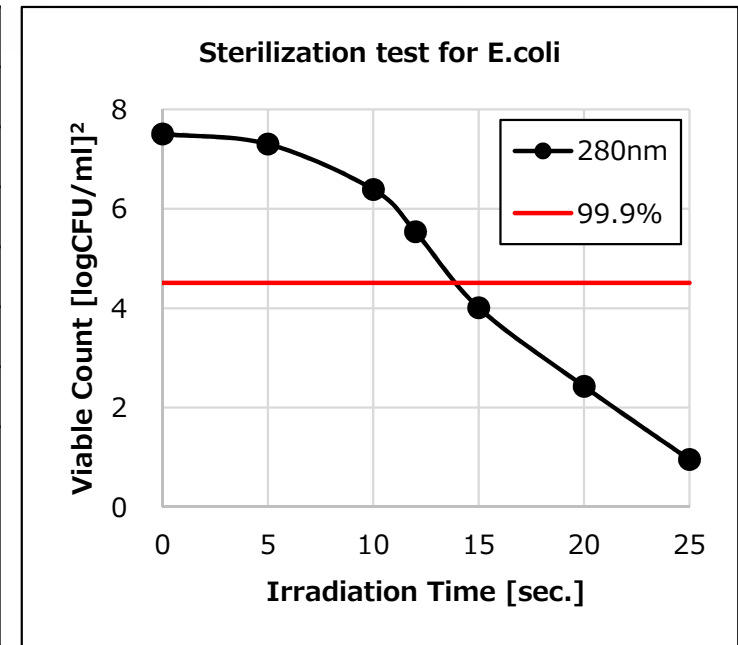


# NCSU334A Sterilization Test (E.coli/280nm)

Part No.		NCSU334A		Unit
Wavelength Rank		280		nm
Test Condition	Number of LED		1	pc.
	Forward Current		350	mA
	Peak Wavelength		280	nm
	Radiant Flux		59	mW
	Working Distance		50	mm
Irradiation <sup>1</sup> Time	Gram Negative Bacteria	E.coli	<b>14</b>	sec.
		P.aeruginosa	<b>6</b>	
	Gram Positive Bacteria	S.aureus	<b>11</b>	



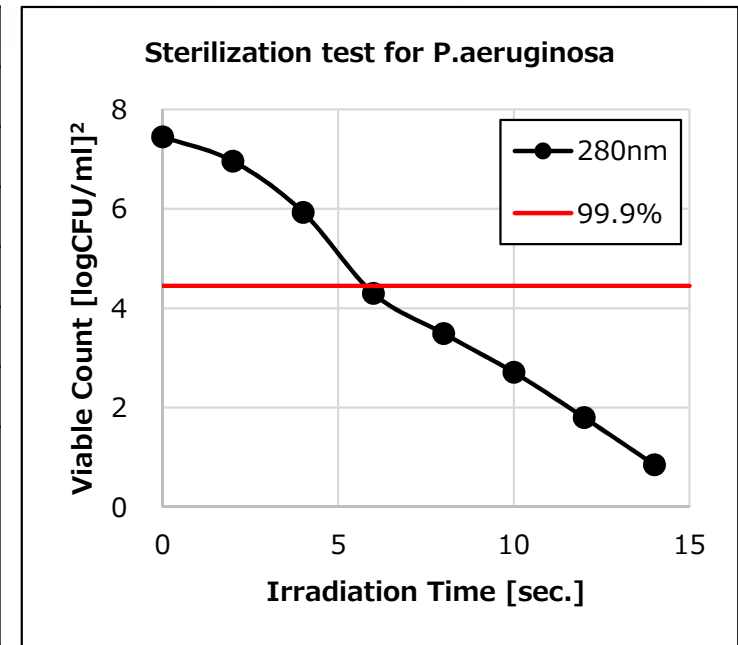
<sup>1</sup> Irradiation time for 99.9% sterilization.

<sup>2</sup> log = Logarithm  
CFU = Colony Forming Unit

Irradiation Time	0 sec. (10,000 dilution)	5 sec. (10,000 dilution)	10 sec. (10,000 dilution)	15 sec. (10,000 dilution)	20 sec. (10,000 dilution)
E.coli Peak Wavelength 280nm Radiant Flux 59mW					

Note: This data is a reference value, hence Nichia cannot make guarantee these results. Please treat this data the as reference.

