tends to develop towards the applications with high value-added, including the automotive market (interior and exterior automotive light, interior automotive display, automotive sensing and automotive LIDAR), the advanced backlight and display market (gaming monitor, advanced drawing screen and small pitch RGB display), UV curing and sterilization products, IR products (security surveillance, biometrics,

and digital medical care) and 2D/3D sensing parts (facial, iris and environmental detection). Besides, the specifications of Blu-ray LED backlight products are continuously improved in response to the needs of the consumer market. The development has developed towards thin, light and small products with high dynamic contrast and high response speed, which gives the rise to Mini LED and Micro LED concepts.

The Mini LED application can be divided into backlight source and RGB display. Featured by high brightness and high contrast in the display effect, it is comparable to OLED display. Therefore, in this stage, it has been introduced in the high-end markets with high requirements for the visual effect such as commercial display and home theater. As shown in the research conducted by TrendForce, a global market intelligence provider, Mini LED will enter the high-speed development stage from 2019 to 2020 after the mature development in 2018.

In the future, Micro LED will be applied in high-end markets, which will become the mainstream of high-end TV and display application products. It is highly expected by the market due to its wide range of applications, including mobile phones, wearable devices, automotive displays, VR, TV, and commercial billboards. However, Micro LED currently encountered with six bottlenecks including small-size chip production, massive transfer, full color, power supply driven, backplane, inspection and repair technology. Plus the production yield rate and high cost, it is still far from mass production. Despite the strong market development potential, it still needs to break through the development obstacles one by one.

As shown by LEDinside's research, with the rising of Micro LED and Mini LED, LED changes to emit light by itself instead of backlight in the past. In the future, each LED on the display will become a pixel point, which will greatly increase the amount of LED chips in use. The breakthrough of technical bottlenecks will reduce the cost, which will make significant contribution to the overall LED output. As estimated by LEDinside, the output of Mini LED and Micro LED will reach US\$1.38 billion in 2022, which will further increase to US\$2.891 billion in 2025.

Besides the Blu-ray LED applications, the industrial focus is recently changed to IR sensing application, automotive panel and UV LED. In terms of the IR sensing application, after iPhone brings the trend of 3D facial recognition, other mobile phone manufacturers introduce such technology, which quickly expands the market demands for 2D and 3D sensing. Aside from the handheld device, the target markets for the development of 2D and 3D sensing also include the biometrics, in-vehicle sensing, drone, unmanned vehicles, and distance sensor. Moreover, the IR sensing market also covers the scope of such applications as security surveillance, digital medical monitoring (heartbeat, blood oxygen, blood glucose sensing...), spectral sensing, etc. As stated by LEDinside, the market scale of IR LED and IR laser will reach US\$2.143 billion in 2020.

The automotive LED market is divided into Original Equipment (OE) and Aftermarket (AM), and the applications could be distinguished into exterior lighting, interior lighting and automotive panel. The exterior lighting includes head light, tail light, fog light, direction light, daytime running lights, and positioning lights. The interior lighting includes the interior light and the mood light.

In the Original Equipment (OE), the new head light doesn't merely adopt the single light, but use LED lights arranged in array, so as to create more advanced visual effect for the automobile. With the LED array and the sensing and computing device, it could dynamically and proactively control the light brightness and change the illumination angle, which further improves the driving safety. As estimated by LEDinside, the head light and fog light will achieve the strongest growth in 2019.

In the part of Aftermarket (AM), with the increase in the number of registered automobiles, the after-sale parts of automotive light are growing accordingly. In the market of automotive light repair, it follows the principle of reasonable price and easy replacement. Thus, if the product is designed like the traditional light source in terms of the appearance, dimension and connector, it will stimulate the intention of both parties to replace the LED head light.

From the perspective of power, the high-power automotive LED was mostly used in the head light of high-class automobiles. However, with the improvement of technology and the cost down in nowadays, the exterior LED lighting will be gradually expanded to the market of middle-class automobiles, in which the low/high beam market achieved the strongest strength. As estimated by LEDinside, the output in the

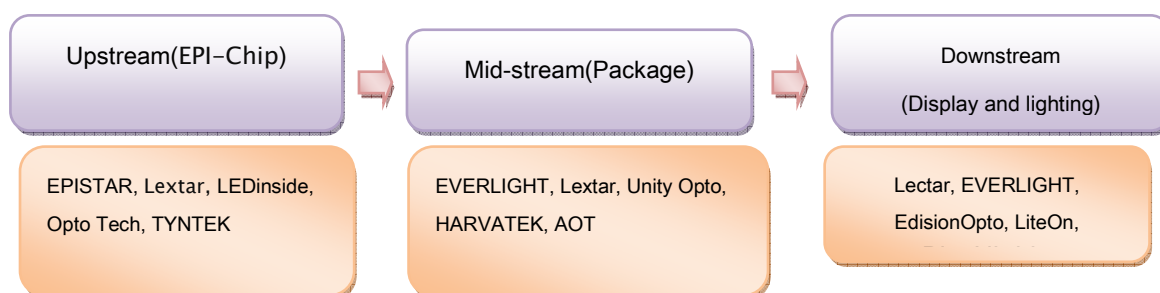
market of low/high beam market will reach US\$1.462 billion in 2020.

The automotive panel includes the head-up display, the central control panel, the instrument panel and the entertainment panel. As shown by the research of LEDinside, the output in the market of automotive LED panel will grow to US\$87 million in 2020. The percent of the global new vehicles equipped with LED panel will grow over 18% in 2020.

As for the market of UV LED application, with the advantages of small size, long endurance, uniform illumination and power saving, especially after the mercury was banded by the international environmental protection issues in 2013, the UV LED is replacing the traditional UV lamps more quickly. Based on different wave lengths, UV LED can be divided into UVA, UVB, and UVC, with UVA LED and UVC LED as the mainstream of the current development. The UVA application is mainly about curing and UV exposure, which will achieve stable growth. The growth driving force in the next five years will be from UVC. UVC can be applied in the fields like surface sterilization, sterilization in static water and sterilization in dynamic water. In terms of the static water and surface sterilization (air purification and home appliance), it has covered a wide range of applications in the market due to low requirements for the product power. In the part of sterilization in flowing water, it mainly includes two markets of drinking water and water purifier. As it needs to sterilize in a short time, it shows relatively high requirements for the product power, which currently takes the household water purifier as the main development direction. As shown by the research report of LEDinside, it is estimated that the output in the UV LED market will reach US\$1.224 billion, with the component growth rate of 33% during 2017–2022.

(2) Correlation of industrial upstream, mid-stream and downstream

With the history of 30 years in the LED industry in Taiwan, the entire industry can be divided into the upstream for manufacturing of EPI-Chip, the mid-stream for manufacturing of module and package, and the downstream for application products. The development is initially started from mid-stream, and expanded to downstream and upstream gradually.



Source: sorted by Lextar

The responsibilities of LED upstream, mid-stream and downstream are introduced as below:

Industry	Product	Process Description
Upstream (Epitaxy)	Single wafer EPI wafer	Single-layer or multi-layer wafer grows on the single wafer substrate. Through chemical combination, it forms the EPI wafer accumulated by multiple chemical elements.
Upstream (Chip)	Chip	EPI chip goes through metal evaporation to make the metal electrodes on both ends of LED. After that, conduct photo mask etching and thermal treatment on the EPI wafer. Finally, perform thinning and polishing on the substrate, and then cut and chip it into LED chips.
Mid-stream (Package)	Package	The mid-stream is mainly engaged in package business. The process includes die bonding, wire bonding, dicing or press molding, testing and packaging. Currently, the chip packages based on different package technologies include lamp, digital display, dot array, surface mount, and so on.
Downstream	Backlight	The downstream applications are mainly backlight modules and lighting



Industry	Product	Process Description
(Display and lighting)	module Display Lighting products	products. There are more than 200 lighting product assembly manufacturers in Taiwan.

