

# Gallium-arsenide (GaAs) VGF-p type Wafer

Our gallium-arsenide (GaAs) VGF-p type wafers are widely used for LED applications and LD chips such as laser printers, etc.

## Feature

- Single-crystal growth by VGF method
- Low EPD
- High cleavage accuracy
- Epi-ready available

## Application Examples

- LD chips for laser printers
- LED chips for display

## Characteristic introduction

		VGF-p type Zn doped		VGF-p type Zn+Si doped	
Crystal growth method		VGF (Vertical Gradient Freezing) method		VGF (Vertical Gradient Freezing) method	
Dopant, Conduction type		P-type: Zn doped		P-type: Zn+Si doped	
Carrier concentration		P-type (0.5-3) E19 cm <sup>-3</sup> (adjustable within the above range)		P-type (0.5-3) E19 cm <sup>-3</sup> (adjustable within the above range)	
Dislocation density (cm <sup>-2</sup> )		EPD average ≤ 3,000 EPD max ≤ 10,000		EPD average ≤ 1,500 EPD max ≤ 10,000	
Size		4 inches	2 inches	4 inches	2 inches
Orientation		1. (100)0°/2°off±0.3° 2. Upon request		1. (100)0°/2°off±0.3° 2. Upon request	
Diameter (mm)		100.0±0.3	50.0±0.3 50.8±0.3	100.0±0.3	50.0±0.3 50.8±0.3
Thickness (μm)		450/625 ±25	350/450 ±25	450/625 ±25	350/450 ±25
OF/IF length	OF (mm)	32.5±1.0	16.0±1.0	32.5±1.0	16.0±1.0
	IF (mm)	18.0±1.0	8.0±1.0	18.0±1.0	8.0±1.0
		(adjustable upon request)		(adjustable upon request)	
OF/IF orientation	OF position IF position	EJ (Dove-Tail): [OF] (0-1-1)±0.05°/ [IF] (0-11)±0.5° or SEMI US (V-Groove): [OF] (01-1)±0.05°/ [IF] (011)±0.5° (cleavage and beveling are also possible)		EJ (Dove-Tail): [OF] (0-1-1)±0.05°/ [IF] (0-11)±0.5° or SEMI US (V-Groove): [OF] (01-1)±0.05°/ [IF] (011)±0.5° (cleavage and beveling are also possible)	
Edge		Beveling		Beveling	
Flatness	TTV (μm)	≤10.0	≤10.0 (TV)	≤10.0	≤10.0 (TV)
	Warp (μm)	≤10.0	≤10.0	≤10.0	≤10.0
Surface finish	Front surface	Mirror Polished		Mirror Polished	
	Back surface	Etching after Lapping (Mirror Polished is also available)		Etching after Lapping (Mirror Polished is also available)	
Surface treatment		Epi-ready		Epi-ready	
Laser marking		Option		Option	
Package		Cassette or Individual Container		Cassette or Individual Container	

