

PM-400

Powered by Gocator
Sensors from
LMI Technologies



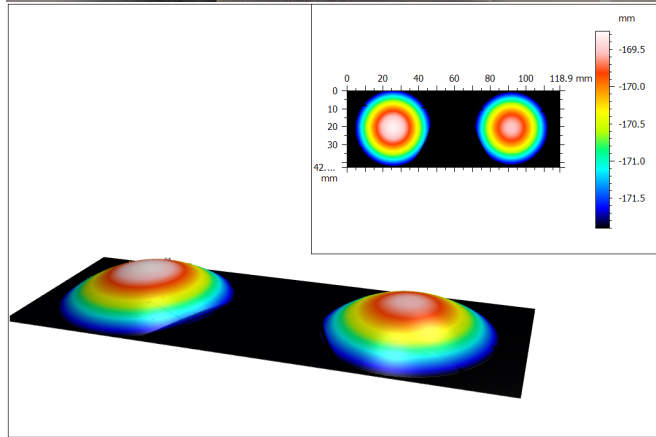
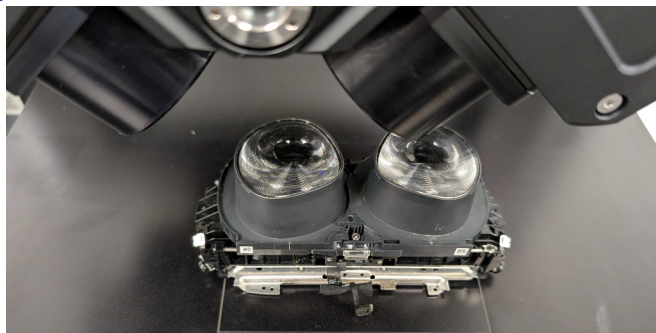
Laser Confocal
Scanning Platform

Contents

Introduction	1
Specifications	2
Dimensions	3
Example Part String	5
Examples of Ordering Options	6
CaptureUI Overview	7
Peak Analysis Software Overview	8
What to Order from LMI Technologies	9
Accessory Fixture Plates	10

PM-400

Laser Confocal Scanning Platform



Lens inspection from VR goggle assembly

Easy Recipe Creation

Software tools provided for scan area setup, recipe generation, and analysis:

- Gets scan data quickly
- Stitches data for large area scans (supports scans with over 2 billion points)
- Automates surface analysis

Contact us today to find out more:

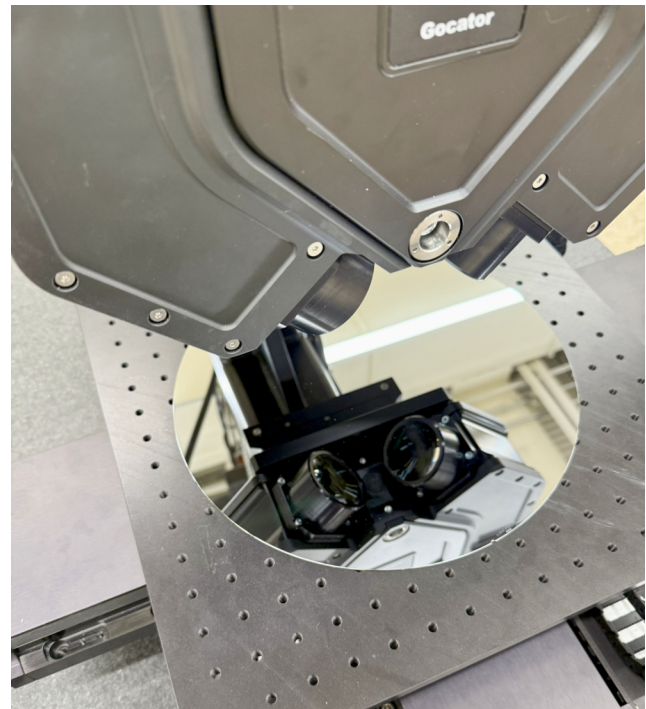
e: sales@peakmetrology.com

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How Does it Work?