(3) Product development trends

A. Backlight product development trend

- It enters the consumer electronics products such as the backlight keys of mobile phone since 2000.
- LED backlight is integrated in the laptop products since 2007.
- The large-scale backlight application becomes popular since 2009, and the demands for high-brightness white light keep growing.
- With the increasing requirements for backlight performance of the panel, the high-power LED product development has become the trend of LED backlight products.
- For the high color saturation and high dynamic contrast requirements of panel, it will develop the products of higher specification and higher performance.
- For the requirements of more advanced LED backlight products, such as the automotive panel, the gaming laptop and display, the advanced drawing display and the medical product applications, it will develop the LED backlight products with higher dynamic contrast, wider color gamut and high response speed, which can be distinguished into areas for control.
- It will develop the new generation of Mini LED backlight products, which will be arranged in a array in the backlight module. It will also emphasizes on high contrast, ultrahigh brightness and local trimming to realize the advantages such as HDR.

B. Various developments of lighting products

For the development of lighting products, they can be mainly classified into general lighting, commercial lighting, special lighting, and outdoor/architecture lighting based on different application.

- General lighting: It includes lamp, bulb, PAR light and other changeable lights, which is mainly used in households.
- Commercial lighting: It includes batten light and high bay light, which are mainly used in the office, plant or store for showcasing products. For commercial customers, the lighting requirements are mainly the overall lighting efficiency, power-saving effect, color rendering and light pattern.
- Special lighting: The main application scope includes the plant lighting, stage lighting, outdoor sport lighting, and so on.
- Outdoor/architecture lighting: It includes the road light, courtyard light, stadium light and lights for other special application. The major requirements are water-proof, high brightness and long life span. The architecture lighting is relatively diverse, which is mainly used on architectures and bridges at night. Besides the basic outdoor requirements for water-proof and life span, it also needs colorful lights to enrich the scene.

C. Various developments of automotive lighting products

As for the development of automotive lighting products, the application scope is mainly divided into the automotive interior light, the exterior signal lights, the head lights and the smart head lights.

- Interior light: It includes the interior light, the mood light and the interior indicators, which are mainly used by the personnel inside the vehicle.
- Exterior signal lights: It includes the day running light, direction light, brake light and tail light. It mainly aims to provide exterior signals for the personnel out of the vehicle.
- Head lights: It includes the high/low beam light and fog light, which mainly provides exterior lighting for the personnel inside the vehicle.
- Smart head lights: It includes the LED head light set in array, the sensing parts and the light control module. Besides the exterior lighting, it can also detect the condition out of the vehicle, so as to adjust the brightness of the angle of the light.

D. Various development of sensing products

- It is applied in 2D iris recognition or facial recognition, which can be used on personal handheld devices, PC or security surveillance.
- 3D sensing recognition is the trend of the sensing products in the new generation, which can be applied more widely. The scope of IR application also covers the fields of biometric recognition (facial), safety surveillance, automotive LIDAR, UAV, drone, industrial robotic arm.

E. Various developments of invisible light products

- IR LED: Initially the application in the IR LED market was started from the security surveillance. Later with the prevalence of digital medical care, the IR LED products used to monitor the heartbeat and blood oxygen are integrated in the wearable devices such as smart watch and bracelet.
- UV LED: Initially the development of UV LED was mainly UVA LED curing. The product applications include the printing market, medical care facilities, beauty equipment, automotive coating and industrial exposure system. It has started to develop UVC LED sterilization products in recent years, which cover various applications for individuals, households and public facilities.

F. Development of RGB display

- Initially the RGB display was used in the outdoor billboard, which was mainly used for promotion information display and the billboard in the stadium and public commercial space.
- With the advancement of LED technology, the dimension and space between RGB LEDs are shortened. Then the RGB display turns to the interior application, which can be mainly divided into six categories, namely, broadcasting application (live hall), security surveillance, enterprise and education (conference room of company, classroom of school and training institution), retail (high-end retail, shopping centers), public space and transportation (airports, subways, plazas, etc.), hotels and theaters (including other cultural & recreational places).

(4) Competition situation

In recent years, the substantial increase in the capacity of LED results in the fierce competition of the market price. Under the industrial environment with fierce competition, LED manufacturers actively respond to it with the strategy of product transformation, so as to enter the niche market more quickly. In addition to improving the technology and quality of the original products, we are seeking a differentiated product combination with high value added, so as to get out of the price war. Besides, the LED industry will face a more complicated and changing situation in the future. Under the market of fierce competition, the mergers and acquisitions of the LED industry will be continued. The large ones will get larger and the weak ones will be out of the industry. The industrial order will be gradually stabilized.

(C) Overview of technology and development

(1) The annual development expense invested in the last five years

Unit: NT\$ thousand

Year	2014	2015	2016	2017	2018
Research and development expense	432,110	562,834	618,307	650,434	662,703

(2) The development technologies and products in the most recent year

A. Products developed in 2017

- Developed the third generation of WCG package products, which increased the color rendering ability of the panel, and can be applied in the new products such as game machine, and advanced display for gaming.
- Released the high-power direct-illumination backlight package products, which could reduce the usage of backlight LED and improve the energy-saving benefits.
- Released the new generation of CSP chip-level package technology, which was applied in the direct-lit/sided-lit backlight products.
- Released the direct-illumination curved LED LB, which could be applied in the new generation of curved TV.
- Released the new generation of slim package products, which could reduce the overall backlight thickness of the panel, and could be applied in the new products such as advanced TV, display and

notebook.

- Released the automotive package with high reliability, which was put into mass production and applied in the automotive panel products.
- Released the new generation of Blu-ray LED products integrated with QD technology, which could increase the color gamut of the panel.
- Released Solar White(CRI > 97) package and COB lighting parts, which could be applied in commercial lighting.
- Released induction light, which could regulate brightness or color temperature based on the environment to achieve energy-saving or human-factor lighting.
- Released medium and low-power package with the light efficiency >215LPW, which could be applied in interiors lighting applications.
- Released high-power integrated package with the light efficiency>160LPW, which could be applied in high-end projection light.
- Released automotive package with higher reliability, which can be applied in automotive display products.
- Released high-power automotive (Core series) package, which could provide alternative light source for headlight. The packages were also introduced in the Aftermarket, and the shipment of automotive components was expected to grow gradually.
- Released the second generation of dual optical lens LED automotive and motorcycle headlight module integrated with high/low beam light, which conformed to the EU and China's automotive standards.
- Developed the modular concept product of automotive laser headlight, which could be applied in the headlight of high-class automobiles.
- Released 1.4mm ultra-slim iris and face dual biometric recognition IR module, which is a rare IR module with dual biometric recognition capability in the industry. The full series products of IR biometric recognition were also listed in IEC 62471 exempt group, the highest level of human eye safety, which were applicable to the mobile phone, notebook, door access and security system.
- Released LED module for heartbeat rate detection, which was already applied in sports watch, stepping into the physiological detection application field successfully.
- Released UV products, which was massively applied in the nail beauty solidification, and penetrated in the top 5 nail beauty phototherapy unit brands in the US.

#### B. Products developed in 2018

- Developed the fourth generation of WCG package products, which increased the color rendering ability of the panel, and can be applied in the new products such as game machine, and advanced display for gaming.
- Released the new generation of slim package products, which could reduce the overall backlight thickness of the panel, and could be applied in the new products such as advanced TV, display and notebook.
- Released the new generation of Mini LED backlight products. The advanced thin backlight Mini LED light bar of this series could achieve high contrast, WCG and thin size, which could be applied in the advanced notebook, gaming display and automotive panel.
- Released the new generation of Mini LED RGB display products, which could be applied in the Mini RGB LED package of small pitch display.
- Released the next generation of Ultra Fine Pitch (UFP) I-Mini RGB display module, so as to realize the minimum space reaching 0.3mm, which was applicable to the indoor/outdoor billboard and theater.
- Released the latest Micro LED chips, with the size smaller than 20μm).
- Released a series of 3D sensing VCSEL package products. The ToF distance measurement method applied by the VCSEL parts has the advantages of fast scanning speed, fast distance and high performance, as well as the ambient light immunity, which can be applied in the applications such as gesture recognition, human detection, facial recognition and drive fatigue detection.