Part No.		NCSU334A		Unit
Wavelength Rank		280		nm
Test Condition	Number of LED		1	pc.
	Forward Current		350	mA
	Peak Wavelength		280	nm
	Radiant Flux		59	mW
	Working Distance		50	mm
Irradiation <sup>1</sup> Time	Gram Negative Bacteria	E.coli	<b>14</b>	sec.
		<i>P.aeruginosa</i>	<b>6</b>	
	Gram Positive Bacteria	S.aureus	<b>11</b>	



<sup>1</sup> Irradiation time for 99.9% sterilization.

<sup>2</sup> log = Logarithm  
CFU = Colony Forming Unit

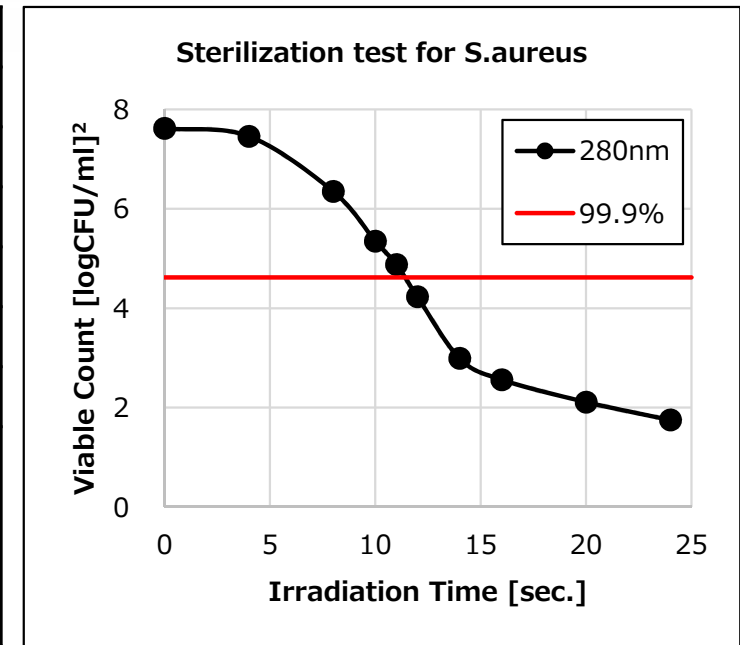
Irradiation Time	0 sec. (10,000 dilution)	2 sec. (10,000 dilution)	4 sec. (10,000 dilution)	6 sec. (10,000 dilution)	8 sec. (10,000 dilution)
<i>P.aeruginosa</i> Peak Wavelength 280nm Radiant Flux 59mW					

Note: This data is a reference value, hence Nichia cannot make guarantee these results. Please treat this data the as reference.

# NCSU334A

## Sterilization Test (*S.aureus*/280nm)

Part No.		NCSU334A		Unit
Wavelength Rank		280		nm
Test Condition	Number of LED	1		pc.
	Forward Current	350		mA
	Peak Wavelength	280		nm
	Radiant Flux	59		mW
	Working Distance	50		mm
Irradiation <sup>1</sup> Time	Gram Negative Bacteria	E.coli	<b>14</b>	sec.
		P.aeruginosa	<b>6</b>	
	Gram Positive Bacteria	S.aureus	<b>11</b>	



<sup>1</sup> Irradiation time for 99.9% sterilization.