Unlock the precision of the Gocator laser confocal line sensors:

- 400x400x200mm measurement volume
- Industry-leading precision motion technology

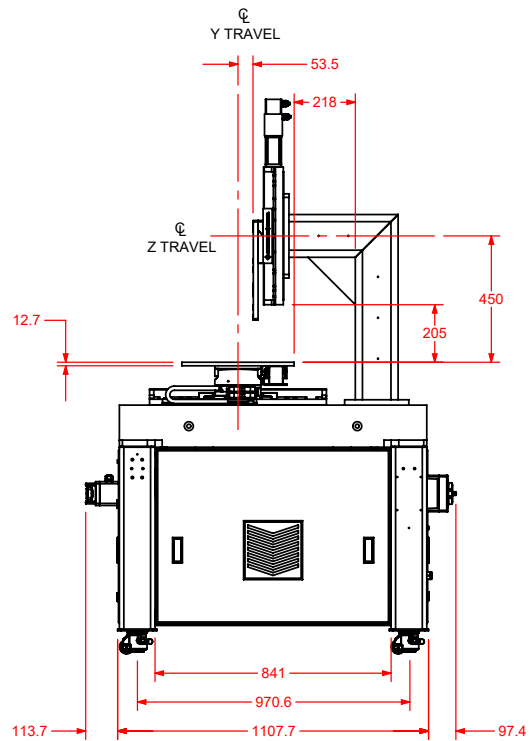
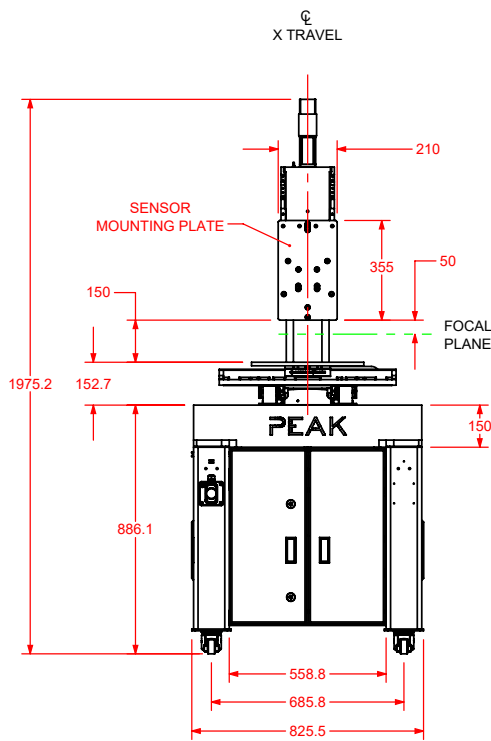
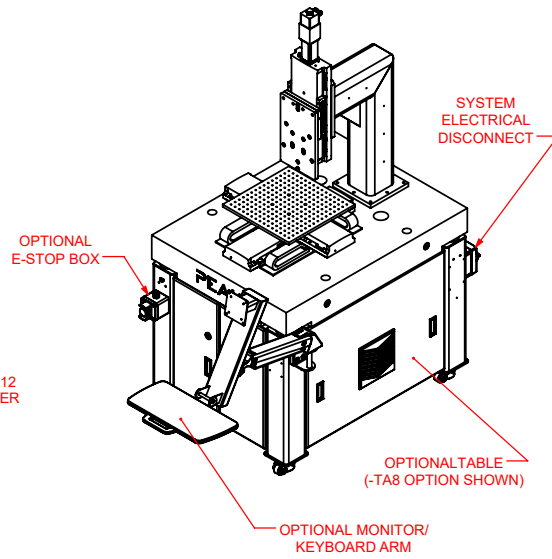
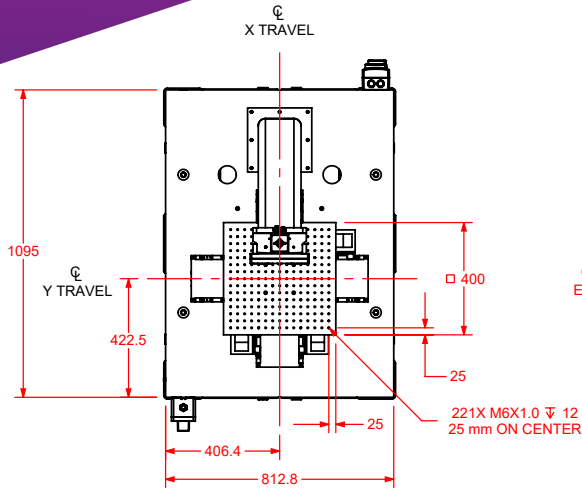


