KLA-Tencor Candela 8720 Introduction

General

The Candela 8720 advanced integrated surface and photoluminescence (PL) defect inspection system captures a variety of mission-critical substrate and epitaxial defects. Implementation of automated wafer inspection with statistical process control (SPC) methodology significantly cuts yield loss due to epi defects, minimizes metal-organic chemical vapor deposition (MOCVD) reactor process excursions, and increases MOCVD reactor uptime.

Configuration

Main Body	1 set
Handler	1set including cassette,robot,pre-aligner etc.
UI	1 set including monitor,keyboard etc.

Specification

Item	**Specification**	
Wafer Size	up to 200mm	
Channel	Scatter Normal, Scatter Oblique Reflectivity (specular) Slope (topography) Phase	
Laser Type	Oblique Laser Diode 405nm Normal Laser Diode 660nm	
Material	**Defect**	**Spec**
Si	Particle	60nm PSL equivalent
	Stain	Thickness:1nm,Diameter 20um
GaN EPI	Particle	0.5um PSL equivalent (GaN on Si)
	Epi height defect	Height>30nm;Length>30um(Sapphire) Height>50nm;Length>30um(PSS) Height>30nm;Length>30um(GaN on Si)
	pit	Width>0.5um(Sapphire) Width>0.6um(PSS) Width>0.5um(GaN on Si)
	stain	Detection stain after calibration (GaN on Si)
	Scratch	Width>0.5um;Depth>75nm
	Cracks	subsurface<20um below surface
Repeatability	Count：CV*≤5.0% (EPI height defect mean count, EPI Height defect on GaN on Si sample) *CV = coefficient of variance, σ/μ	

Defect accuracy	80-95%
Defect coordinate accuracy	≤±50μm

Working Condition

Item	Specification
Power	220 V, 50 Hz,20A
CDA	100psi(±10%)；80L/min(±10%)；1/4inch OD
Vacuum	-90KPa(±10%)；18L/min(±10%)；1/4inch OD
Cleanroom class	Class 10 or better