



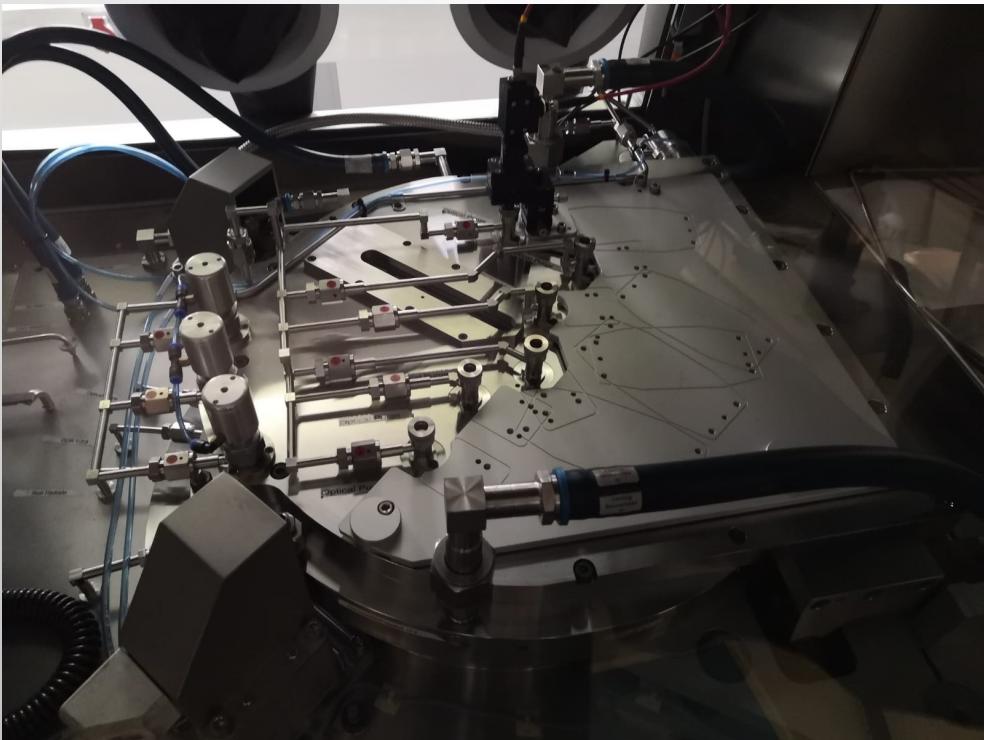
S O S G R O U P

**Aixtron Crius 31x2" MOCVD
SN 1001 700373 Vintage 09/2008
Currently in 2" Configuration**

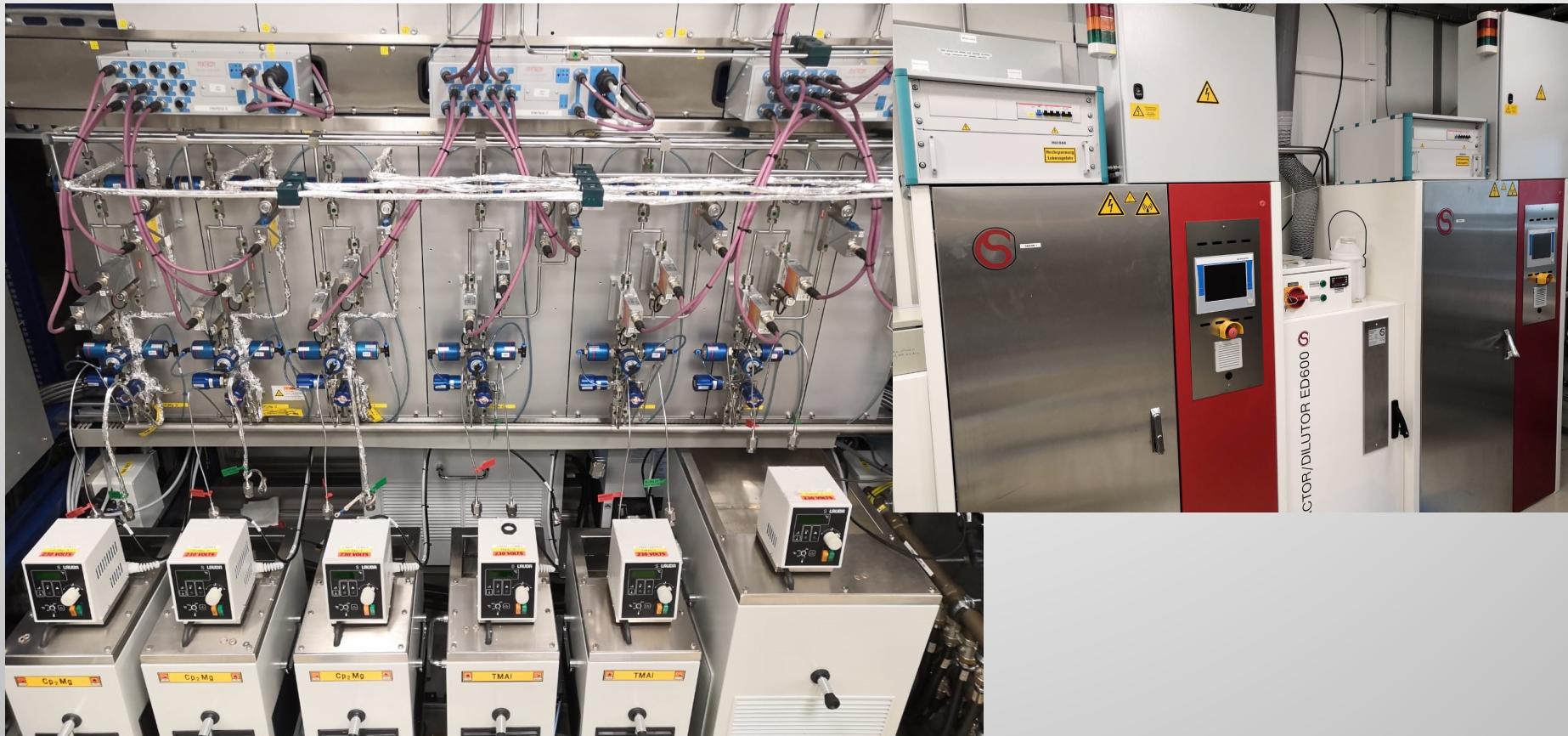
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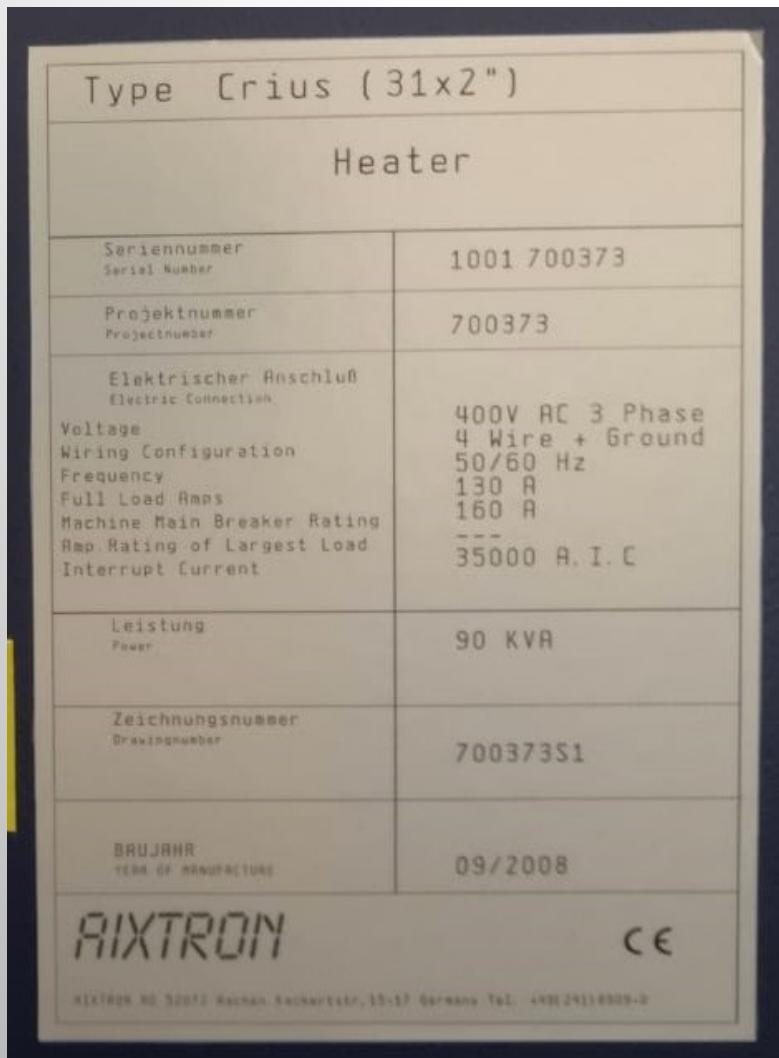
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Process specification in current configuration

GaN	Growth rate $r = 2$ to $3 \mu\text{m/h}$ Thickness uniformity $\sigma \leq 3\%$ Threading dislocation density on the surface $\rho_{TD} < 3e8 \text{ cm}^{-2}$ @ thickness $4 \mu\text{m}$
n-GaN:Si	$n \geq 1e18 \text{ cm}^{-3}$ Mobility $\mu \geq 300 \text{ cm}^2/\text{Vs}$ @ $n = 1e18 \text{ cm}^{-3}$ Doping uniformity $\sigma \leq 10\%$
p-GaN:Mg	$p \geq 5e17 \text{ cm}^{-3}$ Resistivity $\rho \leq 2\Omega\text{cm}$ Doping uniformity $\sigma \leq 10\%$
AlGaN	Al-composition up to 20% Al-composition uniformity $\sigma < 8\%$ of absolute value Growth rate $r = 1$ to $1.5 \mu\text{m/h}$
n-AlGaN:Si	$n \geq 1e18 \text{ cm}^{-3}$
p-AlGaN:Mg	$p \geq 1e17 \text{ cm}^{-3}$
InGaN/GaN MQW	1. Wavelength $470 \pm 10 \text{ nm}$ 2. Wavelength $520 \pm 10 \text{ nm}$ Wavelength uniformity $\sigma \leq 1\%$
AlGaN/GaN superlattice	Al-composition up to 40%



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