Wafer scanning with the PM-400

Specs

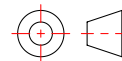
PM-400 Specifications	
Inspection Volume	400 x 400 x 200 mm
Max Data Collection	2.14 billion points
Compatible Sensors	All Gocator 4000 and 5500 Series Sensors
XY Performance	
Accuracy	± 1.5 µm
Repeatability	± 0.5 µm
Encoder Resolution	0.1 µm
Mass Information	
Base System	500 kg
Open Table (-TA5/-TA6)	120 kg
Enclosed Table (-TA7/-TA8)	155 kg
Mechanical Specifications	
Payload Capacity	35 kg
MTBF (Mean Time Before Failure)	20,000 Hours

Dimensions



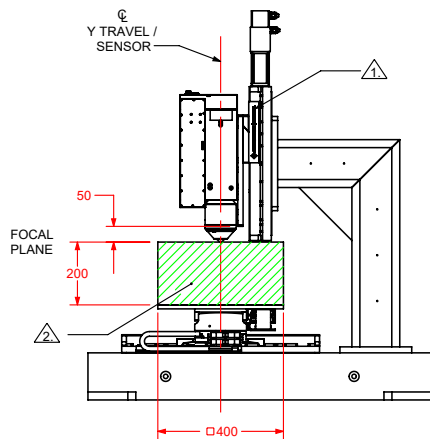
AXIS	NOMINAL TRAVEL
X	400
Y	400
Z	200

DIMENSIONS: MILLIMETERS

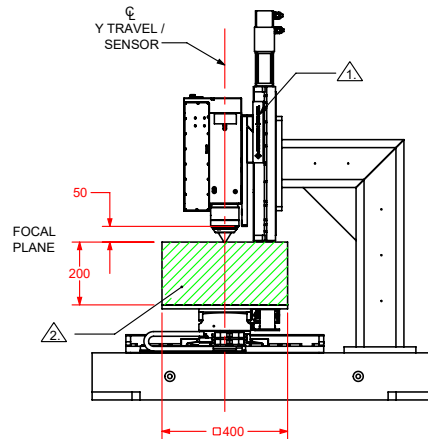


Dimensions

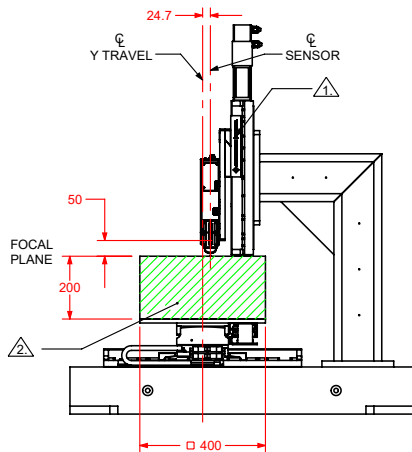
G4010 / G4011



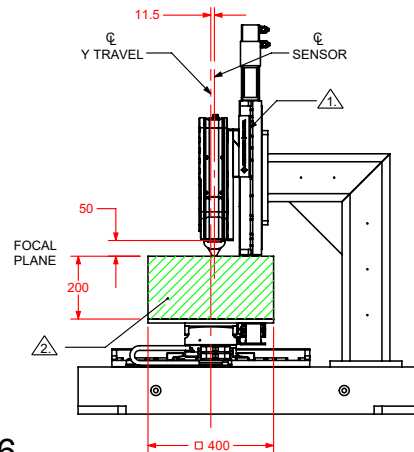
G4020 / G4021



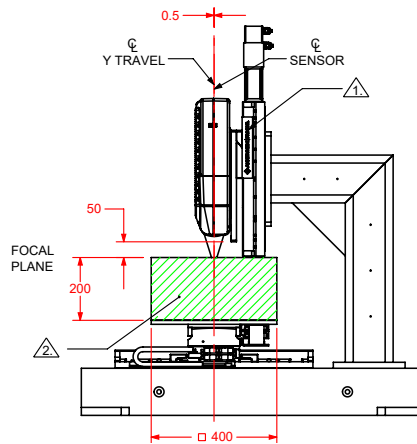
G5504



G5512



G5516



NOTES:

- ⚠ Z-AXIS SHOWN AT THE MAXIMUM TRAVEL
- ⚠ MEASUREMENT VOLUME

DIMENSIONS: MILLIMETERS



Ordering

Required

PM-400

-TA7

-ESTOP

-OS

-LC1

Product

Table

- TA0: None
- TA5: Rigid Table, Open
- TA6: Air Table, Open
- TA7: Rigid Table, Enclosed
- TA8: Air Table, Enclosed

Monitor Arm*

- OS: Operator Station¹

Emergency Stop*

- ESTOP: Emergency Stop

Line Cord*

- LC0: Flying Leads
- LC1: US115VAC
- LC2: US230VAC
- LC3: German
- LC4: UK

* Optional - omit if not desired

¹ Requires -TA5-8 options

Ordering

What's included?