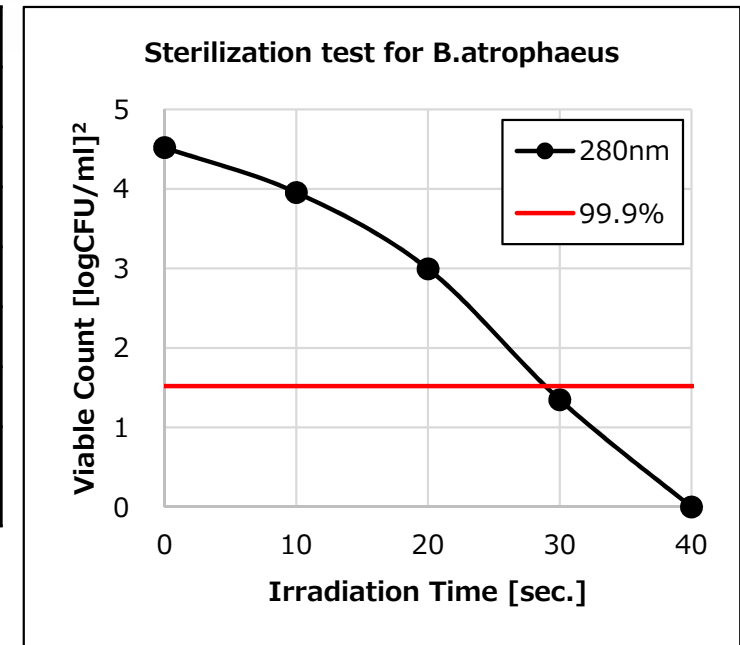
<sup>2</sup> log = Logarithm  
CFU = Colony Forming Unit

Irradiation Time	0 sec. (10,000 dilution)	4 sec. (10,000 dilution)	8 sec. (10,000 dilution)	11 sec. (10,000 dilution)	14 sec. (10,000 dilution)
S.aureus Peak Wavelength 280nm Radiant Flux 59mW					

Note: This data is a reference value, hence Nichia cannot make guarantee these results. Please treat this data the as reference.

Part No.		NCSU334A		Unit
Wavelength Rank		280		nm
Test Condition	Number of LED		1	pc.
	Forward Current		350	mA
	Peak Wavelength		280	nm
	Radiant Flux		58	mW
	Working Distance		50	mm
Irradiation <sup>1</sup> Time	Gram Positive Bacteria	<i>B.atrophaeus</i>	<b>30</b>	sec.

<sup>1</sup> Irradiation time for 99.9% sterilization.



<sup>2</sup> log = Logarithm  
CFU = Colony Forming Unit

Irradiation Time	0 sec. (100 dilution)	10 sec. (10 dilution)	20 sec. (10 dilution)	30 sec. (1 dilution)	40 sec. (1 dilution)
<i>B.atrophaeus</i> Peak Wavelength 280nm Radiant Flux 58mW					

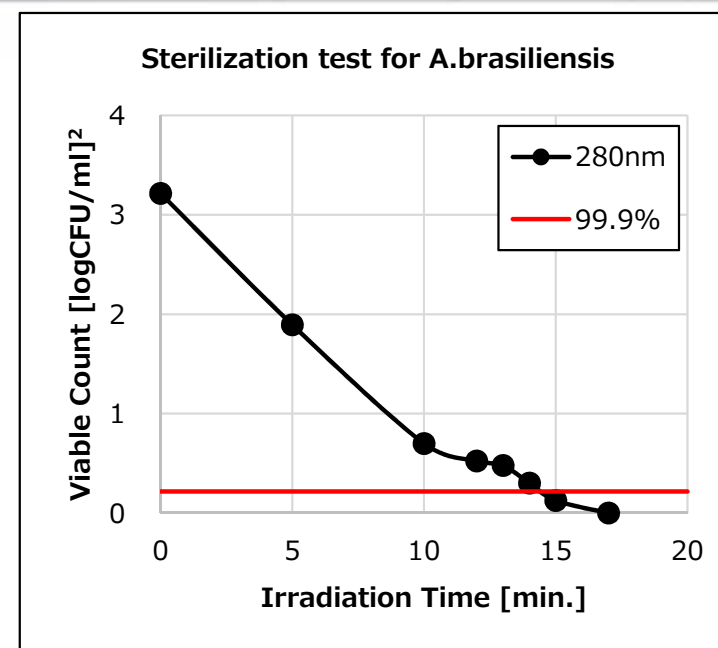
Note: This data is a reference value, hence Nichia cannot make guarantee these results. Please treat this data the as reference.

# NCSU334A

## Sterilization Test (*A.brasiliensis*/280nm)

Part No.		NCSU334A	Unit
Wavelength Rank		280	nm
Test Condition	Number of LED	1	pc.
	Forward Current	350	mA
	Peak Wavelength	280	nm
	Radiant Flux	58	mW
	Working Distance	50	mm
Irradiation <sup>1</sup> Time	<i>A.brasiliensis</i>	<b>15</b>	min.

