

[www.rhopointinstruments.com](http://www.rhopointinstruments.com)

# RHOPOINT

- | 20/60° • 20/60/85° GLOSSMETER
- | DOI METER
- | HAZE METER
- | GONIOPHOTOMETER

## THE RHOPOINT IQ IS THE ULTIMATE GLOSSMETER UPGRADE

IQ GLOSS measurements are fully compatible with existing Novo-Gloss and Micro-TRI-gloss results.

Dualgloss 20/60° or Trigloss 20/60/85° versions are for maximum accuracy and resolution in all gloss applications.



### IMPROVED PERFORMANCE IN ALL GLOSS APPLICATIONS

Paints & Coatings Manufacturers and Applicators  
Metal Polishers • Powder Coaters • Plastics Manufacturers  
Inks & Printing • Additives Manufacturers • Automotive Industry  
Wood Coatings • Coil Coaters • Yacht Manufacturers

# THE ULTIMATE GLOSSMETER UPGRADE

## THE RHOPOINT IQ QUANTIFIES SURFACE QUALITY PROBLEMS THAT ARE INVISIBLE TO A STANDARD GLOSSMETER

The Rhopoint IQ measures reflected image quality; it is the only hand held instrument that profiles *how* light is reflected from a surface. Glossmeters are usually used to measure the “shininess” of a surface but are not sensitive to common effects which reduce appearance quality.



*Orange peel dramatically reduces appearance quality without affecting gloss readings. These two test panels measure identically with a standard glossmeter.*

*The Rhopoint IQ with RIQ/DOI measurement can quantify the differences.*



*Haze is a common problem associated with coatings and polished materials. Surfaces with haze have a “milky” finish with a “shallow” reflected image. This important characteristic is directly measured with the Rhopoint IQ.*

## THE RHOPOINT IQ MEASURES

20/60/85° GLOSS • RSPEC • REFLECTANCE HAZE  
REFLECTED IMAGE QUALITY • DISTINCTNESS OF IMAGE  
GONIOPHOTOMETRIC CURVES

**GLOSS** – A measurement proportional to the amount of light reflected from a surface.

*Geometry:* The correct measurement geometry should be used according to the sample finish – matt: 85°, mid gloss: 60°, high gloss: 20°.

**RSPEC** – The peak gloss measured over a very narrow angle.

*Usage:* It is very sensitive to surface texture and can be used to identify subtle differences in smooth surfaces.

**REFLECTANCE HAZE** – An optical effect caused by microscopic texture or residue on a surface.

*Visible Symptoms:* A milky finish is apparent on the surface with a loss of reflected contrast. Halos and patterns can be seen around reflections of high intensity light sources.

*Causes:* Poor dispersion, raw material incompatibility, additive migration, vehicle quality, stoving/drying/curing conditions, polishing marks, fine scratches, ageing, oxidisation, poor cleanliness/surface residue.

**REFLECTANCE HAZE COMPENSATION** – The instrument compensates for reflection from within the coating for highly reflective pigments, metallic coatings and speciality pigments, allowing the haze of **any** painted surface to be measured.

**REFLECTED IMAGE QUALITY (RIQ)** – RIQ is used to quantify effects such as orange peel and surface waviness. This new parameter gives higher resolution results compared to Distinctness of Image (DOI) measurement and better mimics human perception of surface texture, especially on high quality finishes such as automotive.

*Symptoms of Poor RIQ:* Orange peel, brush marks, waviness or other structures visible on the surface. Reflected images are distorted.

*Causes:* Application problems, incorrect coating flow, coating viscosity too high/low, sag or flow of coating before curing, incorrect particle size/distribution, overspray, improper flash/recoat time, inter coat compatibility, incorrect cure times and cure temperature.

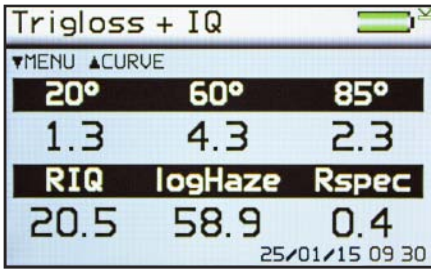
**DISTINCTNESS OF IMAGE (DOI)** – A measure of how clearly a reflected image will appear in a reflective surface.



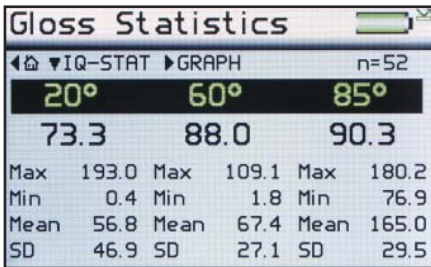
# FEATURES

## Measurement

Fast measurement of all parameters. Full on-board statistics with graphical trend analysis and reporting.



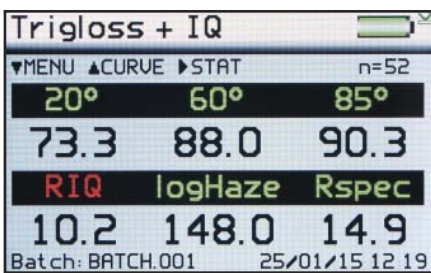
Simultaneous measurement of all parameters, results are date and time stamped.



Displays full statistics for the number of readings in the current batch.



Graphical reporting for quick trend analysis.



Pass / fail parameters can be defined for instant identification of non-conformances.

## Goniophotometric Curves

Different types of surface textures produce identifiably shaped reflectance profile. This goniophotometric data can be downloaded to PC for further analysis and comparison via the USB cable or Bluetooth Data Widget.

