# OPTICAL DIMENSIONS

# Lasercheck ® SURFACE ROUGHNESS MEASUREMENT GAGES

Full line of Portable, Automated, & OEM Systems providing economical and reliable Non-Contact measurements



#### **Durable**

- · Lasercheck heads are virtually indestructible
- Eliminates high maintenance and calibration costs

#### **Fast and On-Line Capable**

- Single measurements in a fraction of a second
- Measure moving surfaces with high precision
- Multiple input trigger and output monitor options

#### Reliable

- Superior repeatability for dependable results
- Runs for years without performance degradation

## The Perfect Manufacturing Floor Solution

Lasercheck is specifically designed for portable or on-line use in production and manufacturing environments. Patented "light scatter" detection technology provides superior durability, measurement speed, and repeatability to any competing surface finish technology.



Operators on the production floor can use Lasercheck to easily and quickly check products ensuring the process and quality is in control. Lasercheck provides immediate testing of surfaces without concern for damage to fragile measurement equipment or surfaces.















### Save Maintenance Time and Cost

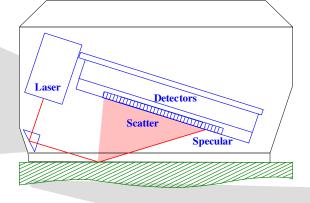
Lasercheck measurements and instruments have no moving parts or stylus tips to maintain. Once set up and calibrated, Lasercheck never changes, reducing maintenance & re-calibration time & cost.

## Use the Right Tool at the Right Place

Lasercheck allows more practical use of fragile stylus & optical profilers. These analytical devices can be better protected in labs performing QC audit & process development measurements while Lasercheck performs high volume manufacturing QC work. Using technology where it is best suited provides maximum benefit.

## **Principal of Operation**

- Detectors inside measurement head measures distribution of specular & scattered laser light reflected from surface
- Increased roughness creates less specular & more scattered laser light reflection to be measured
- Electronics and software in controller digitize signals from detectors and calculate Ra (Average) surface roughness



Measurement Heads—Specifications				
A6536	Micro 8826 Head	Mi ni 6212 Head	Standard 5872 Head	
Dimensions	0.990" X 0.75" X 2.05"	3.00" X 1.40" X 1.75"	12.00" X 5.5" X 5.25"	
Measurement range	1.00 μinch to 80 μinch	0.50 μinch to 80 μinch	0.25 μinch to 40 μinch	
(Ra Roughness)	0.025 μm to 2.0 μm	0.0125 μm to 2.0 μm	0.00625 μm to 1.0 μm	
Shapes Measured	Flats, Cylinders > 0.75" Ø	Flats, Cylinders, Wires, Bores >2.00" Ø	Flats, Cylinders > 0.50" Ø	
Surfaces Measured	Works on any material (rubbers, glass, metals, cera mics etc.); customization for low reflectivity			
<b>Processes Measured</b>	Ground, Sanded, Polished, Honed, Super-Finished, Fine-Turned, Shot-Blast			
Repe at a bility	±3.0% of measured value	± 3.0% of measured value	± 3.0% of measured value	
Measurement Size	5 mm X 1 mm	5 mm X 1 mm	5 mm X 1 mm	

Controllers—Specifications					
	Automated "A" Controller	Portable "B" Controller	OEM Card "C" Controller		
Dimensions	8.00" X 9.00" X 4.00"	4.20" X 1.75" X 7.60"	3.35" X 2.90"		
Measure ment spee d	10 measurements per second	Single measurement < 1 second	10 measurements per second		
Inputs	Pushbutton Serial Port (Lasercheck SW) External Trigger Port	Pushbutton	Serial Port (User SW)		
Outputs	LCD Display Serial Port (Lasercheck SW) Failed Part Trigger Out Analog (0-10V / 4-20mA)	LCD Display Serial Port (with optional cable and Lasercheck SW)	Serial Port (User SW)		
Storage	All Ra Values (no limit) Min, Max, Std Dev, Time/Date Graphical Plot & Display ASCII Formatted File	Up to 10,000 Ra Values Time/Date ASCII Formatted Files	n/a—no storage on board		



## **Options**

- Alignment fixtures for cylindrical parts
- Storage / carrying case
- Certified specimen plates and certificates
- Pre-wired triggering sensors
- Mounting & positioning hardware

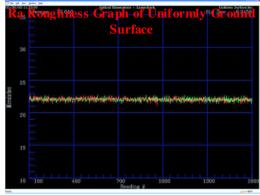
# **Storage Computer Requirements**

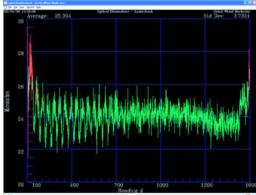
- Windows 98 or newer
- Available serial port











SAFETY PRECAUTIONS



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주소: 경기도 성남시 분당구 야탑3등 306-5번지 102호 우: 463-856 Http://www.is77.co.kr Tel: 82-31-704-2401 Fax: 82-31-704-2421 E-mail: is@is77.co.kr