



Lextar

2018-2019
VCSEL & Invisible Light LED

Smart Innovation, Amazing Life

About Lextar

Lextar Electronics Corporation is a global leader in LED solutions with a strategic advantage of integrating upper stream epitaxial, middle stream chip and package, and downstream LED module. Founded in 2008, Lextar is a subsidiary of AU Optronics, the leading TFT-LCD and solar PV manufacturer. With over 2,000 patents worldwide, Lextar is an innovator of product applications, which include component and modules applying on 3D sensing, automotive lighting, LCD backlighting, display and lighting. Lextar currently has 2 manufacturing plants in Taiwan, and 3 in China including Suzhou, Xiamen and Chuzhou. Lextar revenue US\$403 million in 2017.

Manufacturing Sites

Taiwan

Hsinchu Site (Headquarters) / Chunan Site

China

Chuzhou, Anhui
Suzhou Industrial Park
Xiamen Torch Hi-tech Industrial Development Zone

Workforce

4,500 (as of Jul. 2018)

Product

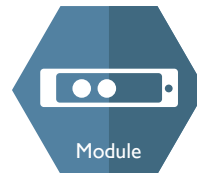
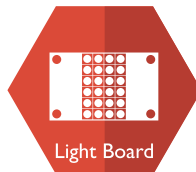
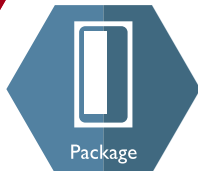
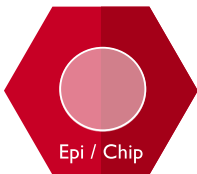
Epi / Chip / Package / Component
and Module

Revenue

\$403 million USD in 2017

Capital

\$187 million USD



The Fab

Lextar's strategic geographic location of its Fabs and manufacturing in China and Taiwan facilities means it profits from economies of scale, plus competitive pricing.

Lextar's state-of-the-art LED manufacturing sites are located in Hsinchu Science Park and Chu-Nan in Taiwan, and Chuzhou (An-Hui), Suzhou and Xiamen in China.

R&D

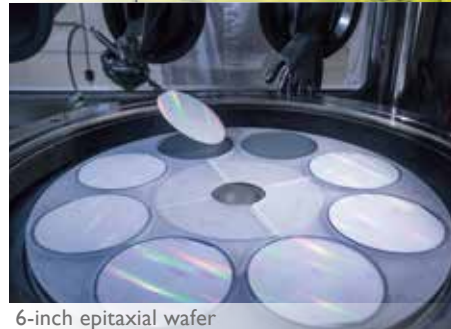
Lextar is associated with rapid technological improvements because of its leadership in LED R&D. Lextar invests substantially in R&D in LED epitaxial, chip, package process as well as T.E.M.P. technology (thermal, electrical, mechanical, photometric). As of 2017, Lextar had over 2,000 patents (including granted and files) in the US, Japan, Europe, China, Korea and Taiwan.

Quality

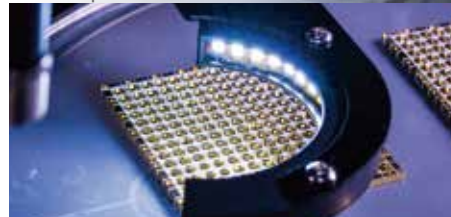
Lextar's difference is that its quality is both world-class, and consistently flawless. Our LED quality meets the global qualification standards of :UL, CE, RoHS and more.



Lextar headquarters



6-inch epitaxial wafer



IR packaging process for iris recognition



Reliability test lab

IR LED and VCSEL Illumination



Surveillance



Biometric



Gesture Sensing



Robotics



Industry

VCSEL Chip Series

- Vertical-cavity surface-emitting laser technology
- Narrow spectral width (<1nm typ.)