## C. Products to be developed in 2019

In 2019, we plan to invest the development expense about NT\$800 million in the development items as listed below:

Development item	Description	Progress	Time for mass production	Major factors to success
WCG package	Apply QD phosphor technology to further increase the color rendering ability of the panel	In development	2019	Optical design ability Product reliability
CSP	Extend CSP technology of backlight products, and further meet the requirements of the next generation of direct-illumination wide color CSP LED	In development	2019	Optical design ability Process stability and high yield rate
Ultra-slim package	Ultra slim LED products to cope with the slim requirements of mobile phone and compete against OLED	In development	2019	Mechanical optical design ability Process stability and high yield rate
Long-life-span package	Develop long-life-span package for the next generation of generic GD and automotive requirements	In development	2019	Product reliability Process stability and high yield rate
Micro LED	The new generation of micro LED products is of proactive light emitting display, which will be more power-saving and brighter with higher response speed.	In development	2019	Mass transfer technology Product reliability Process stability and high yield rate
3D ToF products	Develop VCSEL (Vertical-Cavity Surface-Emitting Laser) chip, package and modular product to meet the requirements of 3D sensing products	In development	2019	Product reliability Process stability and high yield rate
UV sterilization products	Develop UV sterilization chip and package	In development	2019	Develop UV sterilization chip and package
Red-ray chips	Develop red-ray chips to meet the RGB LED display requirements	In development	2019	Product reliability Process stability and high yield rate
Invisible light(IR)package products	Develop IR LED package products for higher specification and different angles of light emitting	In development	2019	Product reliability Process stability and high yield rate

## (3) R&amp;D personnel and their education background

Until December 31, 2018, there were 296 employees working in the R&D department of the company and its subsidiaries. Those getting master or higher degree account for 52.36% of the total employees in the R&D department. The education background is distributed as below:

December 31, 2018

Education background	Counts (persons)	Percentage (%)	Average seniority in the company and its subsidiaries (years)	Related working experience Average seniority (years)
Doctor	11	3.72%	2.31	4.27
Master	144	48.64%	3.41	6.6
Bachelor	113	38.18%	4.08	8.36
Junior college	28	9.46%	7.36	10.07
Total	296	100.00%	4.00	7.51

## Long- and Short-term Business Development Plans

### (1) Short-term plans

- Increase the proportion of advanced backlight products, increase the high value-added products such as Mini LED.
- Develop new products of RGB display, and accelerate the layout in the market
- Improve the reliability of automotive products, and actively expand new customers in the Original Equipment (OE) market
- Adjust the lighting product combination and focus on the professional lighting products, to improve the product profitability
- Actively expand the 3D sensing business applications
- Improve patent quality and increase competitiveness
- Adjust the proportion of production sites to lower manufacturing cost
- Increase production efficiency, actively develop smart manufacturing, and add automation technologies so as to reduce production cost
- Perfect management system, and establish active, responsible and innovative enterprise culture

### (2) Long-term plans

- Strengthen the sales and channels in global market, and enhance the strategic cooperation with global customers
- Develop exclusive LED key technology continuously and strengthen the patent layout, so as to increase the competitiveness
- Establish multi-layer commercial cooperation with LED upstream/mid-stream/downstream suppliers, expand the growth of technology and capacity
- Increase cross-industrial cooperation and platform establishment, so as to improve the international competitiveness and product value-added in the entire LED industry
- Take advantage of one-stop production from LED Epi, Chip, Package to SMT, construct the plant production model in the LED supply chain, so as to reduce production cost and increase profitability

## Markets and Sales

### (A) Market analysis

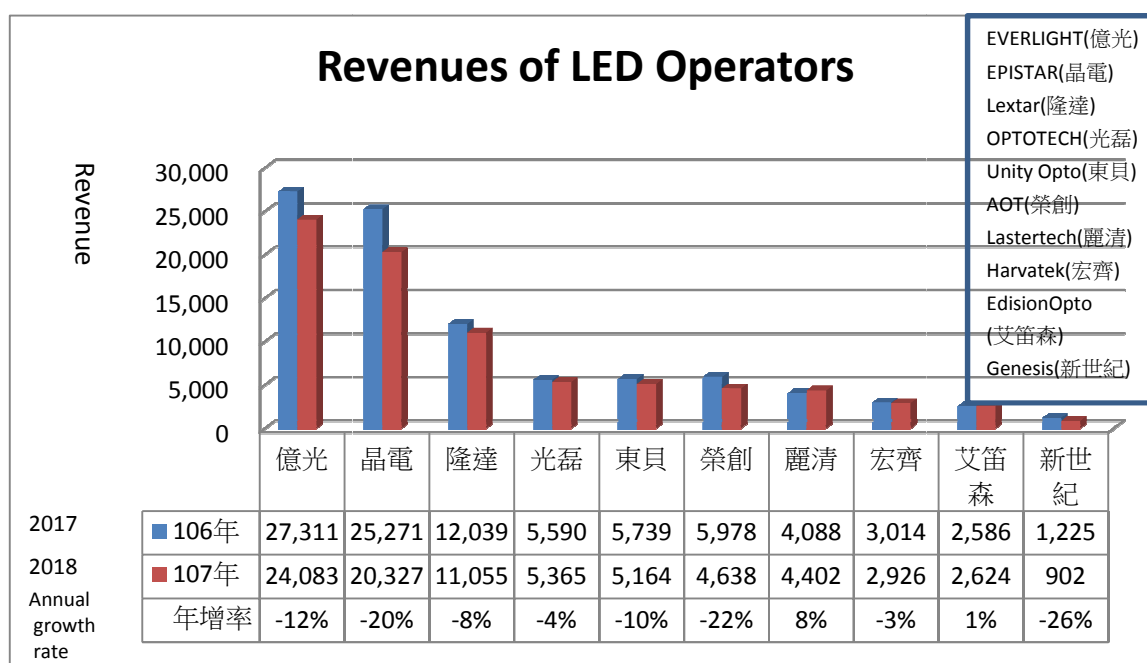
#### (1) The target sales (provision) regions of the main products (services) of the company

Unit: NT\$ thousand, %

Target region	Year	2017		2018	
		Sales volume	%	Sales volume	%
Domestic sales		421,390	3.50	448,592	4.06
Export (Asia)		8,718,432	72.42	8,642,730	78.18
Export (Other regions)		2,899,446	24.08	1,963,901	17.76

#### (2) Market share

Lextar is mainly engaged in LED research, development, design, manufacturing and sale businesses, which is an all-in-one enterprise based on vertically integrated production-sale model. Currently there are dozens of competitors, mainly including EVERLIGHT, EPISTAR, Unity Opto and OPTOTECH. After analyzing the LED manufacturers in Taiwan, according to the revenue statistics announced by the manufacturers, the consolidated revenues of major LED manufacturers in 2018 were shown as below. Wherein, Lextar obtained the consolidated revenue about NT\$ 11.06 billion, which was ranked in the third place in Taiwan, with the annual growth rate -8.0%. The major factors that cause dropping revenue were the sharp decline of consumption lighting businesses. Moreover, it focused on the technical development of photoelectric semiconductor products, and set targets on the parts and modules in the four fields of display, professional lighting, automotive and sensing, returning to the integrated product service of photo, mechanical, electric and thermal technologies.