Base Product

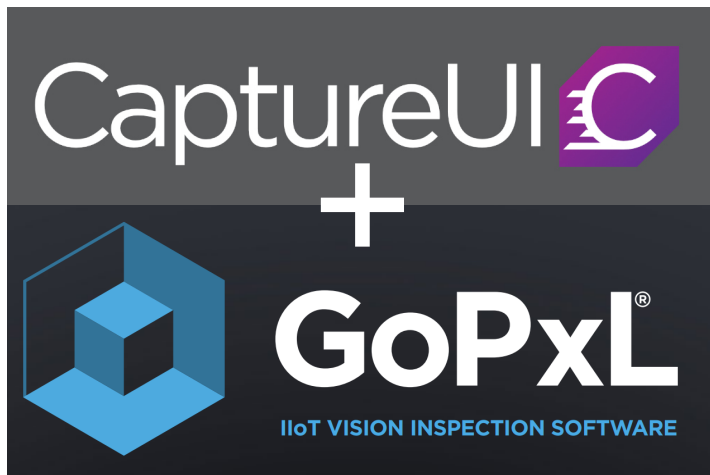
- Motorized XYZ stage
- Sensor Mounting Plate
- Controls Box

Table (optional)

- Rigid or Air Isolation options
- Open-frame or Enclosed options
- Emergency Stop button
- Monitor Arm with Keyboard Tray



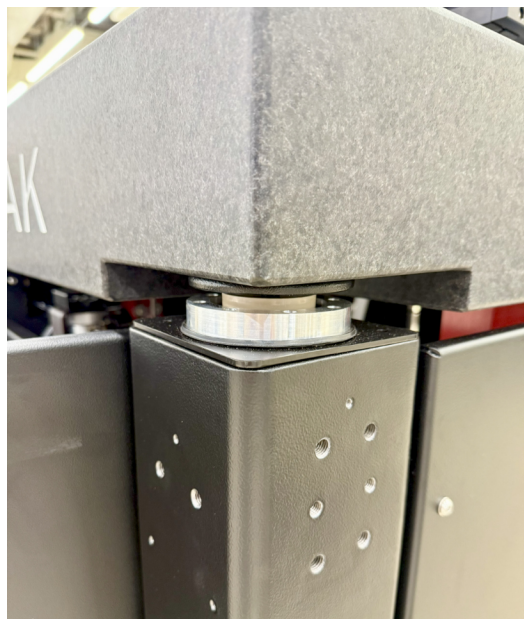
Emergency Stop button



Powerful software

Leverage Peak's CaptureUI software to quickly capture surface data over large areas with automatic stitching. Data can then be analyzed in LMI Technologies' feature-filled GoPXL software with tools such as defect detection, dimensional analysis, tolerance-based decision making, and more...

Additionally, users can also utilize Peak Analysis Software for advanced surface characterization and metrology reporting capabilities.



Embedded Air Isolator for low-profile vibration control

Control for your environment

We'll work with you to characterize your floor vibrations, offering:

- On-site floor vibration measurements
- Standard air-isolation options, when needed