Model Name	Peak Wavelength (nm)	Dimension (μm)	Forward Current (mA)	Radiant Flux (mW)	Forward Voltage (V)
N081S3	VCSEL chip	175x175x150	25	13	1.9-2.3
CI26B	VCSEL chip	660x800x120	1200	1000	1.9-2.3



Infrared 3535 High Power VCSEL Series

- Vertical-cavity surface-emitting laser technology
- Narrow spectral width (<1nm typ.)
- 3D depth assistance



Model Name	Dimension LxWxH (mm)	λ_p (nm)	Radiant Power (mW)	View Angle ($^\circ$)
PV88M Series	3.5x3.5x1.77	850 / 940	500-4000	60x45 72x55 90x60 100x80



Infrared LED High Power Emitter Series

- High intensity and efficiency infrared LED
- Durable reliability
- Top view assembly device
- Various emitting angles
- Low thermal resistance



Model Name	Dimension LxWxH (mm)	Vf (V)	λ_p (nm)	Radiant Intensity (mW)	View Angle ($^\circ$)
PR35FXX Series	3.55x3.55x2.05-3.28	1.8V@1A	850 / 940	650mW@1A	120 / 90 / 60 / 45
PR35FXX Series	3.55x3.55x1.87-2.50	1.7V@1A	850 / 940	650mW@1A	130x80 / 100x90
PR37FXX Series	3.70x3.70x1.49-2.40	1.8V@1A	850 / 940	700mW@1A	150 / 80
PR88FXX Series	3.50x3.50x2.10-3.03	1.7V@1A	850 / 940	770mW@1A	120 / 90 / 60
PR88FXX Series	3.50x3.50x2.10-3.03	3.2V@1A	850 / 940	1340mW@1A	120 / 90 / 60
PR92FXX Series	2.75x2.00x0.60-1.80	3.2V@1A	850 / 940	1200mW	120 / 80



Infrared LED 3535 High Power Module Series

- High intensity and efficiency infrared LED
- Durable reliability
- Low thermal resistance (Max. 25 K/W)
- Peak wavelength 750 / 810 / 850 / 940nm
- Various emitting angles
- Double stack emitter



Model Name	Dimension LxWxH (mm)	Vf (V)	λ_p (nm)	Radiant Intensity (mW)	View Angle (°)
PR88M0X Series	3.5x3.5x2.52	2.6	750	1300mW/sr @ 1A	25
		3.3	810 / 850 / 940	2700mW/sr @ 1A	
PR88M3X Series	3.5x3.5x1.7	3.3	810 / 850 / 940	1000mW/sr @ 1A	36
PR88M8X Series	3.5x3.5x1.5	3.3	850 / 940	500mW/sr @ 1A	80



PLCC Multi-Wavelength Emitter Series

- IR/R/G/B 4-in-1 package
- Top view assembly device



Model Name	Dimension LxWxH (mm)	View Angle (°)	λ_p (nm)	Luminous Intensity (mcd)(mW/sr) @20mA	Forward Voltage (V)
PR80E01	3.5x2.8x1.3	120	IR: 940	4.5	1.4
			R: 630	450	2.0
			G: 530	1700	3.2
			B: 470	300	3.2
PR80E02	3.5x2.8x1.3	120	IR: 850	3.2	1.6
			R: 630	525	2.0
			G: 530	2000	3.2
			B: 470	400	3.2



Wearable Sensor



SPO₂ Tracker



Heart Rate Tracker

Wearable Sensor

PLCC Multi-Wavelength Emitter Series

- High intensity R+IR emitter
- Minimized size 2.1x2.1mm
- 3 wavelength packages available



Model Name	Dimension LxWxH (mm)	Peak Wavelength (nm)	Radiant Power (mW)	Forward Current (mA)	View Angle (°)
PI21E01 V0	2.1x2.1x1.0	660+940	4.0 / 3.0	20 (each)	120

RoHS

EMC Multi-Wavelength Emitter Series

- Thinnest T0.6mm
- Full function emitter for heart rate / blood pressure / oxi-meter measurement



Model Name	Dimension LxWxH (mm)	Peak Wavelength (nm)	Radiant Power (mW)	Forward Current (mA)	View Angle (°)
PI24H01 V0	2.1x4.8x0.6	545+660+680+940	3.5 / 3.0 / 3.0 / 2.5	20 (each)	130
PI24H01 V1	2.1x4.8x0.6	545+680	3.5 / 3.0	20 (each)	130