Source: Sorted by Lextar in February, 2019

#### (3) Supply-demand situation and growth in the future market

Currently the LED backlight market demands show the sloth growth trend. However, with the development of the new technologies such as Mini LED and Micro LED, it brings new opportunities for the growth of LED market. Besides, in the 3D sensing market, the application on the mobile phone set up a new upsurge of facial recognition. Beside the mobile application, it could be also applied in the fields of security surveillance system, human detection, facial recognition and drive fatigue detection. In the future, the application market of 3D sensing parts will bring infinite business opportunities. In addition, the invisible light could be applied in the security surveillance application, biometric recognition, industrial automation

and consumer electronics, as well as the automotive LED market, the automotive LED sensing market and the automotive backlight market, which have attracted a large number of operators engaged in such highly-profitable blue ocean market.

(4) Competition niche

- A. The operation model adopted by the company and its subsidiaries is all-in-one integration operation from LED EPI, chip, package, SMT to downstream module products. Such strategy is different from the professional division of labor that is common in Taiwan's LED industry. Its advantage lies in vertical integration that can speed up the development of products based on customer demands. At the meantime, it provides comprehensive technical support service, so as to cope with the customer's design requirements of product diversification.
- B. As the product sale covers the upstream/mid-stream/downstream of LED industry, it can provide and make good use of product specification and output allocation. This can facilitate the implementation of "complete production and complete sale" philosophy for the chips and package.
- C. With many years of product and operation experience accumulated in the backlight and lighting market, we also get into the supply chain of globally large manufacturers in China, Europe, U.S., Japan and South Korea, so as to get the accurate information of the market and the technical development overview. It will be greatly helpful for the development of new products and the introduction of new customers in the future.
- D. The operation management team of the company mostly owns several years of experience in the fields of TFT LCD, LED EPI, chips and package. Thus, we are capable of integrated manufacturing technology and supply chain management.

(5) Favorable and unfavorable factors for development prospect and the actions to be taken

Favorable factors:

- A. Clear application of new LED display technology  
The Mini LED featured by high brightness and high contrast in the display effect, it is comparable to OLED display. Therefore, in this stage, it has been introduced in the high-end markets with high requirements for the visual effect such as commercial display and home theater.
- B. Explosion of applications of sensing technology  
Benefiting from the 3D face recognition trend brought by iPhone, such technology is introduced by other branded mobile phone manufacturers. As a result, the 2D and 3D sensing market demands are rapidly expanded.
- C. Continuous expansion of automotive LED application  
The high-power automotive LED was mostly used in the headlight of the high-class automobiles in the past. However, under the technological development and the cost down, it is gradually expanded from the high-class automobiles to medium-class automobiles. In addition, the automotive LED is gradually expanded from the interior/exterior lighting to the on-vehicle panel.
- D. Continuous development of new LED technology of invisible light  
The market of LED invisible light application is in rapid development, including security surveillance, biometrical recognition of mobile device (facial, iris and fingerprint recognition), digital medical care (heartbeat, blood oxygen and pressure detection), gaming notebook, IR touchscreen, NIR spectrometer, VR/eye tracking, automotive detection and LIDAR, drone and proximity sensor.

Unfavorable factors and actions:

- A. Rapid expansion of capacity in China shows the potential risk of excess supply in the market  
Actions to be taken: The Company will accelerate the transformation towards the development and sale of high value-added products, integrate the production sites to reduce the production cost based on the economic scale, and actively introduce the smart manufacturing to optimize the production efficiency.
- B. Uncertain China-US trade war is the important potential risk showing influence on the LED industry  
Actions to be taken: We will actively expand the channels in the market of the Europe and the U.S., adjust the proportion of sales in Asia, Europe and the U.S.
- C. Long period of certification for OE vehicles  
Actions to be taken: Besides improving the product reliability continuously, we will seek the strategic partner in the Aftermarket (AM), and perform strategic investment to enter the automotive industry more quickly.



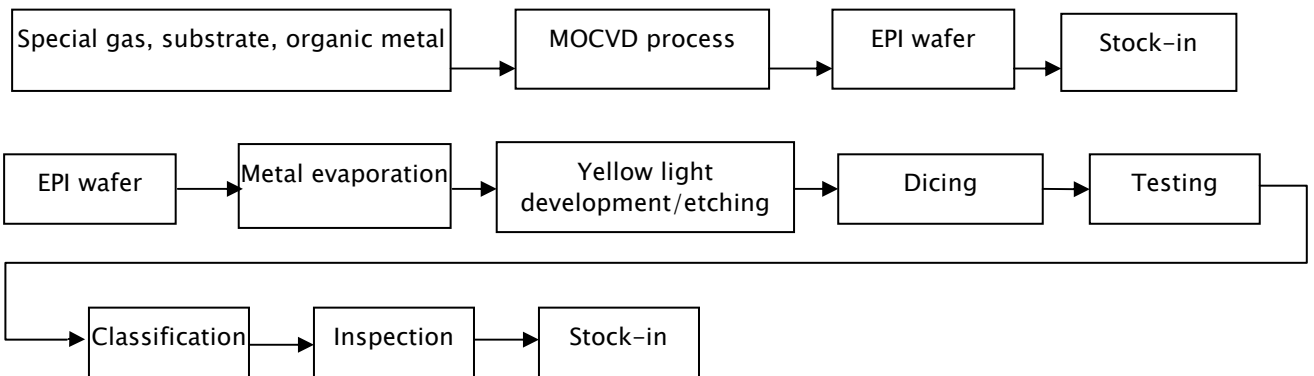
(B) Key purposes and processes of major products

(1) Key purposes of major products

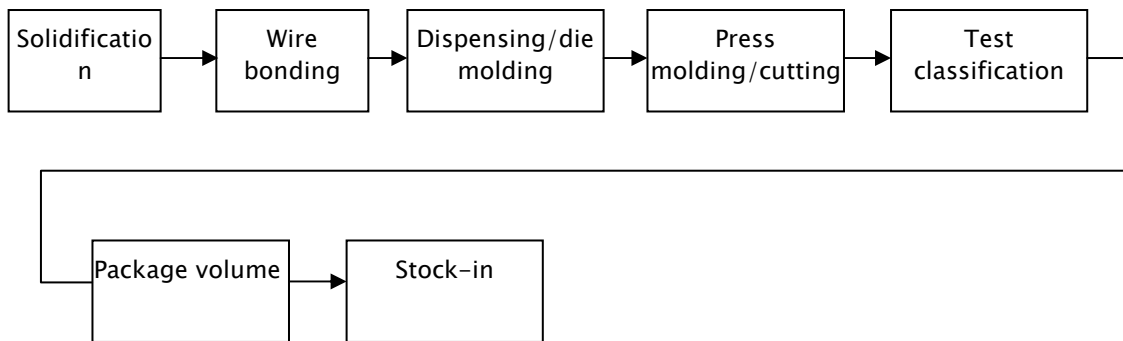
The application covers LCD backlight source and various lighting application products.

(2) Processes of major products

A. EPI and chip processes



B. Package process



Source: Sorted by Lextar

# Corporate Governance

## Corporate Governance Structure

Lextar complies with Company Law, the Securities and Exchange Act, and other relevant laws and regulations of the Republic of China to formulate and implement the company's corporate governance structure. Lextar's corporate governance structure model is made up of three units, the board of directors, audit committee and remuneration committee. The audit committee is made up by all of independent members of the board of directors. The remuneration committee members were appointed by resolution of the board of directors. Members of the board of directors (including independent directors) are selected based on shareholder votes. In principal, the responsibilities of the board of directors are carried out in accordance with relevant laws, company regulations, and shareholder resolutions. The board of directors is also responsible for supervision of company management and overall operational status. The audit committee's responsibilities include accurate financial reporting, selection and performance of independent accountants, effective implementation of internal controls in accordance with relevant laws and regulations, and management of existing and/or potential risk. The remuneration committee will exercise the care of a good administrator in faithfully performing the official powers, and shall submit its recommendations for deliberation by the board of directors.

