Technical Information

Model

NDG7575

Features

· Optical Output Power : 1000mW
· Multi Transverse Mode
· Can Type : ϕ9.0mm Floating Mounted with Zenger Diode

Specifications

■ Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Ratings	Unit
Forward Current (Tc=25℃)	If	2.0	A
Allowable Reverse Current (Tc=25℃)	Ir(LD)	85	mA
Storage Temperature	Tstg	-40 ~ 85	℃
Operating Case Temperature	Tc	0 ~ 60	℃

■ Initial Electrical/Optical Characteristics

(Tc=25ºC)

| Item		Condition	Symbol	Min.	Typ.	Max.	Unit
Optical Output Power		If=1.6A	Po	0.7	(1.0)	-	W
Dominant Wavelength		If=1.6A	λp	515	(520)	525	nm
Threshold Current		CW	Ith	150	(230)	350	mA
Slope Efficiency		CW	η	0.5	(0.7)	1.2	W/A
Operating Voltage		If=1.6A	Vop	4.0	(4.6)	5.3	V
Beam Divergence *	Parallel	If=1.6A	θ//	5.0	(11.0)	25.0	deg.
	Perpendicular		$\theta\perp$	35.0	(46.0)	55.0	deg.
Beam Pointing Accuracy	Perpendicular	If=1.6A	$\Delta\theta\perp$	-5.0	-	5.0	deg.

（）are reference figures.

∗ Full angle at $1/e^2$ from peak intensity.

All figures in this specification are measured by Nichia's method and may contain measurement deviations.

**Model : NDG7575**

Outline

Dimension

Pin Connection

1. LD Anode
2. LD Cathode

This model has no Photo Diode.
This model has a Zenger Diode built in as a protection circuit against static electricity.

Unit (mm)
( ) are reference figures

Typical Optical / Electrical Characteristics
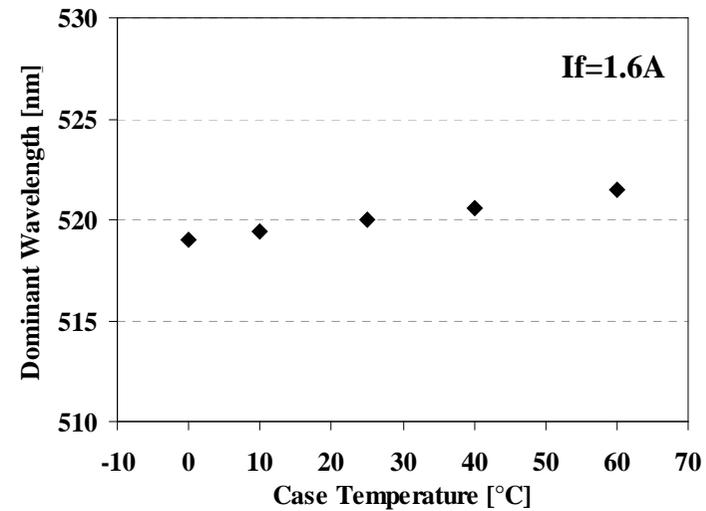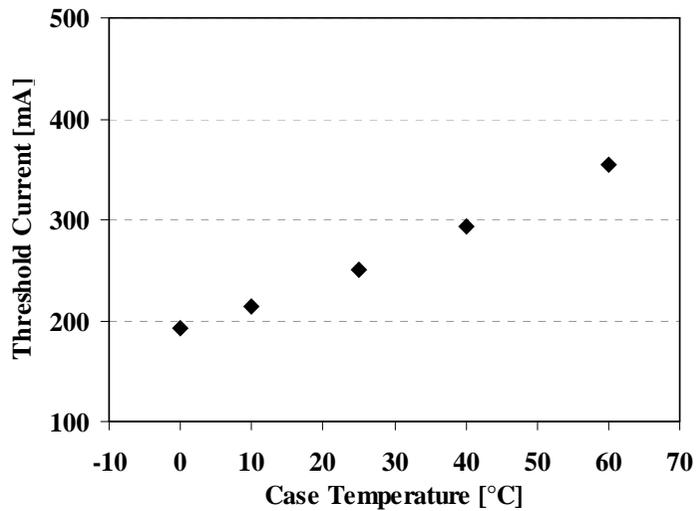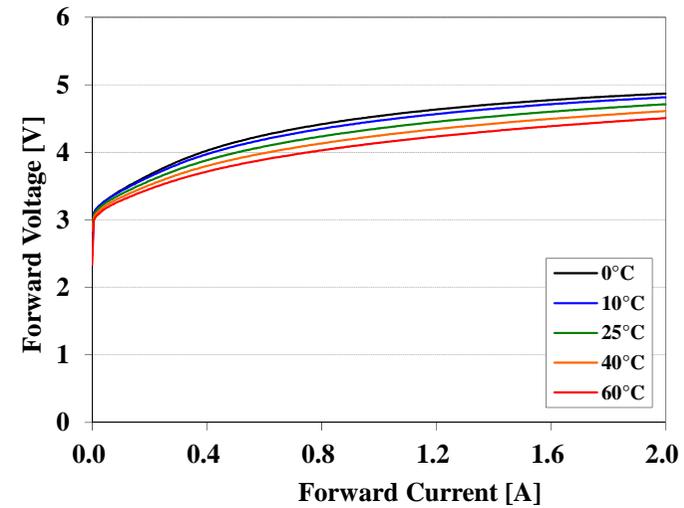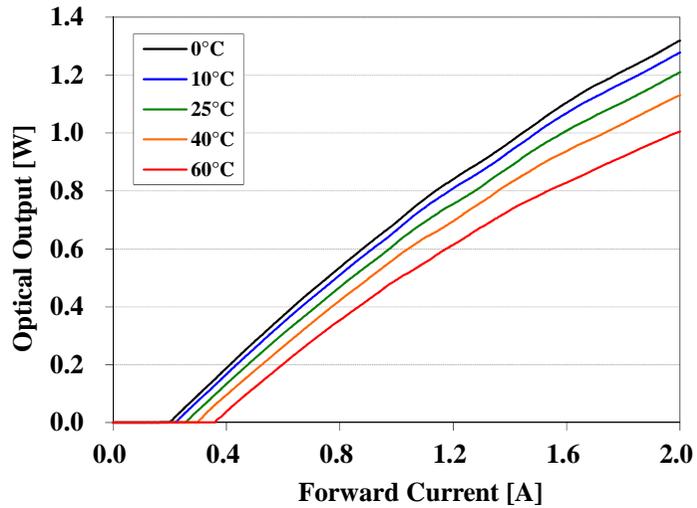
## Condition : CW