<sup>1</sup> Irradiation time for 99.9% sterilization.



<sup>2</sup> log = Logarithm  
CFU = Colony Forming Unit

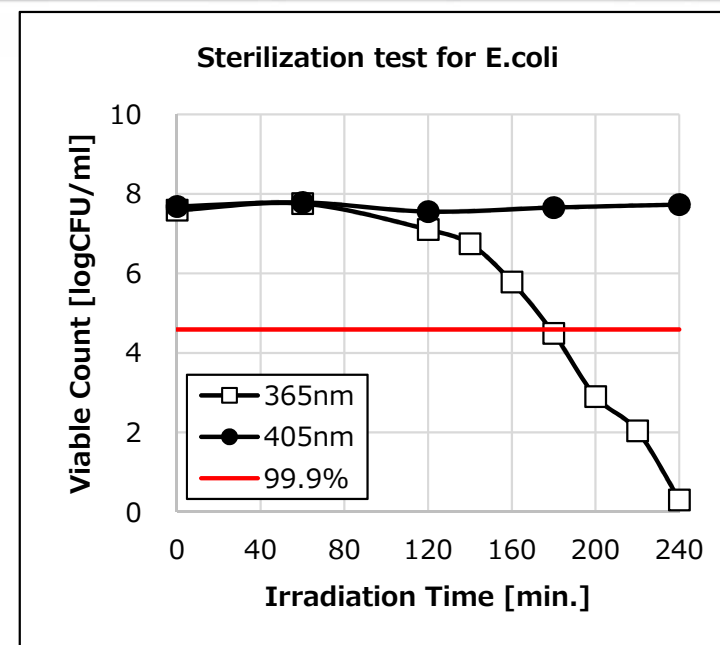
Irradiation Time	0 min. (10 dilution)	5 min. (1 dilution)	10 min. (1 dilution)	15 min. (1 dilution)	20 min. (1 dilution)
<i>A.brasiliensis</i> Peak Wavelength 280nm Radiant Flux 58mW					

Note: This data is a reference value, hence Nichia cannot make guarantee these results. Please treat this data the as reference.

# NVSU233B

## Sterilization Test (*E.coli*/365nm)

Part No.		NVSU233B		Unit	
Wavelength Rank		365	405	nm	
Test Condition	Number of LED	1		pc.	
	Forward Current	1000	908	mA	
	Peak Wavelength	365	405	nm	
	Radiant Flux	1334	1335	mW	
	Working Distance	50		mm	
Irradiation <sup>1</sup> Time	Gram Negative Bacteria	E.coli	<b>180</b>	-	min.
		P.aeruginosa	<b>130</b>	-	
	Gram Positive Bacteria	S.aureus	<b>60</b>	<b>90</b>	



<sup>1</sup> Irradiation time for 99.9% sterilization.

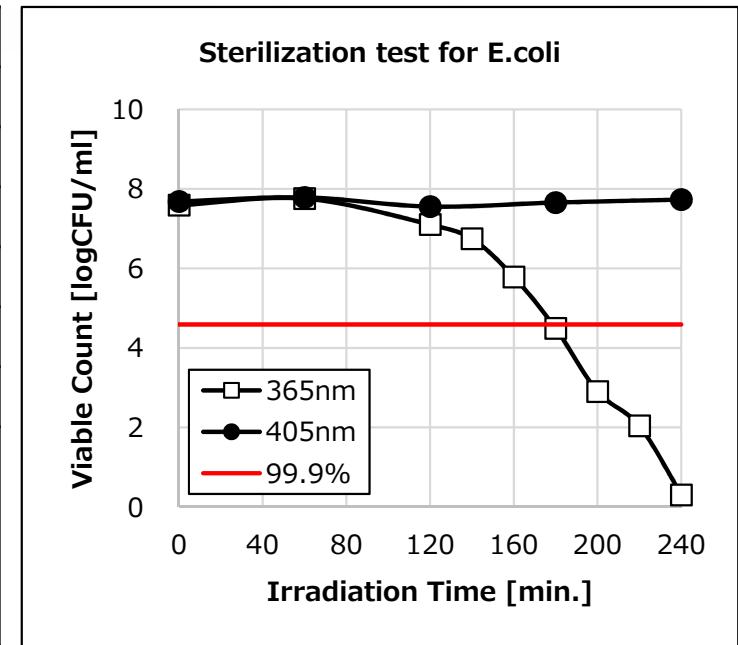
<sup>2</sup> log = Logarithm  
CFU = Colony Forming Unit