Lextar has always believed that upholding shareholder rights and interests is a primary task. In addition to having a professional management team rich in experience, the board of directors also possesses the necessary executive knowledge, technological know-how, professional accomplishments, and devotion to the maximizing shareholder rights and interests. The board of directors has 7 members (including 3 independent directors). The chairman is elected by the board. Board members all have 5 or more years experience in business administration, legal, finance, accounting, or other professional experience required by the company.

## Primary Roles of Governance Entities

Lextar's board of directors considers company and shareholder interests as top priorities in performing operational evaluations and passing significant resolutions. The audit committee fulfills a supervisory role through prudent and careful oversight of the operations of the company and the board of directors.

### Board of Directors

According to the Securities and Exchange Act Article 26, Paragraph 3, Subparagraph 8 regulations, Lextar created the "Regulations Governing Procedure for Board of Directors Meetings". Official board of director business, operational procedures, records of official business, and announcements on company and other related matters are carried out according to these regulations. Lextar's board of directors shall convene at least once per quarter. The guiding policy of the board members shall be to maximize shareholder rights and interests through upright management, faithful obligation, the highest degree of personal oversight, and prudent application of the authority of their positions.

### Audit Committee

In 2010, the company set up independent directors and an audit committee in accordance with the Securities and Exchange Act and shareholder resolutions. Through the "Audit Committee Charter" as defined by the board of directors, the audit committee preserves and strengthens the

organization's strategic policies and works to increase operational efficiency through practical application of corporate governance. Lextar's audit committee must convene at least once per quarter and request the attendance of accountants, internal auditors, and finance department representatives. By providing information on audit committee reports and inquiries into recent financial reporting status, the results of internal audits, significant litigation, and financial operating status, the audit committee can assist investors in ensuring that company governance is transparent and shareholder rights and interests are safeguarded.

## **Remuneration Committee**

The remuneration committee will exercise the care of a good administrator in faithfully performing the official powers listed below, and shall submit its recommendations for deliberation by the board of directors; A. Prescribe and review the performance review and remuneration policy, system, standards, and structure for directors, supervisors and managerial officers. B. Evaluate and prescribe the remuneration of directors, supervisors, and managerial officers.

# Board of Directors

## Board Members

Date: April 8 2019

Title	Name	Education & Experience	Major Current Positions
Chairman	Feng Cheng Su	Ph.D. , Materials Science and Engineering , State University of New York, Stony Brook General Electric (GE) Company, responsible for TFT-LCD project for avionics application. Vice President of Product Development, Unipac Optoelectronics. Executive Vice President, Vice President, AU Optronics Corp. Chairman & CEO, Lextar Electronics Corporation. Director, Wellopower Corp. Director, Darshin Microelectronics Inc. Director, Verticil Electronics Corporation.	Chairman & CEO, Lextar Electronics Corporation.
Director	Hsuan Bin (H.B.) Chen	B.S. Communications Engineering, National Chiao Tung University AU Optronics Corp. , General Manager, COO , Deputy Chairman Lextar Electronics Corp., Chairman Wellypower Optronics Co., Chairman	Darwin Precisions Corporation, Director D&AI Inc., Director
Director	Kuo Hsin (Michael) Tsai Representative of AU Optronics Corp.	Executive M.B.A., National Chiao Tung University. Senior Vice President and the General Manager of Video Solutions Business Group, AU Optronics Corp. Director, Qisda Corporation	General manager and COO ,AU Optronics Corp. , Director, Daxin Materials Corporation.
Director	Wei Lung Liao Representative of AU Optronics Corp.	Ph.D. ,Applied Chemistry , National Chiao Tung University. Director, Qisda Corporation. Director, Darwin Precisions Corporation	Senior Vice President ,AU Optronics Corp. ,
Director	Teng Huei Huang	Bachelor, Department of Chemistry, Chung Yuan Christian University Responsible for CRT production, Philips in Hsinchu, Taiwan. Manager, Unipac Optoelectronics. Vice President, Advanced Optoelectronic Technology Inc. President, LightHouse Technology. President & Vice President, Lextar Electronics Corporation.	Director, Lextar Electronics Corporation. Director, Wellysun Inc. Chairman, First Vertical Laser Inc. Director, Chuzhou Bwin Technology Co., Ltd.
Independent Director	Sen-Tai Wen	MBA, RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY Vice Chairman, Ability Enterprise Co., Ltd. Chairman, CHUAN HSUN Technology Co., Ltd. Chairman & President, Visco Vision Inc. Consultant, Elitegroup Computer Systems Co.,Ltd. Chairman, Vice Chairman & President, CHIH HO Computer Corp. Director, Kuo Lien Venture Corp.	Director, E-Pin Optical Industry Co. Ltd. Director, TAI YI International Venture Corp. Director, Visco Vision Inc. Director, Bandrich, Inc. Independent Director & Compensation committee member, Onano Industrial Corp. Independent Director & Compensation committee member, GEM Services, Inc. Independent Director & Compensation committee member, Billion Electric Co., Ltd.

Title	Name	Education & Experience	Major Current Positions
		<p>Director, Kuo Chi Venture Corp.            Director, Yun Cheng Venture Corp.            Director, Yun Tsan Venture Corp.            Supervisor, Chu Kuo Venture Corp.            Chairman, Sai Chia Venture Corp            Director, Elite Advanced Laser Corporation.            Compensation committee member, Hua Eng Wire &amp; Cable Co., Ltd.            Compensation committee member, First Copper Technology Co., Ltd.</p>	<p>Independent Director &amp; Compensation committee member, Lextar Electronics Corporation.</p>
Independent Director	Yih Lian Chen	<p>MBA, University of California, Los Angeles            Vice President of Finance, Hewlett-Packard Taiwan Ltd.            Sales Executive of Asia-Pacific, Hewlett-Packard Company.            Finance Executive of China &amp; Chairman, Hewlett-Packard Company.            President, Symphox Information Co., Ltd.            Director, NANO-OP Technology Inc.            Chairman, Great Engineering Technology Corporation.            Supervisor, Tai Hwa Oil Industrial Co., Ltd.</p>	<p>Director, Homeyen Networks Co., Ltd.            Director, Tai Hwa Oil Industrial Co., Ltd.            Independent Director &amp; Compensation committee member, Transcend Information Inc.            Independent Director &amp; Compensation committee member, Lextar Electronics Corporation.</p>
Independent Director	Shian Ho Shen	<p>Bachelor, Department of Electronics Engineering, Chung Yuan Christian University            Manager, Factory Manager, Vice President, United Microelectronics Corp.            Vice President, AU Optronics Corp.            Independent Director &amp; Compensation committee member, Gallant Precision machining Co., Ltd.            Independent Director, Surpedia Technologies Co., Ltd.            Director, Grenergy Opto, Inc.            Supervisor, Anpec Electronics Corporation.            Compensation committee member, Airoha Technology Corp.            Compensation committee member, China Electric MFG. Corp.</p>	<p>Director, Taiwan Surface Mounting Technology Corp.            Director &amp; President, Chem Tec Corporation Co., Ltd.            Director, Anpec Electronics Corporation.            Supervisor, C Sun Mfg. Ltd.            Independent Director &amp; Compensation committee member, Lextar Electronics Corporation.</p>

