Available processes in the Centrotherm tubes

Tube 1_1 Polysilicon tube

Process	Parameter	Name of the recipe	Example
Deposition of polysilicon	Thickness Unit A/nm/um	Poly_Thickness_Unit	poly_8000_A poly_800_nm poly_0.8_um
Deposition of amorphous silicon	Thickness Unit A/nm/um	aSi_Thickness_Unit	aSi_8000_A aSi_800_nm aSi_0.8_um

Tube 1_2 Nitride tube

Process	Parameter	Name of the recipe	Example
Deposition of nitride	Thickness Unit A/nm/um	nit_Thickness_Unit	nit_8000_A nit_800_nm nit_0.8_um
Deposition of nitride in 2 layers with boat out	Total_Thickness Unit A/nm/um	nit2_Thickness_Unit	nit2_8000_A nit2_800_nm nit2_0.8_um
Deposition of nitride in n layers (no boat out)	Total_Thickness Unit A/nm/um	nitN_Thickness_Unit	nit8_8000_A nit8_800_nm nit8_0.8_um
Deposition of low stress nitride	Thickness Unit A/nm/um	lsnit_Thickness_Unit	lsnit_8000_A lsnit_800_nm lsnit_0.8_um
Deposition of low stress nitride in n layer (no boat out)	Thickness Unit A/nm/um	lsnitN_Thickness_Unit	lsnit8_8000_A lsnit8_800_nm lsnit8_0.8_um

Tube 1_3 Alloy tube

Process	Name of the recipe
Aluminium annealing in forming gas	AlSi

Tube 1_4 POCl tube

Process	Parameter1	Parameter2	Parameter3	Name of the recipe	Example
Phophorous doping in vapor phase	Temperature	Doping duration (min)	Annealing duration (min)	POCL_Temperature_Duration1_Duration2	POCL_1000_15_15

Tube 2_1 Dox tube

Process	Parameter1	Parameter2	Name of the recipe	Example
Oxidation in O_2	Thickness Unit A/nm/um	-	dox_Thickness_Unit	dox_8000_A dox_800_nm dox_0.8_um
Oxidation in O_2 with a specified temperature	Thickness Unit A/nm/um	Temperature	dox_Thickness_Unit_Temperature	dox_8000_A_900 dox_800_nm_900 dox_0.8um_900
Oxidation in O_2 with a specified temperature and duration	Temperature	Duration Unit min/H	dox_ Temperature_Duration_Unit	dox_950_120min dox_950_2H
Annealing in N_2 with a given temperature and duration	Temperature	Duration Unit min/H	dens_ Temperature_Duration_Unit	dens_950_120min dens_950_2H

Tube 2_2 Wetox tube

Process	Parameter1	Parameter2	Name of the recipe	Example
Oxidation in H_2/O_2	Thickness Unit A/nm/um	-	wox_Thickness_Unit	wox_8000_A wox_800_nm wox_0.8_um
Oxidation in H_2/O_2 with a specified temperature	Thickness Unit A/nm/um	Temperature	wox_Thickness_Unit_Temperature	wox_8000_A_900 wox_800_nm_900 wox_0.8um_900
Oxidation in H_2/O_2 with a specified temperature and duration	Temperature	Duration Unit min/H	wox_ Temperature_Duration_Unit	wox_950_120min wox_950_2H

Tube 2_3 Gateox tube

Process	Parameter1	Parameter2	Name of the recipe	Example
Oxidation in O_2	Thickness Unit A/nm/um	-	geox_Thickness_Unit	geox_8000_A geox_800_nm geox_0.8_um
Oxidation in O_2 with a specified temperature	Thickness Unit A/nm/um	Temperature	geox_Thickness_Unit_Temperature	geox_800_A_900 geox_80_nm_900 geox_0.08um_900
Oxidation in O_2 with a specified temperature and duration	Temperature	Duration Unit min/H	geox_ Temperature_Duration_Unit	geox_950_120min geox_950_2H
Oxidation in O_2 with DCE	Thickness Unit A	-	geoxc_ Thickness_Unit	geoxc_300_A

