NICHIA

Ever Researching For A Brighter World

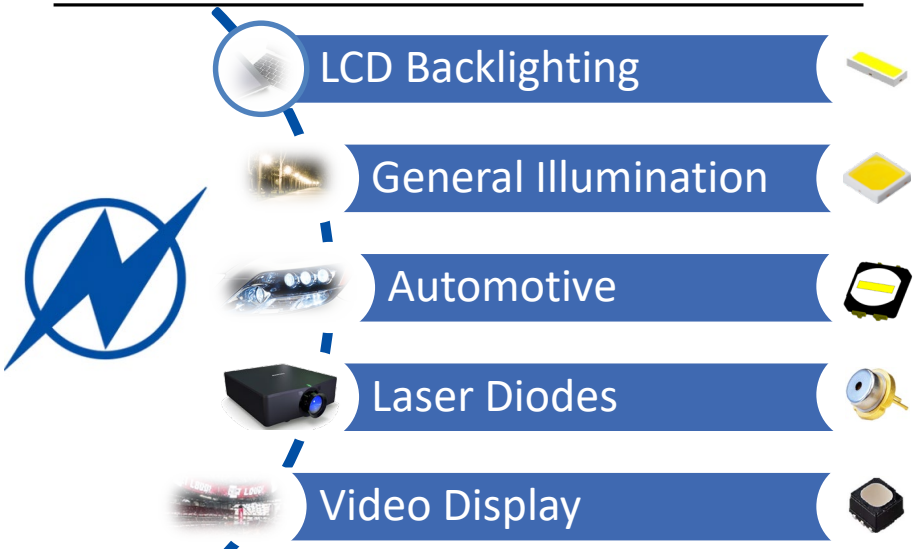
The Rebirth of UV with SSL

Erik Swenson
General Manager – Nichia America
erik.swenson@nichia.com

Corporate Information

Founded	1956
HQ Location	Anan-Shi, Tokushima, JAPAN
President, CEO	Hiroyoshi Ogawa
Main Products	Optical semiconductor (LED, Laser)
	Chemicals / Phosphors
	Lithium Ion Battery Materials
Employees	~ 9,400 globally and growing

LED's FOR EVERY APPLICATION



Nichia remains the only <u>STABLE</u> LED Manufacturer with the <u>BALANCE</u> & <u>DIVERSITY</u> across <u>ALL</u> markets