## The Major Board Resolutions

Date	Major Resolutions
January 25, 2018	<ul style="list-style-type: none"> <li>◆ Approved the Acquisition and Disposal of Assets of Lextar Electronics (Suzhou) Co., Ltd., Wellypower Optronics (Suzhou) Corporation and Lextar Electronics (Chuzhou) Corp.</li> <li>◆ Approved the 2017 performance bonus of managerial officers.</li> </ul>
March 14, 2018	<ul style="list-style-type: none"> <li>◆ Approved the revisions to "A Statement on Internal Control".</li> <li>◆ Approved the issuance of securities in private placement.</li> <li>◆ Approved distribution of employees' profit sharing bonus and directors' profit sharing.</li> <li>◆ Approved 2017 Financial Statements, 2017 Business Report and 2018 Business Plan.</li> </ul>

	<ul style="list-style-type: none"> <li>◆ Approved the proposal for appropriation of retained earnings for 2017.</li> <li>◆ Approved the distribution of capital surplus by cash.</li> <li>◆ Approved the revisions to "Articles of Incorporation".</li> <li>◆ Approved issuance of new common shares for cash to sponsor issuance of the overseas depositary shares ("DR Offering") and/or issuance of new common shares for cash in public offering and/or issuance of new common shares for cash in private placement ("Private Placement Shares") and/or issuance of overseas or domestic convertible bonds in private placement ("Private Placement CB").</li> <li>◆ Approved the proposal of releasing Directors from non-competition restrictions.</li> <li>◆ Approved the date of 2018 Annual General Shareholders' Meeting, meeting agenda, the process and review criteria for the 2018 submission period of shareholder proposals.</li> <li>◆ Discuss and approve the modifications/additions of bank credit line.</li> <li>◆ Approved the record date for new common shares issued from Employee Stock Option executions.</li> <li>◆ Approved the change of CPA.</li> <li>◆ Approved the evaluate independence of the newly-appointed CPA</li> </ul>
April 3, 2018	<ul style="list-style-type: none"> <li>◆ Approved By-election and nomination of director.</li> <li>◆ Approved amend the meeting agenda of 2018 Annual General Shareholders' Meeting, and the process and review criteria for accepting the nomination of director candidates.</li> </ul>
April 17, 2018	<ul style="list-style-type: none"> <li>◆ To examine candidates of the Company's Directors.</li> <li>◆ Approved the proposal of releasing Directors and their representatives from non-competition restrictions.</li> <li>◆ Approved the issuance of Restricted Stock Awards ("RSA") to key employees.</li> <li>◆ Approved amend the meeting agenda of 2018 Annual General Shareholders' Meeting.</li> </ul>
May 4, 2018	<ul style="list-style-type: none"> <li>◆ Approved the consolidated Financial Statements for the first quarter of 2018.</li> <li>◆ Approved the record date for cancellation of Restricted Stock Awards.</li> <li>◆ Approved the capital lending among the subsidiaries of the Company.</li> <li>◆ Approved the proposal for revision of managers' fixed salary.</li> </ul>
August 9, 2018	<ul style="list-style-type: none"> <li>◆ Approved the consolidated Financial Statements for the second quarter of 2018.</li> <li>◆ Approved the record date for cancellation of Restricted Stock Awards.</li> <li>◆ Discuss and approve the modifications/additions of bank credit line.</li> <li>◆ Approved the method for Issuance of Restricted Stock Awards("RSA") of 2018</li> <li>◆ Approved Lextar Electronics (Suzhou) Co., Ltd to invest Lextar Electronics (Chuzhou) CORP.</li> <li>◆ Approved the capital lending among the subsidiaries of the Company.</li> <li>◆ Approved the distribution of directors' profit sharing of 2017.</li> <li>◆ Approved the distribution of employees' profit sharing bonus of 2017.</li> <li>◆ Approved the allocated list and share for the Issuance of Restricted Stock Awards ("RSA") of 2018.</li> </ul>
November 8, 2018	<ul style="list-style-type: none"> <li>◆ Approved the revisions to "Annual Internal Audit Plan of 2019".</li> <li>◆ Approved amend "Internal Control Procedures" and "Internal Audit Implementation Rules".</li> <li>◆ Approved the Consolidated Financial Statements for the third quarter of 2018.</li> <li>◆ Approved the Acquisition and Disposal of Assets of Wellypower Optronics (Suzhou) Corporation by China government policy.</li> </ul>

	<ul style="list-style-type: none"> <li>◆ Approved amend the Acquisition and Disposal of Assets of Lextar Electronics (Suzhou) Co., Ltd., Wellypower Optronics (Suzhou) Corporation and Lextar Electronics (Chuzhou) Corp.</li> <li>◆ Approved the audit fee for the year 2019 and 2020 and the evaluate independence of CPA.</li> </ul>
January 25, 2019	<ul style="list-style-type: none"> <li>◆ Approved the 2018 performance bonus of managerial officers.</li> </ul>
March 13, 2019	<ul style="list-style-type: none"> <li>◆ Approved the revisions to "A Statement on Internal Control".</li> <li>◆ Approved the issuance of securities in private placement.</li> <li>◆ Approved distribution of employees' profit sharing bonus and directors' profit sharing.</li> <li>◆ Approved 2018 Financial Statements, 2018 Business Report and 2019 Business Plan.</li> <li>◆ Approved the proposal for appropriation of retained earnings for 2018.</li> <li>◆ Approved the distribution of capital surplus by cash.</li> <li>◆ Approved issuance of new common shares for cash to sponsor issuance of the overseas depositary shares ("DR Offering") and/or issuance of new common shares for cash in public offering and/or issuance of new common shares for cash in private placement ("Private Placement Shares") and/or issuance of overseas or domestic convertible bonds in private placement ("Private Placement CB").</li> <li>◆ Elected eight directors.</li> <li>◆ Approved the date of 2019 Annual General Shareholders' Meeting, meeting agenda, the process and review criteria for the 2019 submission period of shareholder proposals and accepting the nomination of director candidates.</li> <li>◆ Discuss and approve the modifications/additions of bank credit line.</li> <li>◆ Approved the change of CPA.</li> <li>◆ Approved the evaluate independence of the newly-appointed CPA</li> </ul>

## Corporate Executive Officers

Date: April 8, 2019

Title	Name	Personnel Education & Experience	Other Current Positions
CEO	David Su	Ph.D., Materials Science and Engineering, State University of New York at Stony Brooks Senior Vice President, AU Optronics Corp.	Chairman, LEXTAR ELECTRONICS CORPORATION. Chairman, WELLYBOND CORPORATION. Chairman, LIANG LI INVESTMENT CO., LTD. Chairman, TRENDYLITE CORPORATION. Director, WELLYPOWER OPTRONICS CORP. Director, APOWER OPTRONICS CORP. Director, LEXTAR ELECTRONICS (SUZHOU) CO., LTD. Director, LEXTAR ELECTRONICS (CHUZHOU) CORP. Director, WELLYBOND OPTRONICS (H.K.) LIMITED.
Vice President	Mong Lin	Vice President, EPISTAR Corp.	Director, LEXTAR ELECTRONICS (XIAMEN) CO., LTD. Director, WELLYPOWER OPTRONICS (SUZHOU) CORPORATION. Director, WELLYBOND CORPORATION. Director, LIANG LI INVESTMENT CO., LTD.
Vice President	B.Y. Chang	M.B.A., China Europe International Business School Associate Vice President, AU Optronics Corp.	Director, LEXTAR (SINGAPORE) PTE. LTD Director, WELLYPOWER OPTRONICS CORP. Director, APOWER OPTRONICS CORP. Director, WELLYBOND OPTRONICS (H.K.) LIMITED. Supervisor, WELLYBOND CORPORATION. Supervisor, LIANG LI INVESTMENT CO., LTD. Supervisor, TRENDYLITE CORPORATION. Supervisor, LEXTAR ELECTRONICS (SUZHOU) CO., LTD Supervisor, LEXTAR ELECTRONICS (XIAMEN) CO., LTD. Supervisor, WELLYPOWER OPTRONICS (SUZHOU) CORPORATION. Supervisor, LEXTAR ELECTRONICS (CHUZHOU) CORP. Supervisor, First Vertical Laser Inc.
Vice President	Terry Tang	Ph.D., Chemical Engineering, National Tsing Hua University Vice President, EPISTAR Corp.	Director, LEXTAR ELECTRONICS (SUZHOU) CO., LTD. Director, LEXTAR ELECTRONICS (CHUZHOU) CORP.
Vice President	Louis Lu	Ph.D., Chemical Engineering, Tatung University Vice President, Wellypower Optronics Corp.	Director, LEXTAR ELECTRONICS (SUZHOU) CO., LTD. Director, LEXTAR ELECTRONICS (CHUZHOU) CORP Director, LEXTAR ELECTRONICS (XIAMEN) CO., LTD. Director, WELLYPOWER OPTRONICS (SUZHOU) CORPORATION.
Vice President	C.N. Huang	M.S., Materials Science and Engineering, National Cheng Kung University Vice President, EPISTAR Corp.	Director, First Vertical Laser Inc.
Vice President	Mitch Lee	M.B.A., University of California, Berkeley. CSO& COO, Niche tech Corporation Limited.	Director, TRENDYLITE CORPORATION