Spectrum1 (Forward Current Dependence)

Condition : Case Temperature = 25ºC

Forward Current = 0.8, 1.2, 1.6 A, CW

N = 10

Sample A

Spectrum Example：Sample A

Model : NDG7575
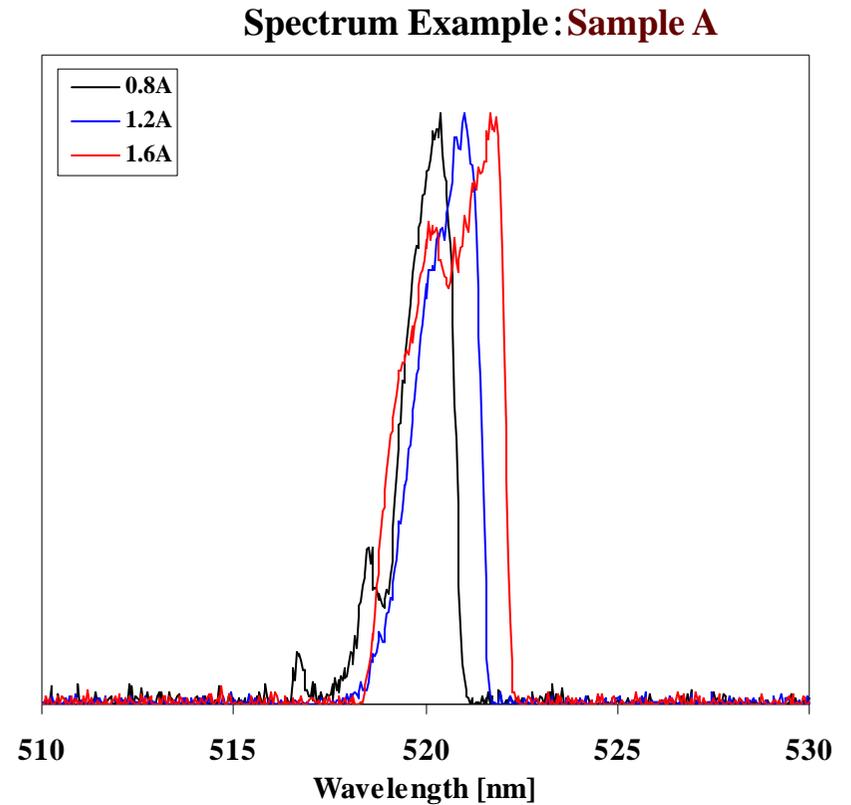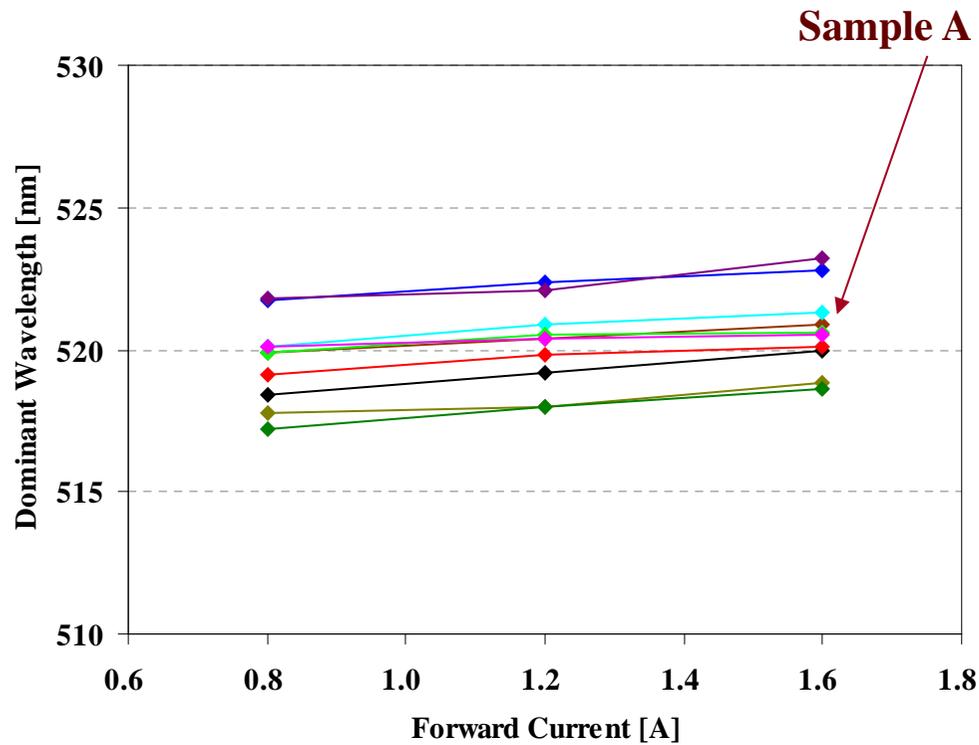
Spectrum2 (Case Temperature Dependence）

