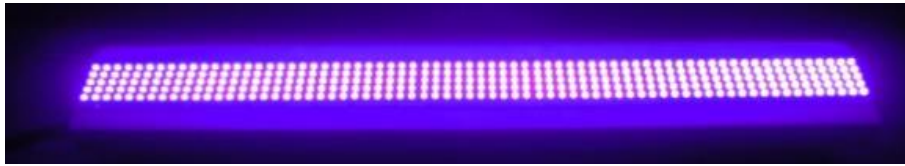


EVERLIGHT UV LED Introduction

www.everlight.com

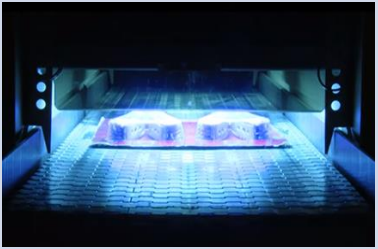


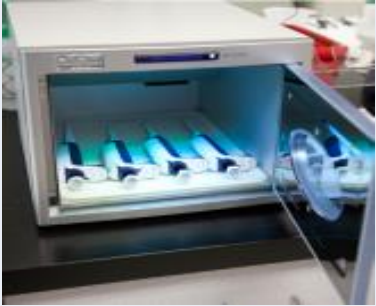



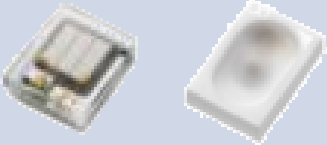

EVERLIGHT

Why LED for UV

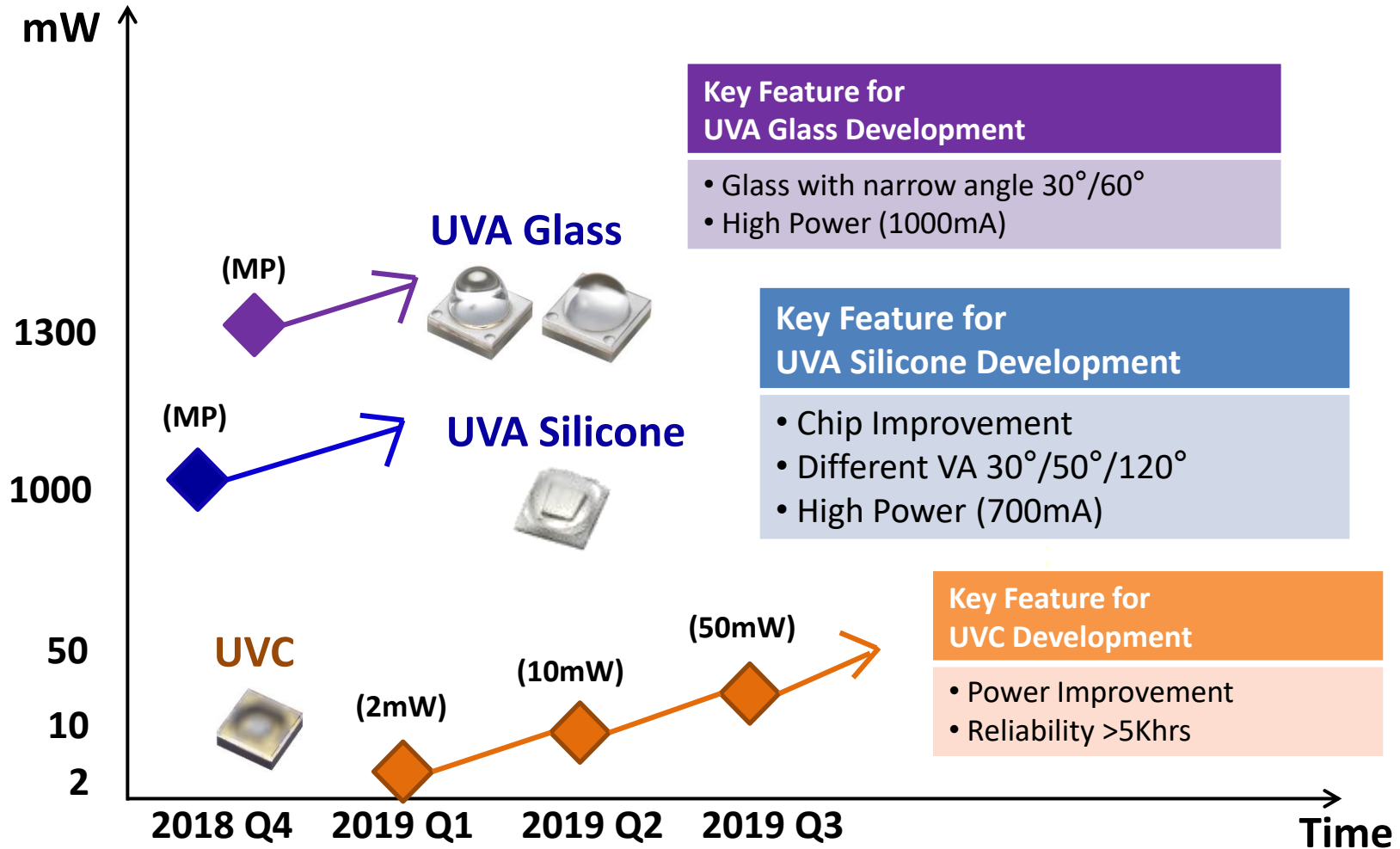


UV LED	Type	Mercury Lamp
New	Technology	Old
10,000-20,000H	Lifetime	1,000H
Single	Wavelength	Multiple
Low	Energy Consumption	High
No need	Warm-up time	Long and Slow
Free and Small	Product Design	Big and Complicated
Eco Friendly (No Mercury and Ozone)	Usage Feature	Easy to break and hard to recycle (Mercury used, will generate Ozone)