PEAKTM
METROLOGY

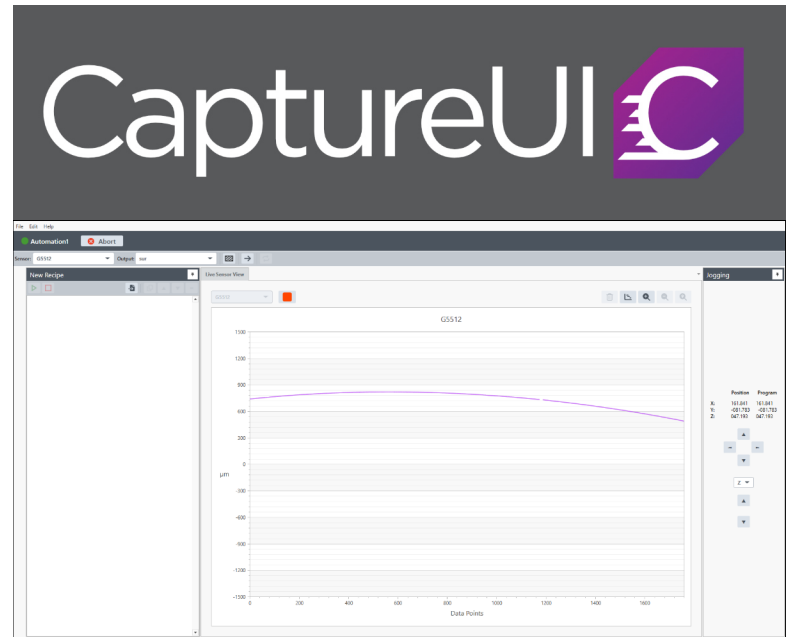
An AEROTECH Company

CaptureUI

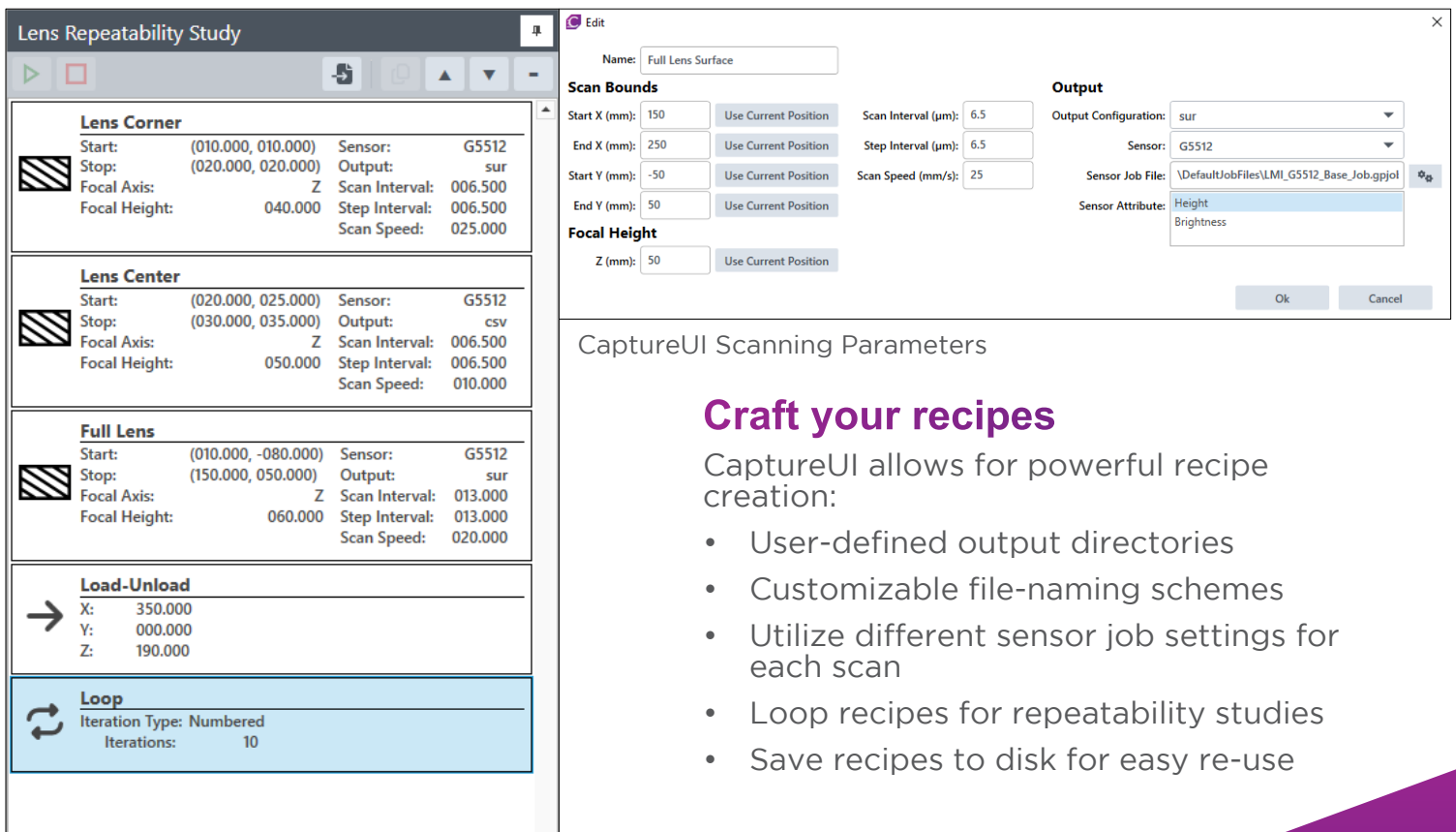
Give me the basics

CaptureUI is a path-planning and data acquisition scanning engine:

- Quickly define scan bounds using live sensor feedback
- Automatic stitching of large scans
- Built-in sensor alignment (angular corrections)
- Data analysis through GoPXL, Peak Analysis Software (based on MountainsMap), or export raw data



CaptureUI Interface



CaptureUI Scanning Parameters

Craft your recipes

CaptureUI allows for powerful recipe creation:

- User-defined output directories
- Customizable file-naming schemes
- Utilize different sensor job settings for each scan
- Loop recipes for repeatability studies
- Save recipes to disk for easy re-use

CaptureUI Recipe Management

Analysis

Get precise answers

In addition to all of GoPxL's dynamic tools, Peak Analysis Software offers additional capabilities:

- Step Height
- Flatness
- GD&T
- Thickness
- Surface Roughness

Test: Step Height Measurement
Date: 12/26/2024
Technician: PM

Information
Channel: Topography channel

Step-Height Calculation

Parameters	Unit	Step 1	Step 2	Step 3	Step 4	Step 5
Maximum height	µm	194.4	188.1	189.0	182.9	182.3

Test: Flatness Measurement of 300 mm welder
Date: 12/27/2024
Technician: PM

ISO 25178-2 - Primary surface

S-filter (As): None
F-operation: [WorkFlow] Levelled (LSPL)

Height parameters	