Condition : Case Temperature = 0, 10, 25, 40, 60ºC

Forward Current = 1.6A, CW

N = 10

Spectrum Example：Sample A
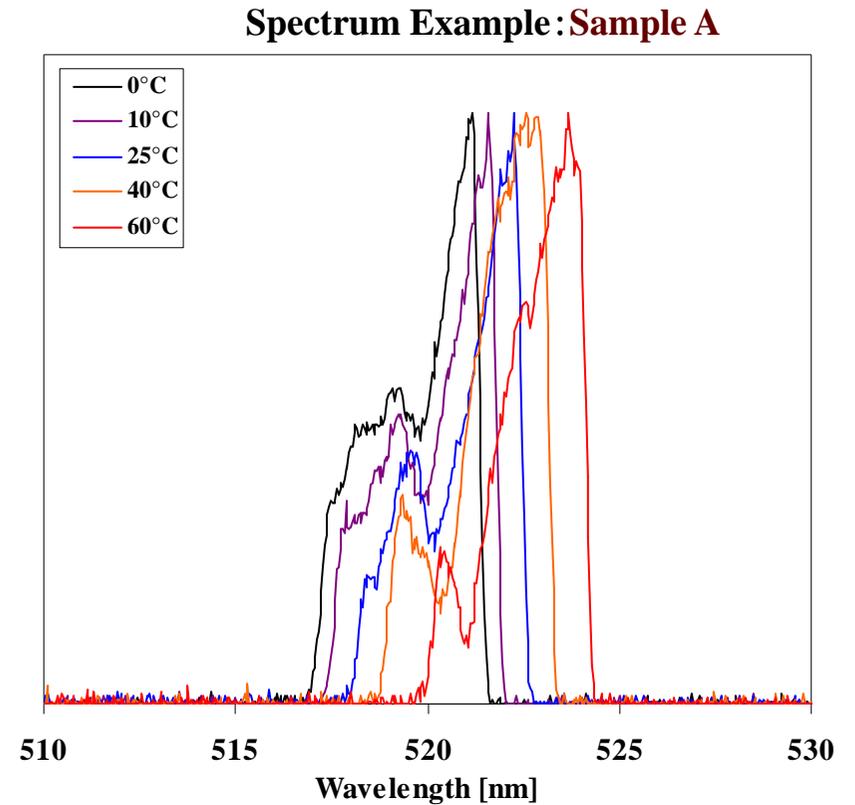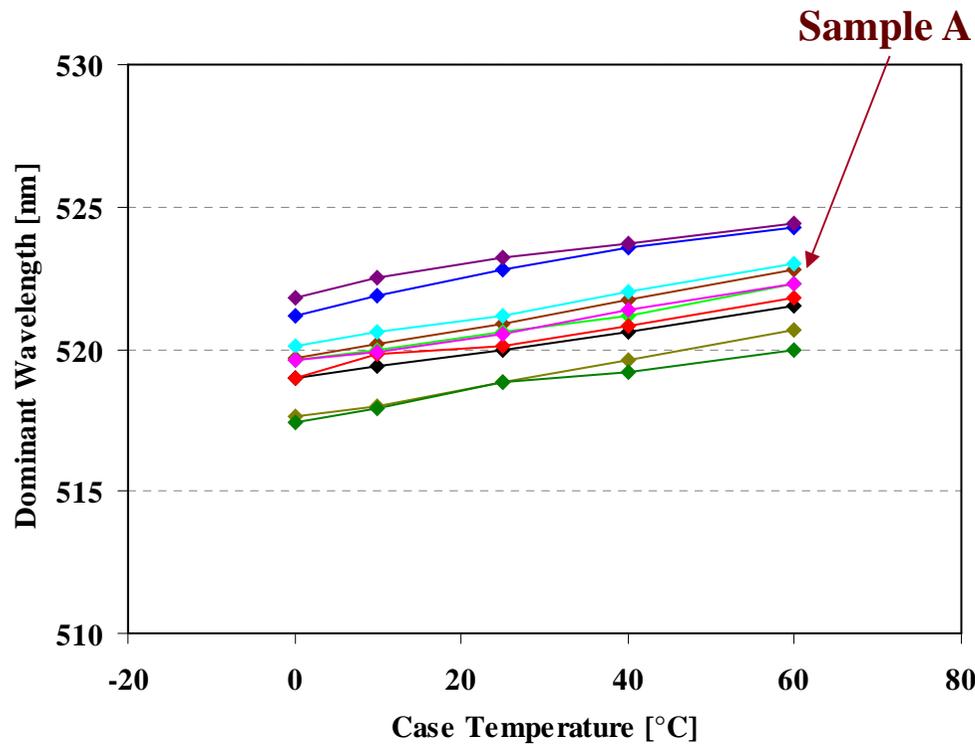
Sample A

FFP1 (Typical Characteristics)