RoHS

HRM Module Series

- Low SNR
- Easy using for HRM function
- Low power consumption (0.05W)



Model Name	Dimension LxWxH (mm)	Peak Wavelength (nm)	Radiant Power (mW)	Forward Current (mA)	View Angle (°)
PM53G01 V0	4.35x3.15x0.8	525	1.0	10 (each)	90x135

RoHS

UV LED & Module



Ink Curing



Bug Zapper



Disinfection

UV LED & Module

UV Chip Series

- High power consumption/ high power output
- Low thermal resistance
- Lateral / vertical / flip chip structure

Model Name	Product Type	Peak Wavelength (nm)	Dimension (µm)	Forward Current (mA)	Radiant Flux (mW)	Forward Voltage (V@350mA)
CU09J	Lateral UVA Chip	385 / 395 / 405	215x460x150	20	20-30	3.1-3.5
CU22N		385	560x910x150	120	150-210	3.2-3.6
CU45S		385	1150x1150x150	350	typ. 390	3.2-3.6
CU45S		395 / 405	1150x1150x150	350	typ. 420	3.2-3.6
CX45S	High Power UVA Flip Chip	385 / 395 / 405	1150x1150x150	700	typ. 920	3.3-3.8
CT15S	High Power vertical UVA Chip	365	380x380x150	150	typ. 140	3.2-4.2
CT45S		365	1150x1150x150	350	typ. 360	3.2-3.6
		385 / 395 / 405	1150x1150x150	350	typ. 480	3.2-3.6

RoHS

UVA 3535 High Power Emitter Series

- High thermal conductivity ceramic body UV package
- Silicone molding type
- High power output
- Low thermal resistance



Model Name	Peak Wavelength (nm)	Dimension LxWxH (mm)	View Angle (°)	Forward Current (mA)	Radiant Flux (mW)	Forward Voltage (V@350mA)
PU88S01	365	3.45x3.45x2.10	120	500	typ. 750	3.4-4.4
	385 / 395 / 405	3.45x3.45x2.10	120	500	typ. 880-950	3.4-4.4
PU88S04	395	3.45x3.45x2.10	120	350	typ. 570	3.0-3.5
PU88S11	365	3.45x3.45x2.10	120	350	typ. 480	3.4-3.8

RoHS

UVA 2016 Small Power Emitter Series

- High thermal conductivity ceramic body UV package
- Low power consumption
- Robust UV light source
- Low thermal resistance



Model Name	Peak Wavelength (nm)	Dimension LxWxH (mm)	View Angle (°)	Forward Current (mA)	Radiant Flux (mW)	Forward Voltage (V@350mA)
PU21S31	365	2.0x1.6x0.7	135	20	typ. 17-21	3.0-4.0

RoHS

UVC Emitter Series

- High thermal conductivity ceramic body package
- Low thermal resistance
- Low operating cost

Model Name	Peak Wavelength (nm)	Dimension LxWxH (mm)	View Angle (°)	Forward Current (mA)	Radiant Flux (mW)	Forward Voltage (V@350mA)
PU89S Series	278	3.5x3.5x1.3	120	20 150	2 10	5-7.5

RoHS

UVA High Power Module Series

- Suitable for various UV applications
- Multi-wavelength
- Low power consumption



Product Type	Peak Wavelength (nm)	View Angle (°)	Forward Current (mA)	Irradiance (W/cm ²)	Forward Voltage (V@350mA)
High Power UV LED Array MCPCB	365 / 385 / 395 / 405	60 / 90 / 120	typ. 500	18.7-22.5	3.4-4.4

RoHS

Production Site

T01 Hsinchu Site / Headquarters

No. 3, Gongye E. 3rd Road, Hsinchu Science Park,
Hsinchu 30075, Taiwan

T05 Chunan Site

No.1, Keyi Street, Kuan Yuan Science Park,
Chunan Township, Miaoli County 35059, Taiwan

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