Sq	2.8 µm
Ssk	1.8
Sku	8.2
Sp	15.9 µm
Sr	2.8 µm
Sz	19.7 µm
Sa	2.0 µm

Points	Unit	Min	Max
X	mm	113.8	67.2
Y	mm	168.0	271.0
Z	µm	0.0	19.7

Test: Dimensional measurements from contour profile of 3D surface data
Date: 12/20/2024
Technician: PM

	Value	Unit	Tolerance
Dimension 1	25.3	µm	24.0 µm ± 2.0 µm ✓
Dimension 2	23.7	µm	24.0 µm ± 2.0 µm ✓
Dimension 3	21.8	µm	24.0 µm ± 2.0 µm ✓
Dimension 4	24.2	µm	24.0 µm ± 2.0 µm ✗

Test: Gear tooth pitch measurement from contour profile of 3D surface data
Date: 12/20/2024
Technician: PM

Parameters

Parameters	Value	Unit
Gear Tooth Pitch	329.1	µm

Gear Tooth Pitch: 329.1 µm
Tolerance: 330.0 µm ± 30.0 µm
Green zone: 330.0 µm ± 20.0 µm

Test: Measuring line roughness from 3D surface data
Date: 12/20/2024
Technician: PM

ISO 21920-Main - Roughness (S-L)

S-filter (As): Gaussian, 2.5 µm
F-operation: [WorkFlow] Levelled (LSPL)
L-filter (Ac): Gaussian, 0.0 mm
Evaluation length: All AC (L2)

Height parameters	
Ra	1.495 µm

Information
The suitable contains non-measured points. The results are calcu...

Ra: 1.495 µm
Tolerance: 1.600 µm ± 0.2500 µm
Green zone: 1.600 µm ± 0.2000 µm

Test: Glass Thickness
Date: 1/7/2025
Technician: PM

Mean thickness: 163.8 µm
Tolerance: 170.0 µm ± 10.0 µm
Green zone: 170.0 µm ± 7.0 µm

Layer	Thickness layer	
General parameters	Value	Unit
Mean thickness	163.8	µm
Minimum thickness	162.8	µm
Maximum thickness	164.7	µm

Or use LMI's built-in GoPxL tools!