Condition : Case Temperature = 25ºC

Forward Current = 1.6A, CW

<u>Sample 1</u>

$\theta// \ (1/e^2) : 11.2 \ [°]$

$\theta\perp \ (1/e^2) : 45.3 \ [°]$
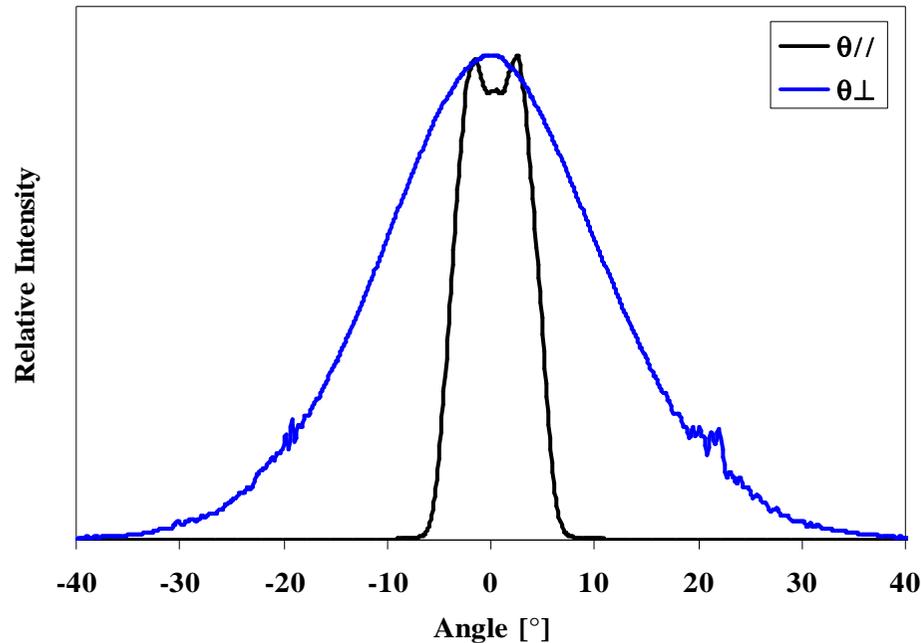
<u>Sample 2</u>

$\theta// \ (1/e^2) : 10.9 \ [°]$

$\theta\perp \ (1/e^2) : 44.0 \ [°]$

Model : NDG7575
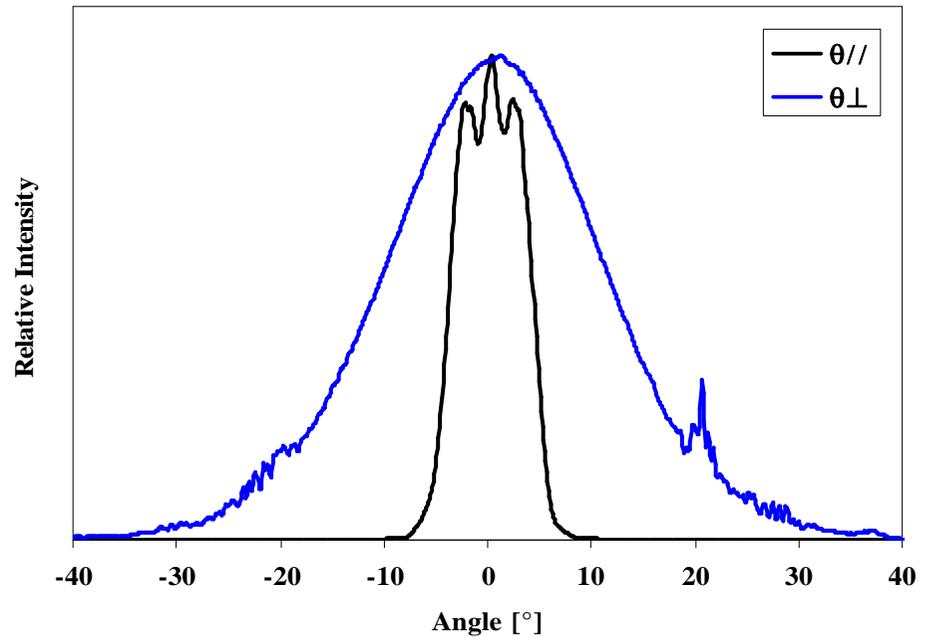
FFP2 (Forward Current Dependence)