Irradiation Time	0 min. (1,000 dilution)	60 min. (1,000 dilution)	120 min. (1,000 dilution)	180 min. (1,000 dilution)	240 min. (1,000 dilution)
E.coli Peak Wavelength 365nm Radiant Flux 1334mW					

Note: This data is a reference value, hence Nichia cannot make guarantee these results. Please treat this data the as reference.

# NVSU233B Sterilization Test (E.coli/405nm)

Part No.		NVSU233B		Unit	
Wavelength Rank		365	405	nm	
Test Condition	Number of LED		1		pc.
	Forward Current		1000	908	mA
	Peak Wavelength		365	405	nm
	Radiant Flux		1334	1335	mW
	Working Distance		50		mm
Irradiation <sup>1</sup> Time	Gram Negative Bacteria	E.coli	180	-	min.
		P.aeruginosa	130	-	
	Gram Positive Bacteria	S.aureus	60	90	



<sup>1</sup> Irradiation time for 99.9% sterilization.

<sup>2</sup> log = Logarithm  
CFU = Colony Forming Unit

Irradiation Time	0 min. (1,000 dilution)	60 min. (1,000 dilution)	120 min. (1,000 dilution)	180 min. (1,000 dilution)	240 min. (1,000 dilution)
E.coli Peak Wavelength 405nm Radiant Flux 1335mW					

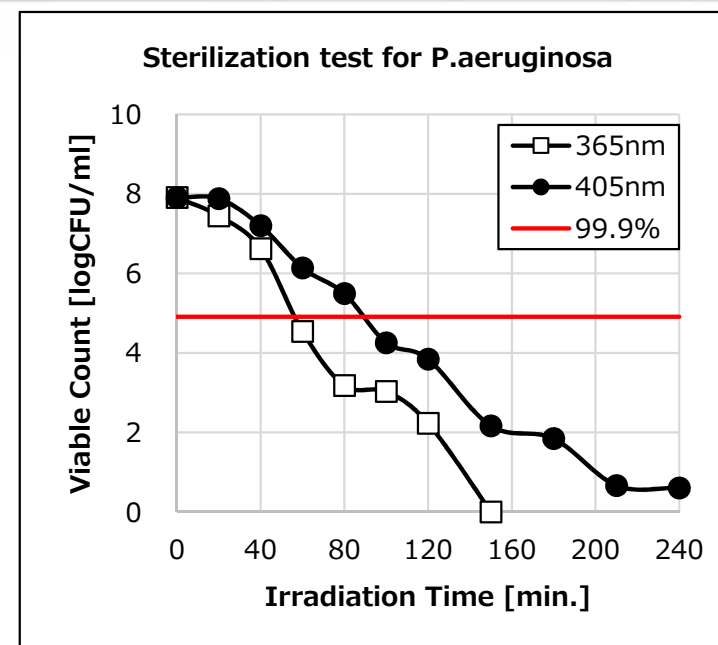
Note: This data is a reference value, hence Nichia cannot make guarantee these results. Please treat this data the as reference.

# NVSU233B

## Sterilization Test (*P.aeruginosa*/365nm)

Part No.		NVSU233B		Unit	
Wavelength Rank		365	405	nm	
Test Condition	Number of LED		1		pc.
	Forward Current		1000	908	mA
	Peak Wavelength		365	405	nm
	Radiant Flux		1334	1335	mW
	Working Distance		50		mm
Irradiation <sup>1</sup> Time	Gram Negative Bacteria	E.coli	180	-	min.
		<i>P.aeruginosa</i>	60	90	
	Gram Positive Bacteria	S.aureus	130	-	

<sup>1</sup> Irradiation time for 99.9% sterilization.