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LMI Kit



Complete the system

Peak provides all the motion equipment you need to be up and running in no time. The LMI Technologies equipment listed below is required to complete the system. Have questions? Don't hesitate to [contact us](#) for answers on what is required.

Measurement Head

Gocator 4000 Coaxial Line Confocal Sensors

Gocator 5500 Line Confocal Sensors

Software

GoPxL (included) running on the PC for sensor acceleration is recommended

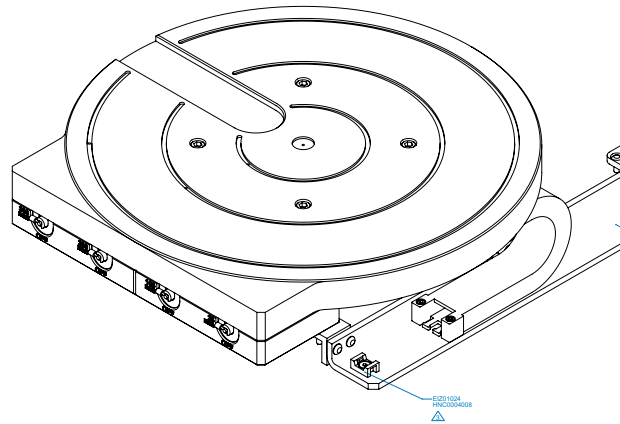
Cables

Cables 301176 and 301175 (5m lengths)

Fixtures

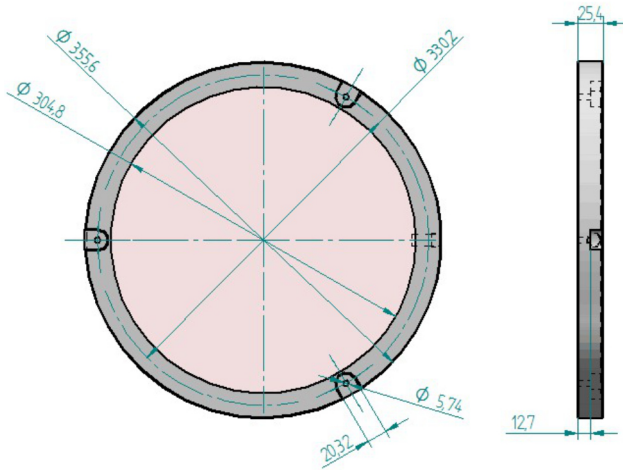
PM-FP-VZR

300 mm Dia Zone-Selectable Vacuum Chuck
Zones: 25, 100, 200, and 300 mm Diameters