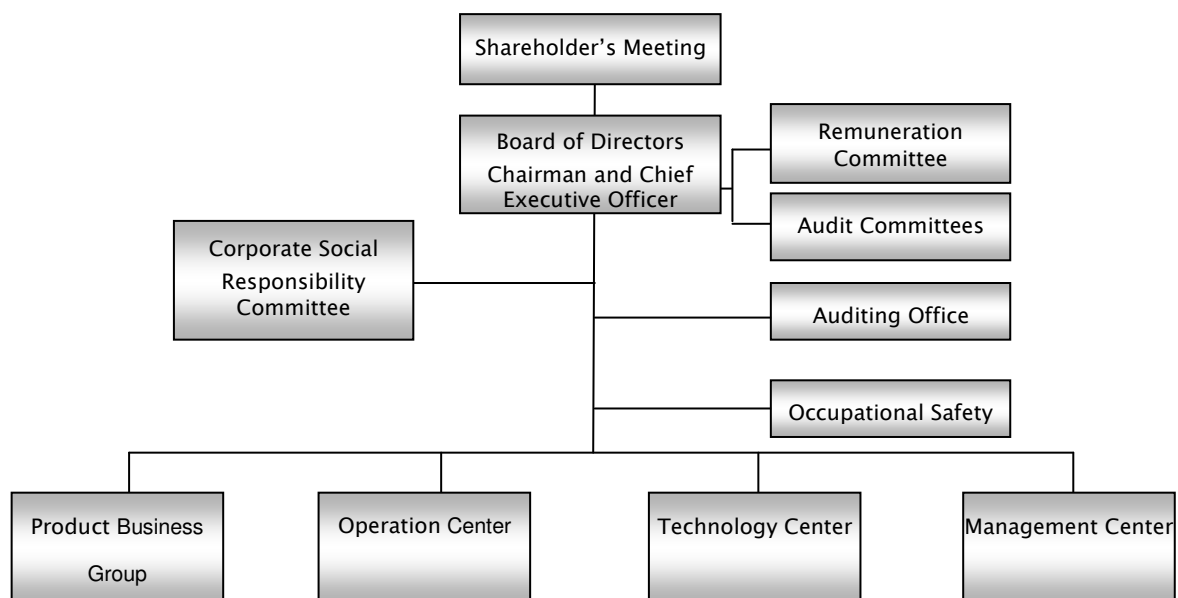


Corporate Governance

Senior Associate Vice President	William Wu	M.S., Power Mechanical Engineering, National Tsing Hua University Senior Project Manager, AU	Director, LEXTAR ELECTRONICS KOREA LTD. Director, LEXTAR ELECTRONICS (SUZHOU) CO., LTD. Director, LEXTAR ELECTRONICS (CHUZHOU) CORP.
Associate Vice President	Brian Lin	M.S., Industrial Management, National Taiwan University of Science and Technology Associate Vice President, Wellypower Optronics Corp.	Director, LEXTAR ELECTRONICS (SUZHOU) CO., LTD. Director, LEXTAR ELECTRONICS (CHUZHOU) CORP.
Associate Vice President	Jackson Hsu	M.S., Industrial Management, National Yunlin University of Science and Technology Vice Director, EPSTAR Corp.	None

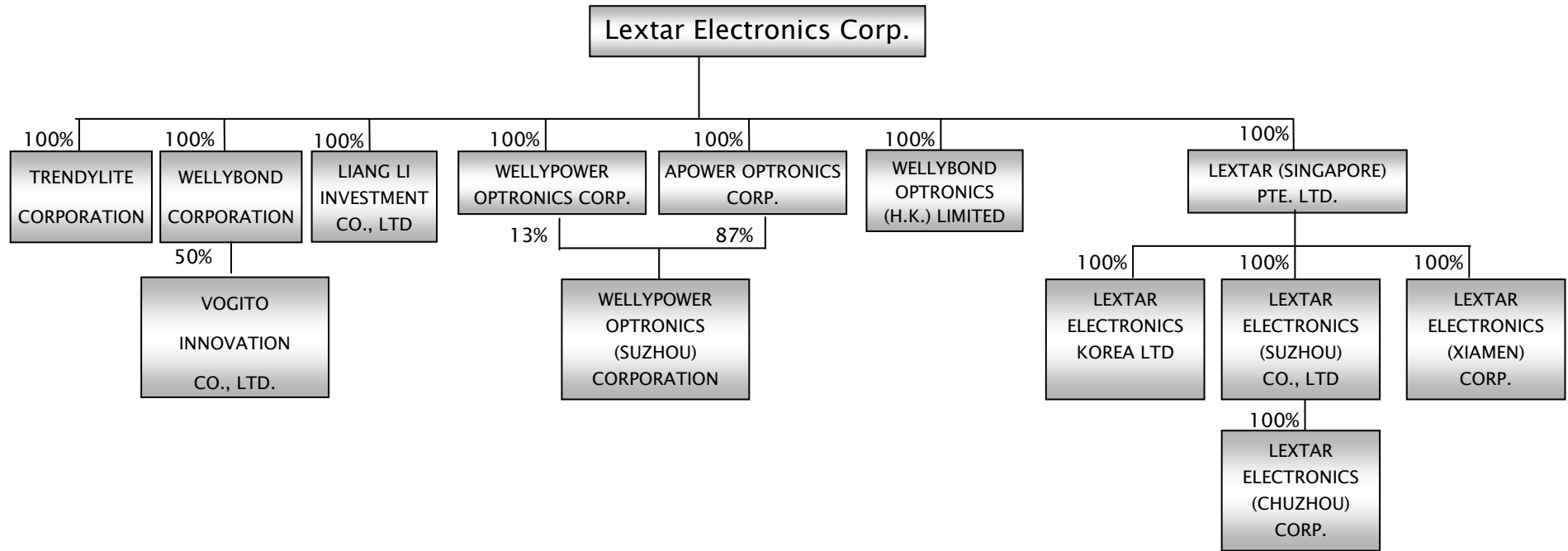
# Group Organization

## Company Organization Chart



## Affiliated Companies

Date: December 31, 2018



# Business Performance

## Capital and Shares

### Shares Type and Shares Outstanding

As of April 8, 2019

Unit: 1,000 Shares

Shares Type	Authorized Shares			Notes
	Outstanding shares	Un-issued shares	Total shares	
Common Shares	520,151	179,849	700,000	

### Ownership and Distribution of Shares

Item	As of April 8, 2019		
	Number of shareholders	Number of shares held	% of shares held
Government Agencies	1	344,000	0.07
Domestic Financial Institutions	17	9,497,388	2.73
Other Domestic Corporations	58	154,130,435	29.63
Domestic Individuals	31,264	226,090,466	43.47
Foreign Institutions and Individuals	104	130,089,091	25.01
Total	31,444	520,151,380	100