Tube 2_4 Diffusion tube

Process	Parameter1	Parameter2	Name of the recipe	Example
Oxidation in O_2	Thickness Unit A/nm/um	-	doxd_Thickness_Unit	doxd_8000_A doxd_800_nm doxd_0.8_um
Oxidation in O_2 with a specified temperature	Thickness Unit A/nm/um	Temperature	doxd_Thickness_Unit_Temperature	doxd_8000_A_900 doxd_800_nm_900 doxd_0.8um_900
Oxidation in O_2 with a specified temperature and duration	Temperature	Duration Unit min/H	doxd_ Temperature_Duration_Unit	doxd_950_120min doxd_950_2H

Process	Parameter1	Parameter2	Name of the recipe	Example
Annealing in N_2 with a given temperature and duration	Temperature	Duration Unit min/H	diff_ Temperature_Duration_Unit	diff_950_120min diff_950_2H

Process	Parameter1	Parameter2	Name of the recipe	Example
Oxidation in H_2/O_2	Thickness Unit A/nm/um	-	woxd_Thickness_Unit	woxd_8000_A woxd_800_nm woxd_0.8_um
Oxidation in H_2/O_2 with a specified temperature	Thickness Unit A/nm/um	Temperature	woxd_Thickness_Unit_Temperature	woxd_8000_A_900 woxd_800_nm_900 woxd_0.8_um_900
Oxidation in H_2/O_2 with a specified temperature and duration	Temperature	Duration Unit min/H	woxd_ Temperature_Duration_Unit	woxd_950_120min woxd_950_2H

Tube 3_1 LTO tube

Process	Parameter	Name of the recipe	Example
Low thermal oxide deposition	Thickness Unit A/nm/um	LTO_Thickness_Unit	LTO_8000_A LTO_800_nm LTO_0.8_um
Phophorous Silica Glass deposition	Thickness Unit A/nm/um	PSG_Thickness_Unit	PSG_8000_A PSG_800_nm PSG_0.8_um
Borous Silica Glass deposition	Thickness Unit A/nm/um	BSG_ Temperature_Duration_Unit	BSG_8000_A BSG_800_nm BSG_0.8_um
Borous Phosphorous Silica Glass deposition	Thickness Unit A/nm/um	BPSG_ Temperature_Duration_Unit	BPSG_8000_A BPSG_800_nm BPSG_0.8_um

Tube 3_2 TEOS tube

Process	Parameter	Name of the recipe	Example
TEOS deposition	Thickness Unit A/nm/um	TEOS_Thickness_Unit	TEOS_8000_A TEOS_800_nm TEOS_0.8_um

Tube 3_4 MEMS tube

Process	Parameter1	Parameter2	Name of the recipe	Example
Oxidation in O_2	Thickness Unit A/nm/um	-	doxd_Thickness_Unit	doxm_8000_A doxm_800_nm doxm_0.8_um
Oxidation in O_2 with a specified temperature	Thickness Unit A/nm/um	Temperature	doxd_Thickness_Unit_Temperature	doxm_8000_A_900 doxm_800_nm_900 doxm_0.8um_900
Oxidation in O_2 with a specified temperature and duration	Temperature	Duration Unit min/H	doxd_ Temperature_Duration_Unit	doxm_950_120min doxm_950_2H

Process	Parameter1	Parameter2	Name of the recipe	Example
Oxidation in H_2/O_2	Thickness Unit A/nm/um	-	wox_Thickness_Unit	woxm_8000_A woxm_800_nm woxm_0.8_um
Oxidation in H_2/O_2 with a specified temperature	Thickness Unit A/nm/um	Temperature	wox_Thickness_Unit_Temperature	woxm_8000_A_900 woxm_800_nm_900 woxm_0.8um_900
Oxidation in H_2/O_2 with a specified temperature and duration	Temperature	Duration Unit min/H	wox_ Temperature_Duration_Unit	woxm_950_120min woxm_950_2H

Process	Name of the recipe
Tunable thermal treatment	TempBoatIn_Gas_StepNumber_Temp1_Temp2…Duration1_Duration2…TempBoatOut

	Min	Max	By default
Boat in	120C	700C	200
Number of step	1	5	1
Temperature of each step	200C	1050C	-
Duration of each step	1min	1800min	-
Boat out	120C	700C	200

Gas
N2
N2/H2 5%
N2/H2 9%
N2/O2
O2