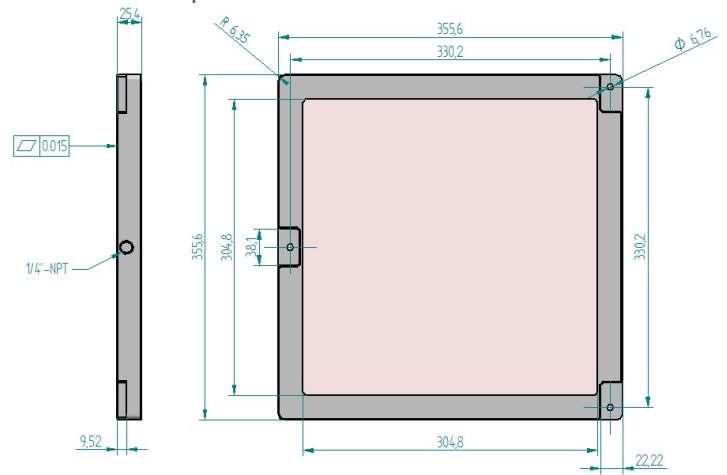
PM-FP-VPR

300 mm Diameter Porous Vacuum Chuck



PM-FP-VPS

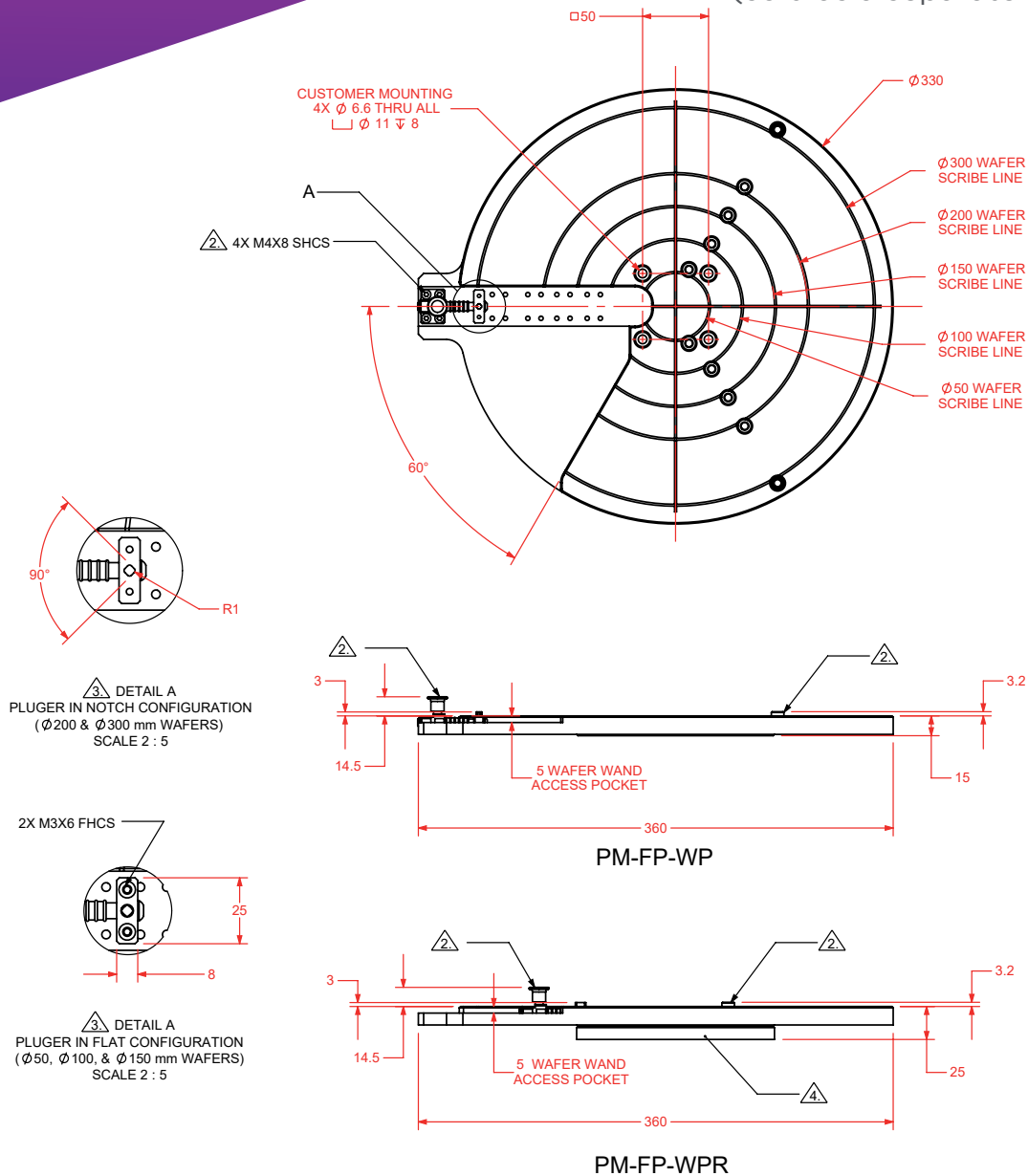
300 mm Square Porous Vacuum Chuck



Fixtures

PM-FP-WP(R)

Wafer Plate with optional Rotation
(sold as a separate line item)



NOTES:

1. PM-FP-WP SHOWN IN THE Ø 300 MM WAFER CONFIGURATION
PM-FP-WPR SHOWN IN THE Ø 150 MM WAFER CONFIGURATION
2. QUANTITY (2) ALIGNMENT BUSHINGS AND (1) SPRING LOADED PLUGGER CAN BE POSITIONED TO ACCOMMODATE Ø 50, Ø 100, Ø 150, Ø 200, & Ø 300 mm WAFERS
3. SPRING LOADED PLUGGER HAS (2) CONFIGURATIONS. FLAT FOR Ø 50, Ø 100, & 150 mm WAFERS AND NOTCH FOR Ø 200 & Ø 300 mm WAFERS
4. PM-FP-WPR HAS A 360° MANUAL ADJUSTABLE BASE

DIMENSIONS: MILLIMETERS