Condition : Case Temperature = 25ºC

Forward Current = 0.8, 1.2, 1.6 A, CW

N = 10

Model : NDG7575
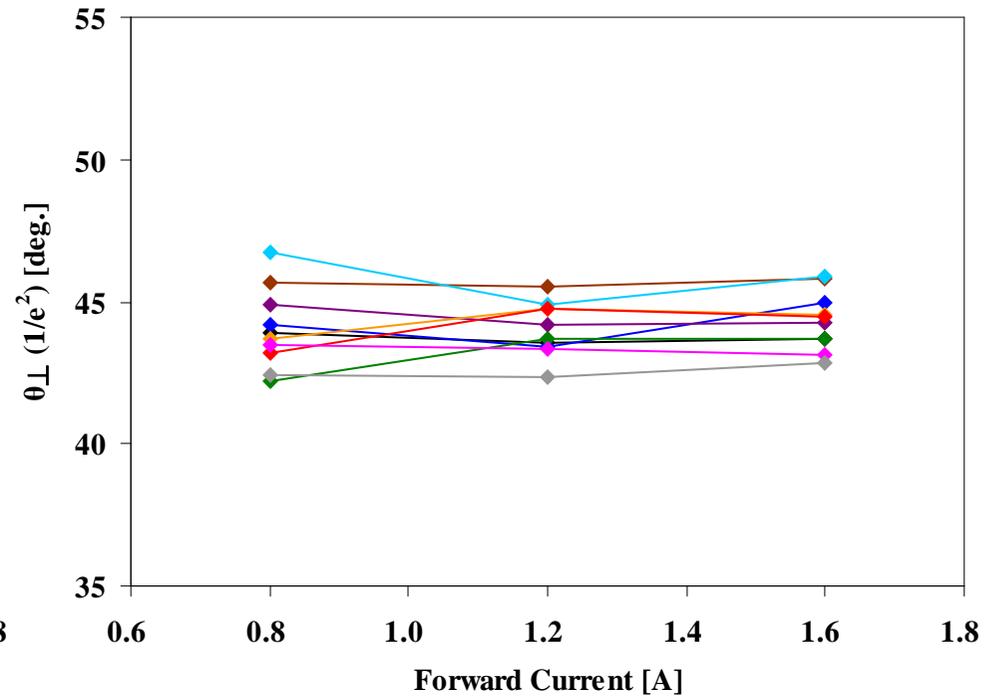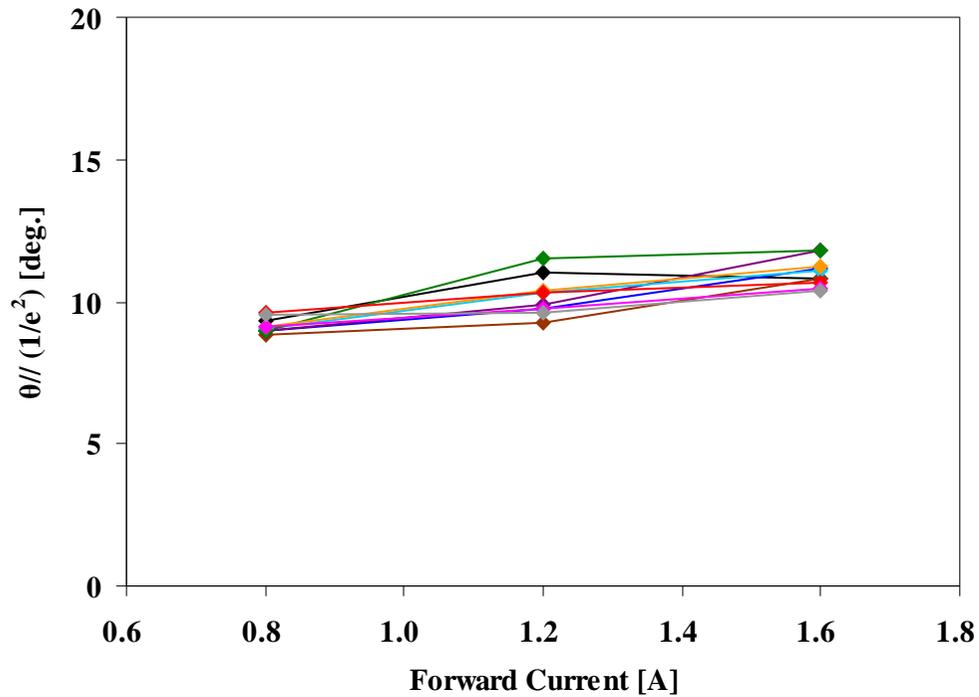
FFP3 (Case Temperature Dependence)

Condition : Case Temperature = 0, 10, 25, 40, 60ºC

Forward Current = 1.6A, CW

N = 10

Model : NDG7575
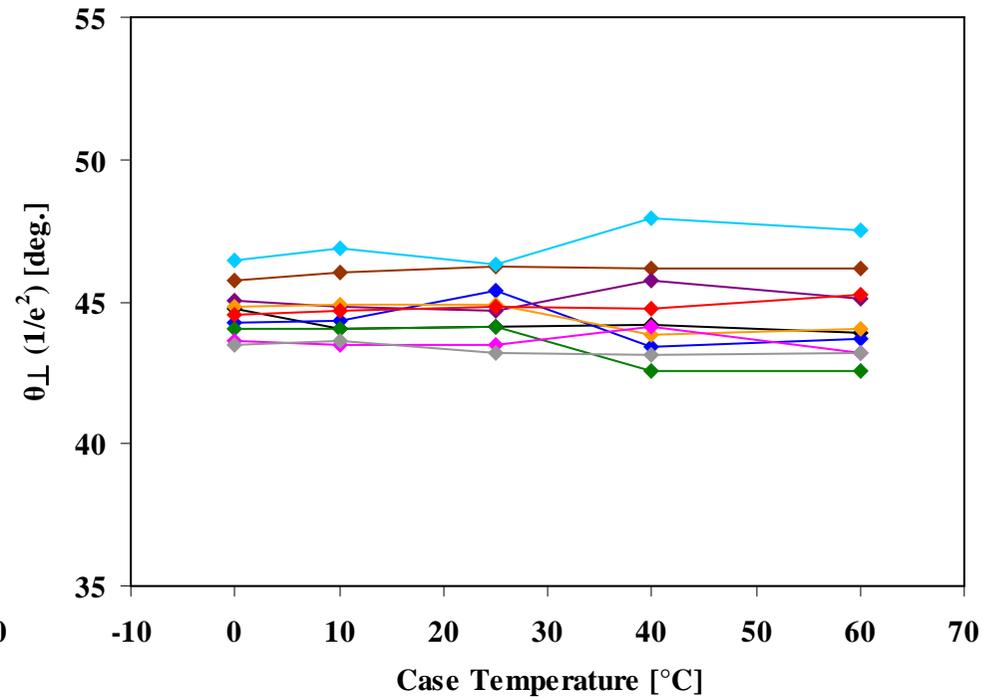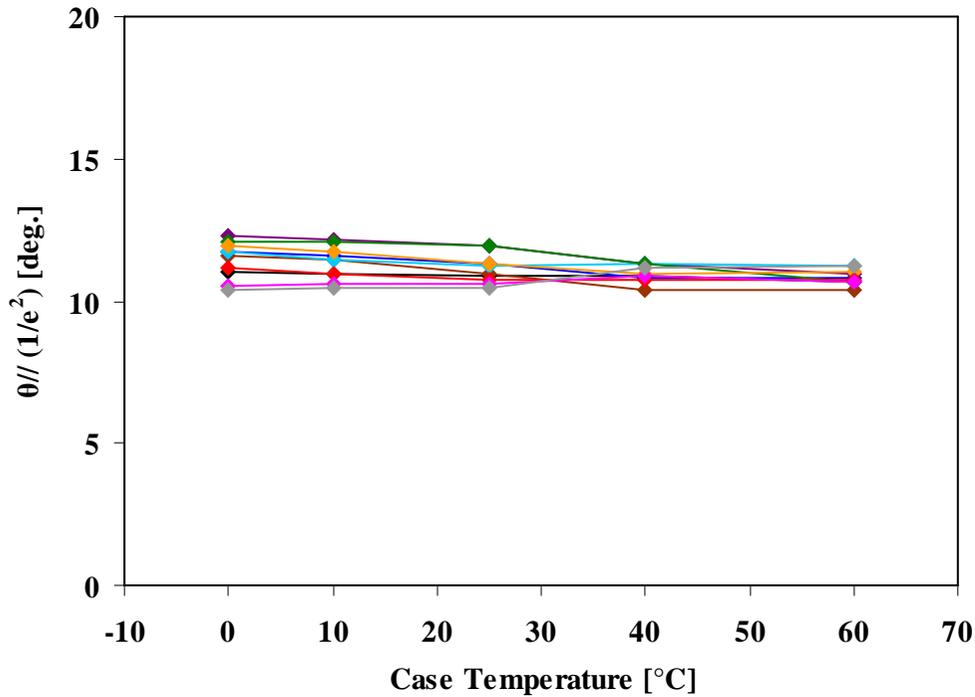
# NFP (Typical Characteristics)