Main UV LED Applications

Application	Market Demand	LED Solution	Competitor
	<p>Industrial Curing / Printing: High Power UVA modules</p>	<p>3535 Glass / Silicone 360-410nm</p> 	<p>Nichia 3535 / Seoul 3535</p> 
	<p>Purification / Desinfection (Air, Water, Surface...): UVA + TiO₂ UVC LEDs</p>	<p>3535 UVA / 3535 UVC</p> 	<p>Nichia 3535 / Seoul 3535</p> 
	<p>Counterfeit Detection UVA in low power</p>	<p>2016 / 3020</p> 	<p>Nichia 3020</p> 

EVERLIGHT UV LED Road Map



UVA Silicone Low Power LEDs

Series	Picture	Specifications			Application
		Minimum Radiant Flux [mW]	Wavelength [nm]	Forward Voltage [V]	Description
2016 Ceramic		20	360~370	3.0~4.0	Counterfeit Detect Max If=30mA
2.0x1.6x0.75mm		25	380~390	3.0~4.0	
VA=120°		25	390~400	3.0~4.0	
IF=20mA		25	400~410	3.0~4.0	
2016 Ceramic		50	360~370	3.0~4.0	Printer Curing Max If=100mA
2.0x1.6x0.75mm		65	380~390	3.0~4.0	
VA=120°		70	390~400	3.0~4.0	
IF=60mA		70	400~410	3.0~4.0	
3020 Ceramic		20	360~370	3.0~4.0	Pin to Pin Max If=30mA
3.0x2.0x0.65mm		25	380~390	3.0~4.0	
VA=120°		25	390~400	3.0~4.0	
IF=20mA		25	400~410	3.0~4.0	



Photocatalysis
Creates CO₂ to simulate human breathing





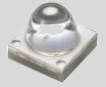
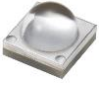
Absorption Fan
Fan to absorb the mosquitos



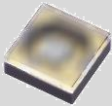
Counterfeit



UVA Silicone/Glass High Power LEDs

Series	Picture	Specifications			Application
		Minimum Radiant Flux [mW]	Wavelength [nm]	Forward Voltage [V]	Description
2016 Ceramic		500	360~370	3.2~4.0	Printer Curing Max If=700mA
2.0x1.6x0.75mm		600	380~390	3.2~4.0	
VA=120°		600	390~400	3.2~4.0	
IF=500mA		600	400~410	3.2~4.0	
3535 Ceramic		1000	360~370	3.2~4.0	Home Appliance With Photocatalyst Max If = 700mA
3.5x3.5x2.35mm		1000	380~390	3.2~4.0	
VA=120°		1000	390~400	3.2~4.0	
IF=500mA		1000	400~410	3.2~4.0	
3535 Ceramic		900	360~370	3.2~4.0	Curing/Exposure Max If= 700mA
3.5x3.5x3.51mm		1000	380~390	3.2~4.0	
VA=50°		1000	390~400	3.2~4.0	
IF=500mA		1000	400~410	3.2~4.0	
4545 Ceramic		900	360~370	3.2~4.1	Curing Max If= 700mA
4.5x4.5x4.57mm		1000	380~390	3.2~4.1	
VA=30°		1000	390~400	3.2~4.1	
IF=500mA		1000	400~410	3.2~4.1	
3535 Ceramic/Glass		900 (700mA)	360~370	3.6~4.8	Curing/Exposure Max If= 1250mA (365nm: 700mA)
3.5x3.5x3.02mm		1300	380~390	3.6~4.8	
VA=30°		1300	390~400	3.6~4.8	
IF=1000mA		1300	400~410	3.6~4.8	
3535 Ceramic/Glass		900 (700mA)	360~370	3.6~4.8	Curing/Exposure Max If= 1250mA (365nm: 700mA)
3.5x3.5x2.46mm		1300	380~390	3.6~4.8	
VA=60°		1300	390~400	3.6~4.8	
IF=1000mA		1300	400~410	3.6~4.8	

UVC LED

Series	Picture	Specifications			Application
		Typical Radiant Flux [mW]	Wavelength [nm]	Forward Voltage [V]	Description
ELUC3535 3.5x3.5x1.2mm VA=120° IF=20mA		2	270~290	5.9~7.9	Purification Max = 30mA

DNA before UV irradiation



DNA after UV irradiation

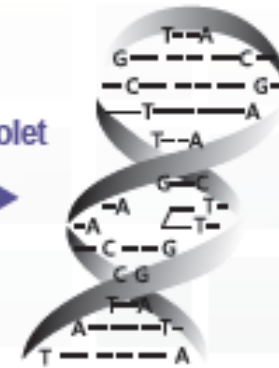


DNA



Ultraviolet

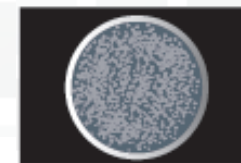
DNA



MP: 2019 Q1



Escherichia coli NBRC3972



360 second
→
265 nm



- これで終わります。
ご清聴ありがとうございました。
- Thank you for your attention !