### Top 10 Shareholders of Lextar

As of April 8, 2019

Shareholders' Names	Shares	Shareholding
Cree International S.à r.l	83,000,000	15.96%
AU Optronics Corp.	78,418,450	15.08%
Ronly Venture Corp.	34,338,365	6.60%
Konly Venture Corp.	26,132,665	5.02%
China Electric Mfg Corporation	10,711,240	2.06%
JPMorgan Chase Bank N.A., Taipei Branch in custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	5,848,000	1.12%
Kingsbury Investments Limited	5,008,442	0.96%
PowerShares International BuyBack Achievers Portfolio	4,846,000	0.93%
Taiwan Life Insurance Co., Ltd.	4,615,000	0.89%
SU, FENG-CHENG	4,340,000	0.83%

## Net Worth, Earning, Dividends and Market Price Per Share

Unit: NT\$; Per 1,000 Shares

Item		2017	2018	April 8, 2019
Market Price Per Share	Highest Market Price	29.5	27.4	19.6
	Lowest Market Price	13.25	15.85	16.35
	Average Market Price	18.63	19.59	17.83
Net Worth Per Share	Before Distribution	22.21	22.19	Note 1
	After Distribution	22.02	Note 2	-
Earnings Per Share (EPS)	Weighted Average Shares	519,787	508,146	512,785
	EPS	0.25	0.10	-
	EPS-adjusted	-	Note 2	-
Dividends Per Share	Cash dividends	0.2	Note 2	-
	Stock dividends- Earnings	-	Note 2	-
	Stock dividends- Capital Surplus	-	Note 2	-
	Accumulated Undistributed Dividend	-	-	-
Return On Investment	Price/ Earnings Ratio (Note 3)	74.52	195.9	-
	Price/Dividend Ratio (Note 4)	93.15	Note 2	-
	Cash Dividend Yield Rate (Note 5)	0.01	Note 2	-

Note 1: The financial statements have not been audited or reviewed by CPA.

Note 2: Subject to change after shareholders' meeting resolution.

Note 3: Price/ Earnings ratio = Average market price/Earnings per share

Note 4: Price/Dividend ratio = Average market price/Cash dividends per share

Note 5: Cash dividend yield rate = Cash dividends per share/ Average market price

## Dividend Policy

According to Lextar's Article of Incorporation, the company's dividend policy is as follows:

“Where the Company has a profit before tax for each fiscal year, the Company shall first reserve certain amount of the profit to recover losses for preceding years, and then set aside 5%~20% of the remaining profit for distribution to employees as remuneration and no more than 1% of the remaining profit for distribution to directors as remuneration. The Company may allocate employees' remuneration prescribed in the preceding paragraph in the form of stock or cash to employees of an affiliated company meeting certain conditions. The Board or the person duly designated by the Board is authorized to decide the conditions and allocation method.

After making the final settlement of account, the Company shall allocate the net profit, if any, according to the following sequences: paying the taxes, making up loss for preceding years, setting aside 10% thereof for legal reserve, setting aside or reversing special reserve in accordance with the regulations of the competent authorities. If there is any residual amount after deducting the amounts stated above, together with accumulated unappropriated retained earnings could be distributed after the distribution plan proposed by the Board and approved by the shareholders' meeting.”

The Company's dividend policy is to pay dividends from surplus considering factors such as the Company's current and future investment environment, cash requirements, competitive conditions and capital budget requirements, and taking into account the shareholders' interest, maintenance of a balanced dividend and the Company's long term financial plan.

If the retained earnings available for distribution of the current year reaches 2% of the paid in capital of the Company, no less than 20% of the retained earnings available for distribution of the current year shall be distributed as dividend. If the retained earnings available for distribution of the current year does not reach 2% of the paid in capital of the Company, the Company may distribute no dividend. No less than 10% of the total dividend to be paid with respect to any fiscal year shall be paid in the form of cash.

## Most Recent 5-year Financial Analysis

### 1. Consolidated Financial Analysis under International Financial Reporting Standards (“IFRS”)

Item		Year				
		2014	2015	2016	2017	2018
Financial ratio	Total liabilities to total assets (%)	39	37	35	26	28
	Financial capital to fixed assets (%)	198	221	190	298	244
Ability to Pay off debt	Current ratios (%)	246	253	171	287	230
	Quick ratios (%)	189	193	133	235	183
	Time interest earned	7	4	(13)	4	9
Ability to Operate	A/R turnover (times)	2.96	2.83	2.97	3.15	3.28
	A/R turnover days	123	129	123	116	111
	Inventory turnover (times)	5.06	4.33	5.00	5.36	5.80
	A/P turnover (times)	4.04	3.90	3.74	3.27	3.69
	Inventory turnover days	72	84	73	68	63
	Fixed assets turnover (times)	1.57	1.66	1.93	2.29	2.57
	Total assets turnover (times)	0.62	0.61	0.66	0.70	0.71
Earning Ability	Return on assets (%)	3.10	1.47	(3.30)	1.00	0.37
	Return on equity (%)	4.60	1.87	(5.50)	1.09	0.43
	PBT to paid-in-capital (%)	12.80	4.97	(12.19)	2.68	-1.52
	Net income ratio (%)	4.24	1.90	(5.28)	1.08	0.45
	EPS (NT\$)	1.17	0.45	(1.28)	0.25	0.10
Cash Flow	Cash flow ratio (%)	34.43	43.44	26.92	45.89	12.59
	Cash flow adequacy (%)	50.47	96.26	126.22	126.70	99.23
	Cash reinvestment ratio (%)	4.70	6.25	6.09	7.41	1.93
Leverage	Operating leverage	3.62	17.49	N/A	6.33	N/A
	Financial Leverage	1.20	3.00	N/A	1.36	N/A

### 2. Financial Analysis under International Financial Reporting Standards (“IFRS”)

Item		Year				
		2014	2015	2016	2017	2018
Financial ratio	Total liabilities to total assets (%)	36	35	30	17	23
	Financial capital to fixed assets (%)	285	356	330	354	362
Ability to Pay off debt	Current ratios (%)	277	266	176	279	208
	Quick ratios (%)	223	208	146	227	180
	Time interest earned	10	5	(13)	4	11
Ability to Operate	A/R turnover (times)	2.59	2.26	2.20	2.20	2.17
	A/R turnover days	141	162	166	166	168
	Inventory turnover (times)	5.41	4.78	5.69	6.88	6.99
	A/P turnover (times)	3.75	3.79	4.02	3.74	3.10
	Inventory turnover days	68	76	64	53	52
	Fixed assets turnover (times)	2.05	2.17	2.61	2.49	2.18
	Total assets turnover (times)	0.62	0.55	0.57	0.56	0.49
Earning Ability	Return on assets (%)	3.25	1.52	(3.48)	1.09	0.39
	Return on equity (%)	4.73	1.91	(5.50)	1.09	0.43
	PBT to paid-in-capital (%)	13.02	4.99	(12.37)	2.50	1.49
	Net income ratio (%)	4.74	2.24	(6.52)	1.47	0.70
	EPS (NT\$)	1.17	0.45	(1.28)	0.25	0.10
Cash Flow	Cash flow ratio (%)	29.60	26.71	29.55	81.39	43.66
	Cash flow adequacy (%)	60.67	123.65	119.15	131.33	122.04
	Cash reinvestment ratio (%)	2.54	2.09	5.32	7.61	6.23
Leverage	Operating leverage	3.93	N/A	N/A	N/A	N/A
	Financial Leverage	1.14	N/A	N/A	N/A	N/A

**Attachment : Independent Auditor’s Report & Audited Financial Statements**



**Lextar**

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