

Standard specifications of 100 mm Sn-doped β -Ga₂O₃ (001) substrate

Items		Specifications
Orientation		(001)
Dopant		Sn
Conductivity		n-type
Resistivity ($\Omega \cdot \text{cm}$)		0.007–0.042
Dimensions	Diameter (mm)	100 ± 0.5
	Orientation flat width (mm)	32.5 ± 2.5
	Index flat width (mm)	18.0 ± 2.5
	Thickness (mm)	0.65 ± 0.02
	Reference	Fig. 1
Offset angle (degree)		[010] : 0 ± 1
		[100] : 0 ± 1
XRD FWHM (arcsec)		[010] : ≤ 50
		[100] : ≤ 50
Surface	Front	CMP
	Back	CMP

Remarks

1 Chipping may be up to <18 mm on the opposite side of the OF, and < 32.5 ± 2.5 mm on the OF side.

2 These products must be used for research and development purposes only.

3 The substrates must not be used as a seed crystal.

4 The specifications are subject to change without notice.

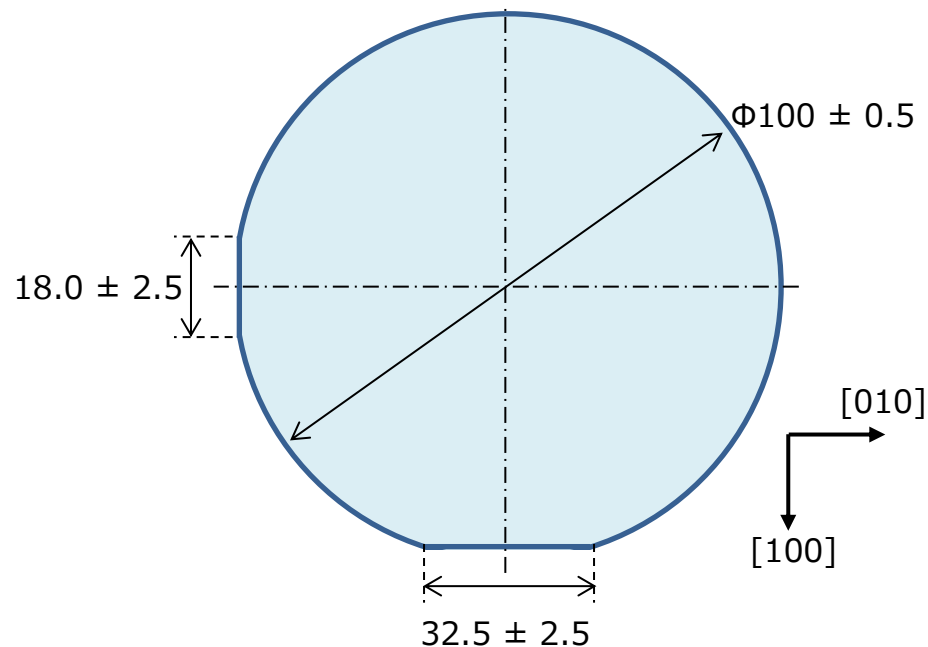


Fig. 1



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Standard specifications of 2 inch Sn-doped β -Ga₂O₃ (001) substrate

Items		Specifications
Orientation		(001)
Dopant		Sn
Conductivity		n-type
Resistivity ($\Omega \cdot \text{cm}$)		0.007–0.042
Dimensions	Diameter (mm)	50.8 ± 0.3
	Orientation flat width (mm)	15.9 ± 2.5
	Index flat width (mm)	8.0 ± 2.5
	Thickness (mm)	0.65 ± 0.02
	Reference	Fig. 2
Offset angle (degree)		[010] : 0 ± 1
		[100] : 0 ± 1
XRD FWHM (arcsec)		[010] : ≤ 50
		[100] : ≤ 50
Surface	Front	CMP
	Back	CMP

Remarks

1 Chipping may be up to <8 mm on the opposite side of the OF, and <15.9 ± 2.5 mm on the OF side.

2 These products must be used for research and development purposes only.

3 The substrates must not be used as a seed crystal.

4 The specifications are subject to change without notice.

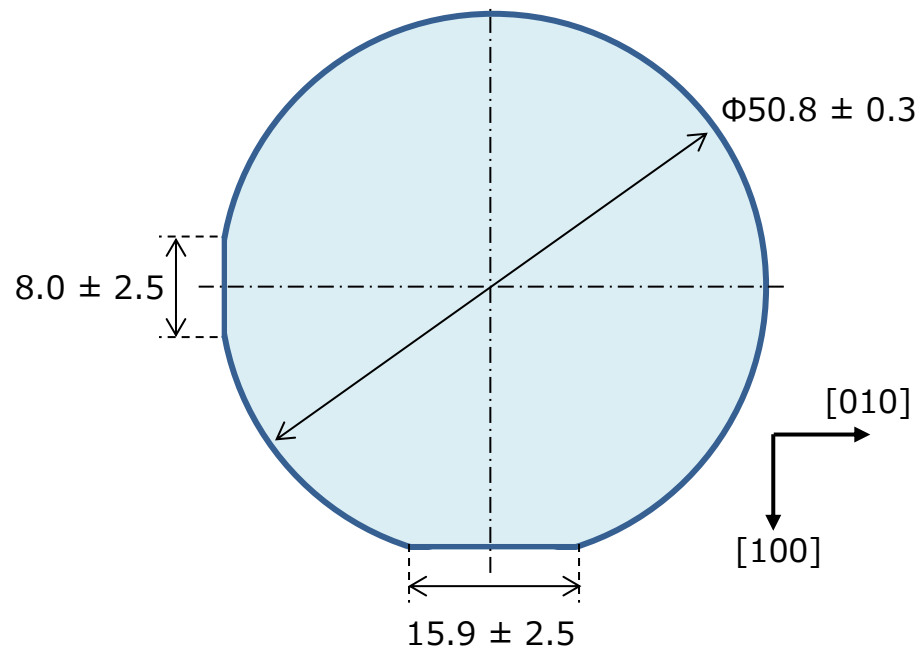


Fig.2



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Standard specifications of 10×15 mm² β-Ga₂O₃ (010) substrates

Items		Specifications		
Orientation		(010)		
Dopant		Sn	Undoped	Fe
Conductivity		n-type	n-type	Insulating ($>10^{10}\Omega \cdot \text{cm}$)
N_d-N_a (cm ⁻³)		$1\times10^{18}\text{--}9\times10^{18}$	$\leq 9\times10^{17}$	-
Dimensions	A-B (mm)	15 ± 0.3	15 ± 0.3	15 ± 0.3
	C-D (mm)	10 ± 0.3	10 ± 0.3	10 ± 0.3
	Thickness (mm)	0.5 ± 0.02	0.5 ± 0.02	0.5 ± 0.02
	Reference	Fig. 3	Fig. 3	Fig. 3
Offset angle (degree)		$\perp[102] : 0 \pm 1$	$\perp[102] : 0 \pm 1$	$\perp[102] : 0 \pm 1$
		$[102] : 0 \pm 1$	$[102] : 0 \pm 1$	$[102] : 0 \pm 1$
XRD FWHM (arcsec)		$\perp[102] : \leq 150$	$\perp[102] : \leq 150$	$\perp[102] : \leq 150$
		$[102] : \leq 150$	$[102] : \leq 150$	$[102] : \leq 150$
Surface	Front	CMP	CMP	CMP
	Back	Grinding	Grinding	Grinding

- Remarks
- 1 These products must be used for research and development purposes only.

2 The substrates must not be used as a seed crystal.

3 The specifications are subject to change without notice.

