

# NIT-Epitec GaN FET Project

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Reactor: Veeco D-125 (3x2" substrates)

Substrate: 2" sapphire (0.15° off) or your spec.

Structure : standard or full ordered

Attached data : XRD (Philips X'Pert MRD)

Rs map (LEI 1510B)

mobility (non-destructive measurements, LEI 1600)

**Epitec**, a new venture established in collaboration between NIT (Nippon Institute of Technology) and Professor Suzuki at NIT, can provide you GaN FET epi wafers.

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# Nippon Institute of Technology

		Current Best	Typical
HEMT	Al Composition by XRD (%)	~31.2	≤30
	Al Composition Unif.(%)	1.61	~3
	AlGaIn Thickness Unif.(%)	10.2	13
	RMS (nm)(2μm×2μm)	0.22(at x=0.25)	~0.5 (at x=0.25)
	Rs (Ω/sq.)	Ave.: 355.4	Ave.:420
	Rs uniformity (%)	4.05	6.5
	μ (cm <sup>2</sup> /Vs)	1597	1300
	Ns (cm <sup>-2</sup> )	1.24x10 <sup>13</sup>	≥8.0x10 <sup>12</sup>
GaN Buffer	RMS (nm) (5mm×5mm)	0.15	0.15
	(002)FWHM (arcsec)*	267.5	~290
	(102)FWHM (arcsec)*	390.5	~490
	FWHM Unif. (%)	0.63	~3
	Rs (Ω/sq.)	Ave.:2.5x10 <sup>4</sup>	Ave.:3x10 <sup>3</sup>
	Rs Unif. (%)	17	~35

\*)PHILIPS X'pert MRD