Condition : Case Temperature = 25ºC
Forward Current = 1.6A, CW

Sample 1

// $(1/e^2)$: 14.3 [µm]
$\perp$ $(1/e^2)$: 0.9 [µm]
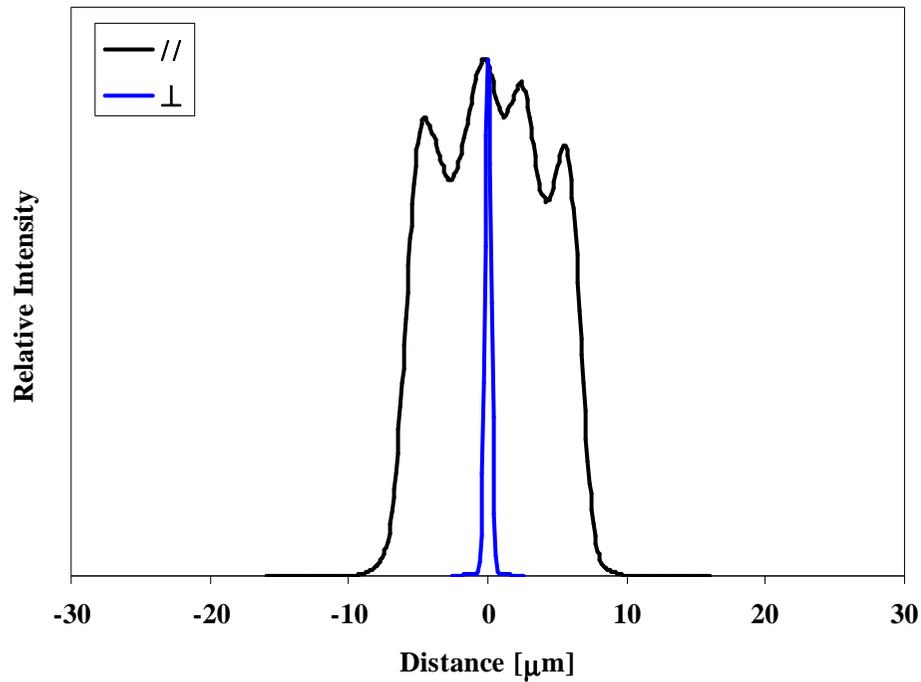
Sample 2

// $(1/e^2)$: 14.2 [µm]
$\perp$ $(1/e^2)$: 1.0 [µm]