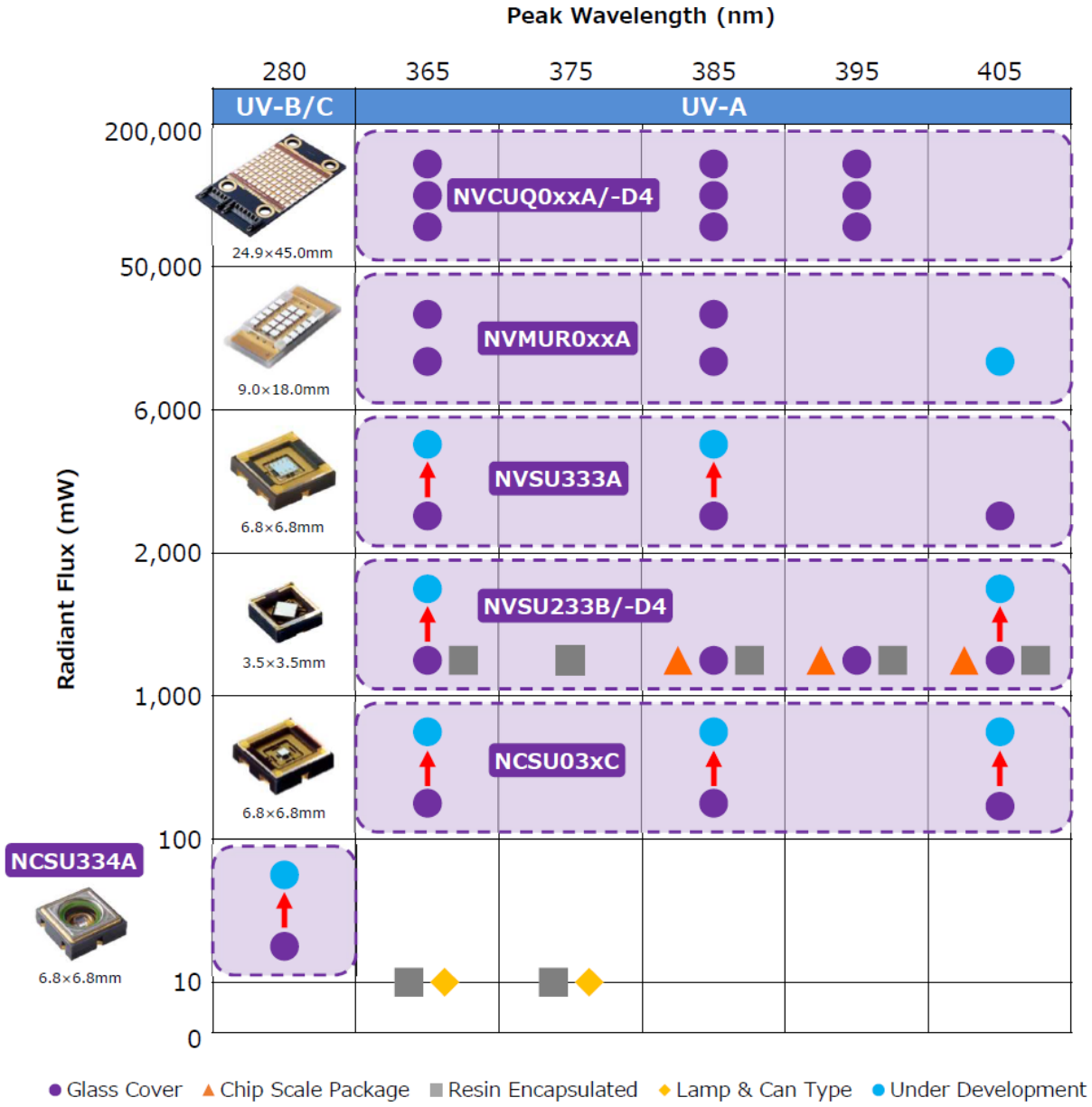
Corporate Information

Founded	1956
HQ Location	Anan-Shi, Tokushima, JAPAN
President, CEO	Hiroyoshi Ogawa
Main Products	Optical semiconductor (LED, Laser)
	Chemicals / Phosphors
	Lithium Ion Battery Materials
Employees	~ 9,400 globally and growing

LED's FOR EVERY APPLICATION

Nichia remains the only <u>STABLE</u> LED Manufacturer with the <u>BALANCE</u> & <u>DIVERSITY</u> across <u>ALL</u> markets

Nichia's UV Portfolio Snapshot

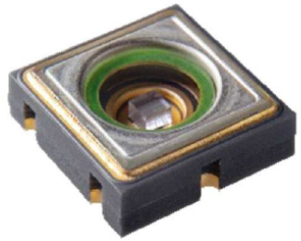


UVC New Release "Teaser"

Features

- Leading efficiency UVC LED
- Hermetically sealed package for superior lifetime and reliability at high temperature / high humidity ***(L70 25k hours @ ~60^{0}C for 334A)***
- 3rd Party disinfection testing data available upon request.

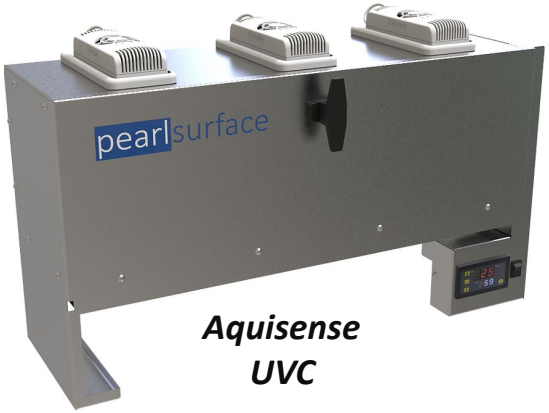
T_A=25℃, I_F=350mA
(Max. I_F=500mA)

		NCSU334B
		 6.8×6.8×2.1mm
Peak Wavelength	nm	280
Radiant Flux	mW	70
Efficacy	%	3.6
Forward Voltage	V	5.5
Directivity	deg.	120
Absolute Maximum Junction Temperature	℃	100
Feature	-	Hermetic Package

*Typical values estimated for Specification release in early September

UV Surface Disinfection Observations

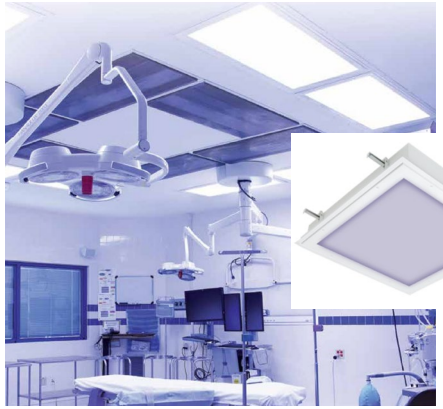
There are a lot of exciting solutions coming to market with supporting data.



Aquisense UVC

GE Current UVA

FAR UV



Kenall UVA

Phoseon UVC

Heraeus UVC Lamp

There is not just one way to solve the challenge with UV technology.

UV Surface Disinfection Observations

This also is not just one way to fail the technology

While there is promise with Far UV (i.e. 222nm), UV-C can still be very harmful for humans…

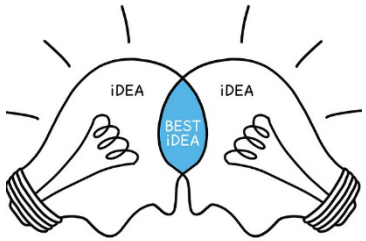
False advertising gets nowhere quickly.

UV Technology will succeed in mass disinfection applications.
Let's do it the right way, with an honest approach,
let the technology drive success as it is ready and proven.

https://iuva.org/iuva-covid-19-faq

Requests to Stakeholders / Needs of Nichia

1. Take steps in designs to implement safety redundancy
2. Test, test and test again that safety measures are functional
3. Do not cut corners to take advantage of a short-term opportunity
4. Consider all pieces of the puzzle – irradiation, time, geometry, targeted organisms…
5. Collaboration is critical to prove out new concepts / case studies
6. Urgency with a sense of patience.



Thank you for your time!

ありがとう

info@nichia.com