<sup>2</sup> log = Logarithm  
CFU = Colony Forming Unit

Irradiation Time	0 min. (1,000 dilution)	30 min. (1,000 dilution)	50 min. (1,000 dilution)	90 min. (1,000 dilution)	120 min. (1,000 dilution)
<i>P.Aeruginosa</i> Peak Wavelength 365nm Radiant Flux 1334mW					

Note: This data is a reference value, hence Nichia cannot make guarantee these results. Please treat this data the as reference.

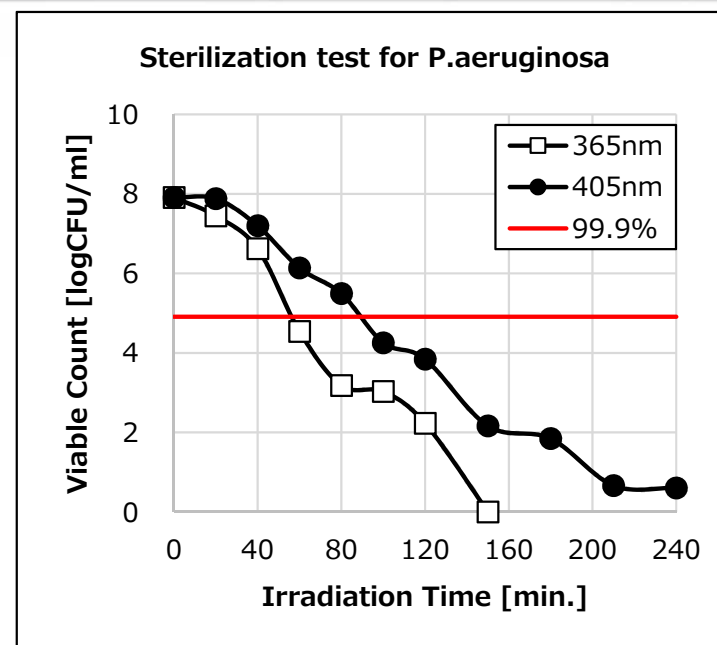


## NVSU233B

Sterilization Test (*P.aeruginosa*/405nm)

Part No.		NVSU233B		Unit	
Wavelength Rank		365	405	nm	
Test Condition	Number of LED		1		pc.
	Forward Current		1000	908	mA
	Peak Wavelength		365	405	nm
	Radiant Flux		1334	1335	mW
	Working Distance		50		mm
Irradiation <sup>1</sup> Time	Gram Negative Bacteria	E.coli	180	-	min.
		<i>P.aeruginosa</i>	60	90	
	Gram Positive Bacteria	S.aureus	130	-	

<sup>1</sup> Irradiation time for 99.9% sterilization.



<sup>2</sup> log = Logarithm  
CFU = Colony Forming Unit

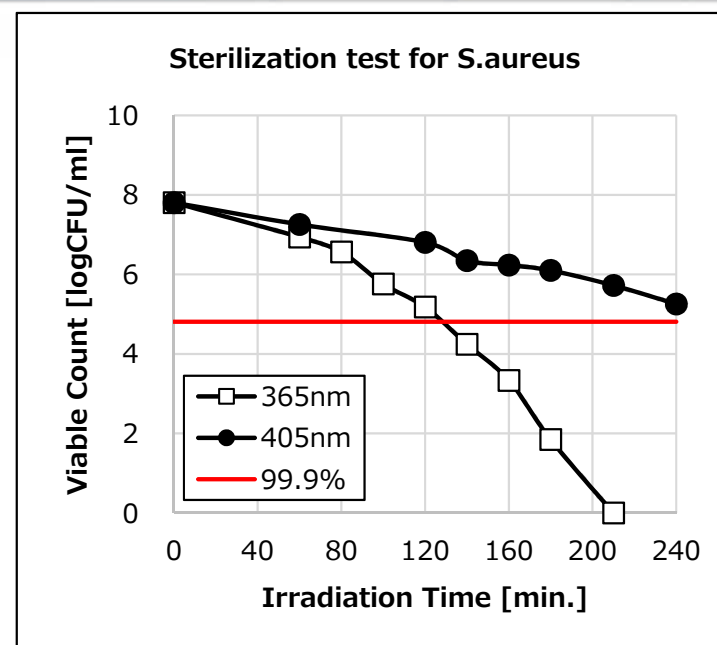
Irradiation Time	0 min. (1,000 dilution)	30 min. (1,000 dilution)	50 min. (1,000 dilution)	90 min. (1,000 dilution)	120 min. (1,000 dilution)
<i>P.Aeruginosa</i> Peak Wavelength 405nm Radiant Flux 1335mW					

Note: This data is a reference value, hence Nichia cannot make guarantee these results. Please treat this data the as reference.