Model : NDG7575
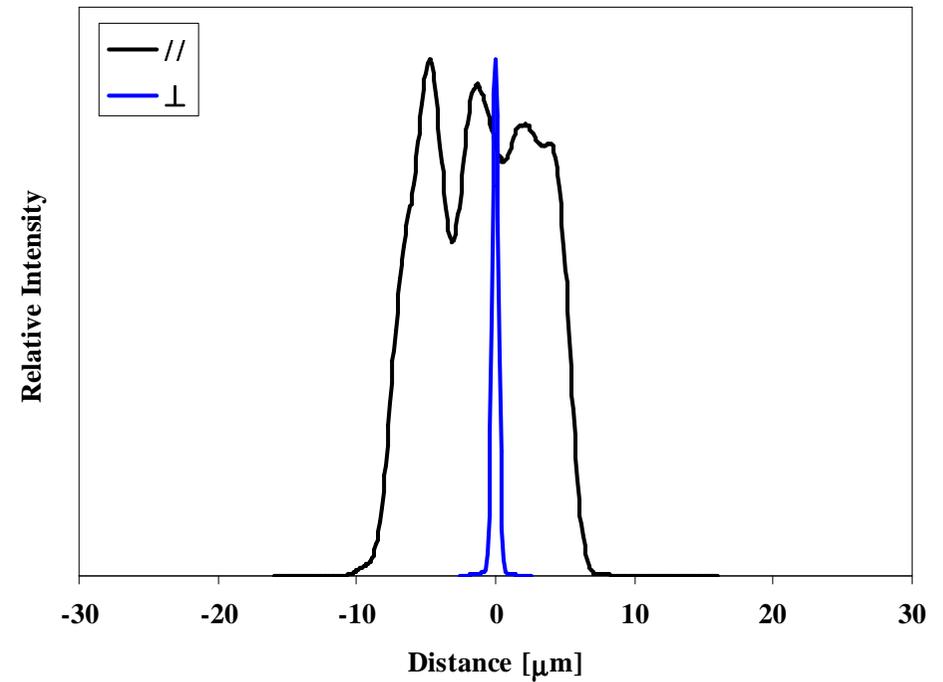
Polarization

Condition : Case Temperature = 25ºC
         Forward Current = 1.2, 1.4, 1.6A, CW
         Numerical Aperture = 0.5
         N = 10

Polarization Angle
Polarization Plane
(+)
(-)
TOP View

Model : NDG7575
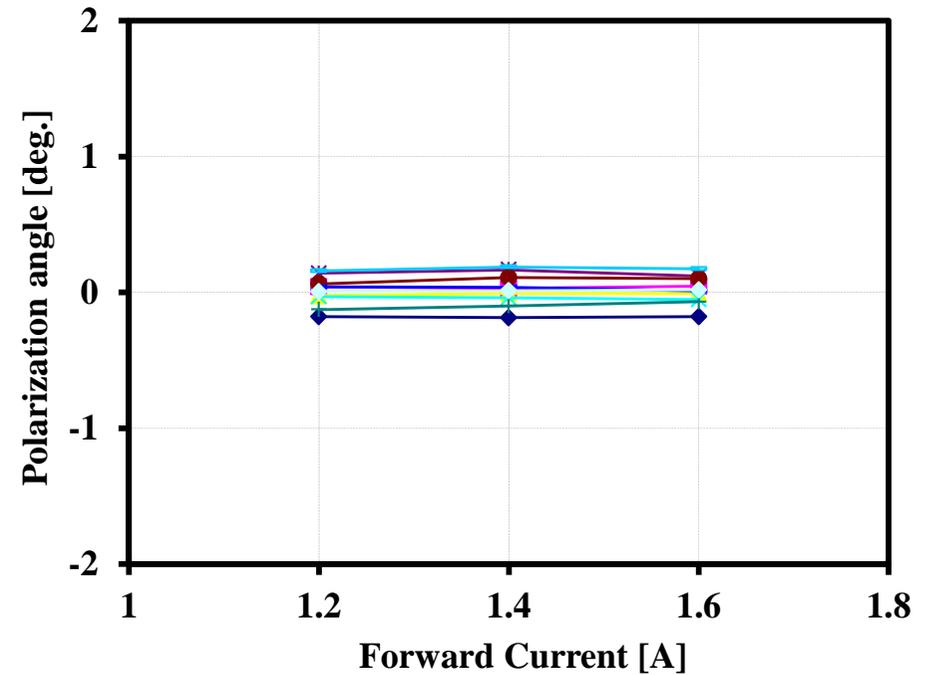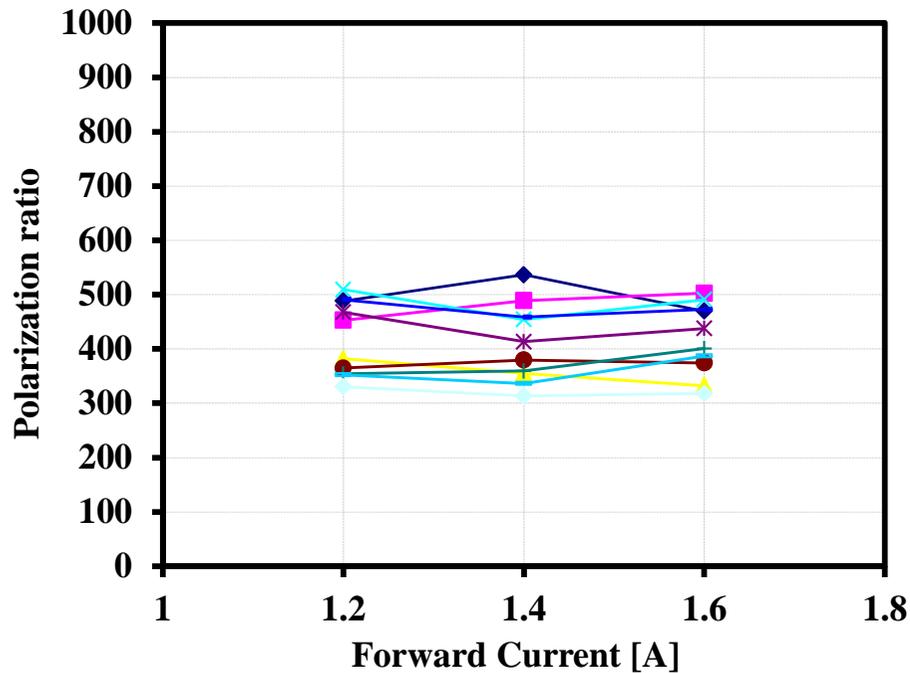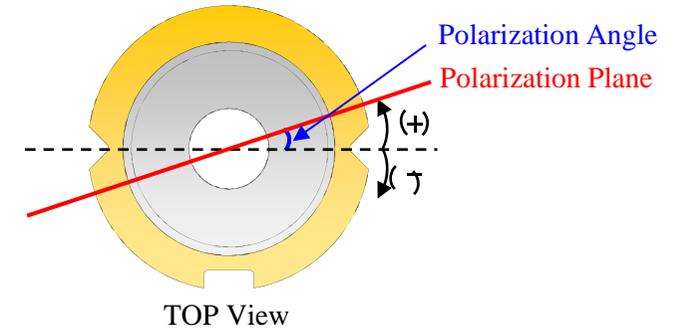
Estimated Life Time

