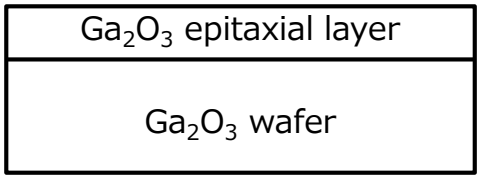
Standard specifications of Φ2 inch HVPE gallium oxide epitaxial wafers

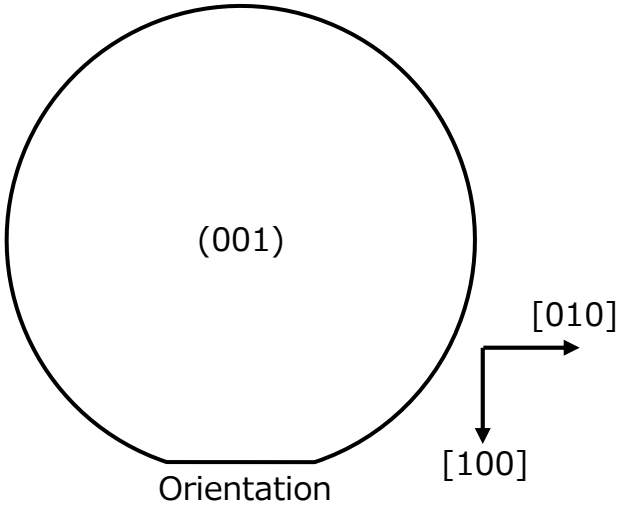
Epitaxial layer (Growth method: HVPE)

Property	Specification
Dopant	Si (n-type)
Doping concentration	Specify a value in the range between $2x10^{16}$ and $9x10^{16}$ cm^{-3}
Thickness	Specify a value in the range between 5 and 10 μm

Property	Specification
Dopant	Sn (n-type)
Doping concentration	$1\text{-}9x10^{18}$ cm^{-3}
Orientation	(001)
Size	Φ2 inch
Thickness	0.65 mm
XRD FWHM	≦350 arcsec
Off set angle	0°±1°



Cross section of Gallium oxide epitaxial wafers



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.

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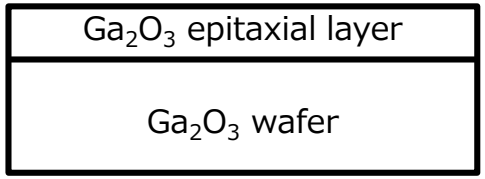
Standard specifications of MBE gallium oxide epitaxial wafers

Epitaxial layer (Growth method: MBE)

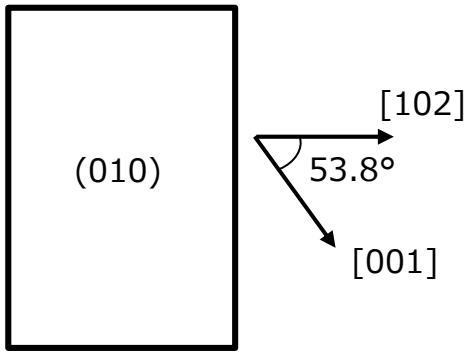
Property	Specification	
Dopant	Si (n-type)	Undoped (semi-insulating)
Doping concentration	Specify a value in the range between $5x10^{16}$ and $2x10^{18}$ cm^{-3}	-
Thickness	Specify a value in the range between 0.1 and 0.5 μm	



Cross section of Gallium oxide epitaxial wafers

Wafers

Property	Specification	
Dopant	Sn (n-type)	Fe (semi-insulating)
Doping concentration	1-$9x10^{18}$ cm^{-3}	-
Resistivity	-	≧10^{10} Ωcm
Orientation	(010)	
Size	10x15 mm^2	
Thickness	0.5 mm	
XRD FWHM	≦150 arcsec	
Off set angle	0°±1°	



Orientation

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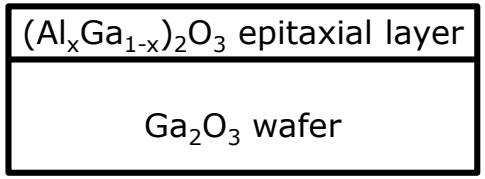
Novel Crystal Technology, Inc.

Standard specifications of MBE $(Al_xGa_{1-x})_2O_3$ epitaxial wafers

Epitaxial layer (Growth method: MBE)

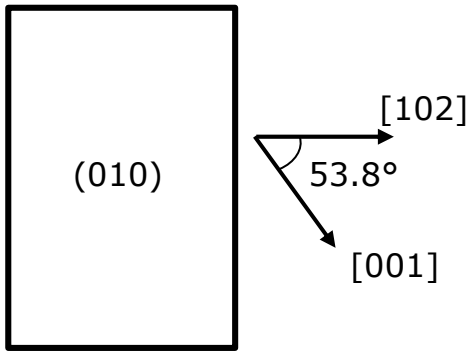
Property	Specification
Al mole fraction	$x \leqq 0.23$
Dopant	Si (n-type)
Doping concentration	$\leqq 1x10^{18}$ cm^{-3}
Thickness	≦60 nm



Cross section of Gallium oxide epitaxial wafer

Wafer

Property	Specification	
Dopant	Sn (n-type)	Fe (semi-insulating)
Doping concentration	1-9x10^{18} cm^{-3}	-
Resistivity	-	$\geqq 10^{10}$ Ωcm
Orientation	(010)	
Size	10x15 mm	
Thickness	0.5 mm	
XRD FWHM	≦150 arcsec	
Off set angle	0°±1°	



Orientation

Remarks
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3 The specifications are subject to change without notice.

Novel Crystal Technology, Inc.