# NVSU233B

## Sterilization Test (*S.aureus*/365nm)

Part No.		NVSU233B		Unit	
Wavelength Rank		365	405	nm	
Test Condition	Number of LED	1		pc.	
	Forward Current	1000	908	mA	
	Peak Wavelength	365	405	nm	
	Radiant Flux	1334	1335	mW	
	Working Distance	50		mm	
Irradiation <sup>1</sup> Time	Gram Negative Bacteria	E.coli	<b>180</b>	-	min.
		P.aeruginosa	<b>60</b>	<b>90</b>	
	Gram Positive Bacteria	S.aureus	<b>130</b>	-	



<sup>1</sup> Irradiation time for 99.9% sterilization.

<sup>2</sup> log = Logarithm  
CFU = Colony Forming Unit

Irradiation Time	0 min. (1,000 dilution)	60 min. (1,000 dilution)	120 min. (1,000 dilution)	180 min. (1,000 dilution)
S.Aureus Peak Wavelength 365nm Radiant Flux 1334mW				

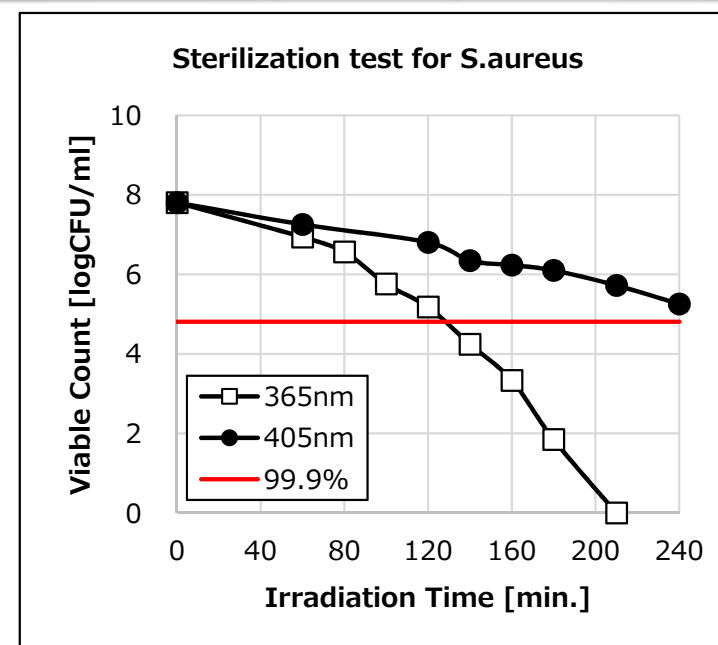
Note: This data is a reference value, hence Nichia cannot make guarantee these results. Please treat this data the as reference.

# NVSU233B

## Sterilization Test (*S.aureus*/405nm)

Part No.		NVSU233B		Unit	
Wavelength Rank		365	405	nm	
Test Condition	Number of LED	1		pc.	
	Forward Current	1000	908	mA	
	Peak Wavelength	365	405	nm	
	Radiant Flux	1334	1335	mW	
	Working Distance	50		mm	
Irradiation <sup>1</sup> Time	Gram Negative Bacteria	E.coli	<b>180</b>	-	min.
		P.aeruginosa	<b>60</b>	<b>90</b>	
	Gram Positive Bacteria	S.aureus	<b>130</b>	-	

<sup>1</sup> Irradiation time for 99.9% sterilization.



<sup>2</sup> log = Logarithm  
CFU = Colony Forming Unit

Irradiation Time	0 min. (1,000 dilution)	60 min. (1,000 dilution)	120 min. (1,000 dilution)	180 min. (1,000 dilution)	240 min. (1,000 dilution)
S.Aureus Peak Wavelength 405nm Radiant Flux 1335mW					

Note: This data is a reference value, hence Nichia cannot make guarantee these results. Please treat this data the as reference.

NCSU334A and NVSU233B are merely Nichia's part numbers.