Condition : Case Temperature = 60ºC
Forward Current = 1.6A(ACC), CW
Tested Duration = 1000hr, N = 24
Definition of Life-end: Initial Po × 0.5
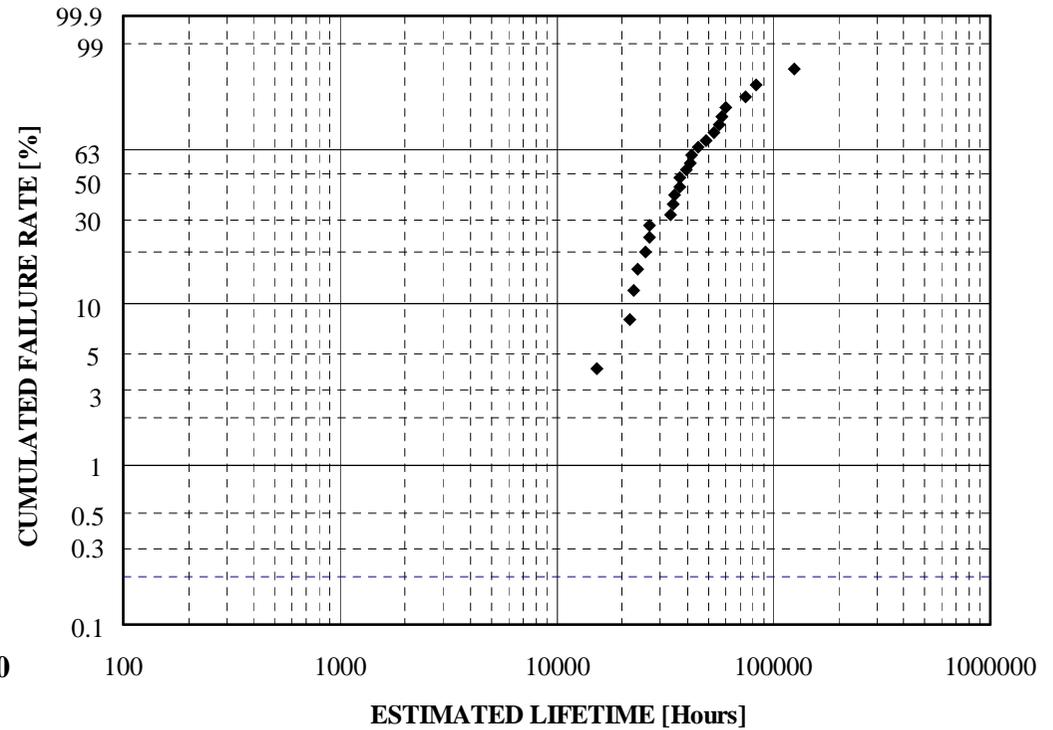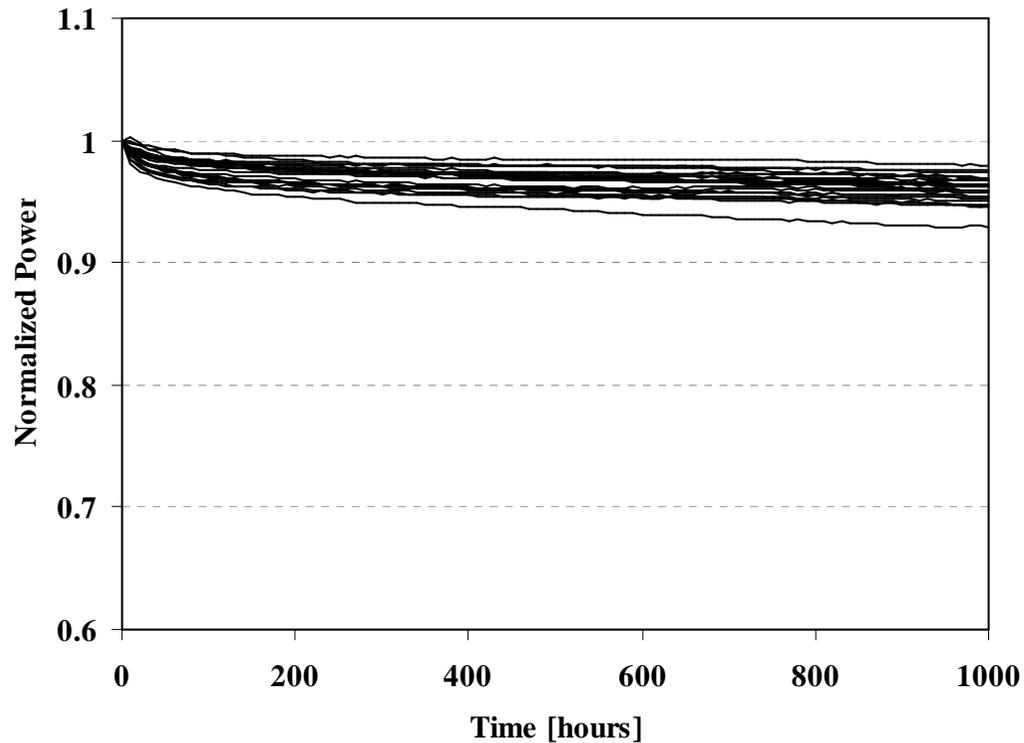
※This weibull data is estimated by 1000 hours life test.
Nichia does not guarantee this data and will update this data as needed.

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