## Easy Batching

User definable batch names and batch sizes for quicker and more efficient reporting.

## Rapid data transfer



Software-free data transfer.

USB connection to PC instantly recognises the device as a drive location which facilitates the quick transfer of files using Windows Explorer or similar.

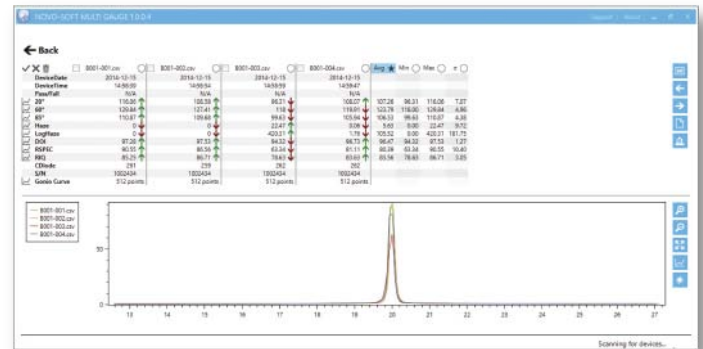
## Direct data input via Bluetooth



Instantly transmit measured readings directly to programs such as MS Excel on your PC / tablet to greatly simplify the reporting process.

	1	2	3	4	5	6
DATE	05/10/2012	05/10/2012	05/10/2012	05/10/2012	05/10/2012	05/10/2012
TIME	11:52:20	11:52:25	11:52:30	11:52:36	11:52:41	11:52:47
20°	87.2	87.3	87.1	87.1	87.2	87.2
60°	92.6	92.6	92.6	92.6	92.6	92.5
85°	98.1	98.1	98	98.1	98	98
HAZE	0	0	0	0	0	0
LogHaze	0	0.6	0	0	0.6	0.1
DOI/RIQ*	99.8	99.8	99.8	99.8	99.8	99.8
RSPEC	87.2	87.3	87.1	87.1	87.2	87.2
CDiode	250	250	250	250	250	250
Calibrated	05/10/2012	05/10/2012	05/10/2012	05/10/2012	05/10/2012	05/10/2012
Serviced	12/09/2012	12/09/2012	12/09/2012	12/09/2012	12/09/2012	12/09/2012
S/N	1002322	1002322	1002322	1002322	1002322	1002322

## Statistical analysis via Novo-Soft Multi Gauge Software



This software provides an easy means to measure, import and compare data and export the measurements into several other file formats, e.g. PDF, Excel® or CSV.

# SAMPLE APPLICATIONS



Paints and Coatings



Yacht Manufacturers



Metal Polishers

## SAMPLE APPLICATIONS



Polished Stone



Smartphone, Tablet PC and Laptop Covers



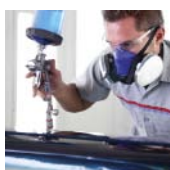
Wood Coatings



Automotive



Printing Ink



Automotive Re-finish



Powder Coating



Automotive Coatings



Furniture



Plastics Industry

## SPECIFICATIONS

### GLOSS

20/60° or 20/60/85° versions available

**20°**

Improved accuracy and resolution on high gloss & metallic samples (>70GU when measured at 60°)

**60°**

Universal angle – all gloss levels

**85°**

Improved resolution for matt finishes (<10GU when measured at 60°)

Measurement range: 0-100 GU 100-2000 GU

Resolution: 0.1 GU 0.1 GU

Repeatability: ±0.2 GU ±0.2 %

Reproducibility: ±0.5 GU ±0.5 %

Standards: ISO 2813, ISO 7668  
ASTM D523, ASTM D2457  
DIN 67530  
JIS 8741, JIS K 5600-4-7

■ Conforms at 60° & 85°

■ Verified performance at 20°

### RSPEC

Peak Specular Reflectance: 20° ±0.09905°

Measurement range: 0-2000GU

### HAZE

Near Specular Reflectance measured at 17.2-19°, 21-22.8°

Switchable between Haze Units (HU) and Log Haze Units (LogHU)

Resolution 0.1HU • Repeatability ±0.5HU • Reproducibility ±1.5HU. STANDARDS, ASTM E430, ISO 13803

### RIQ

Resolution 0.1 • Repeatability ±0.2 • Reproducibility ±0.5

Measurement range: 0-100

### DOI

Resolution 0.1 • Repeatability ±0.2 • Reproducibility ±0.5

Measurement range: 0-100

STANDARD, ASTM D5767.

## INSTRUMENT SPECIFICATION

### Operation

- Full colour easy to read screen
- Adjustable brightness
- 6 button touch sensitive interface

### Construction

- All aluminium construction – enclosure, optics, standard holder
- Integrated calibration holder with in-position detector for error free calibration

### Measurement

- Single button push to measure all parameters
- Fast measurement
- Results batching with user definable names

### Statistical Analysis

- Max, min, mean, SD
- All measured parameters

### Graphical Analysis

- On board trend analysis
- Gloss and IQ values

### Power

- Rechargeable lithium ion
- 17+ hours operation
- 20,000+ readings per charge

### Recharge Time

- Mains charger: 4hrs

### Memory

- 8 MB = 999 readings
- User definable alphanumeric batching

### Data Transfer

- Bluetooth
- PC compatible
- USB connection, no software installation required

### Measurement Area

- 20°: 6mm x 6.4mm
- 60°: 6mm x 12mm
- 85°: 4.4mm x 44mm
- Operating temperature: 15 - 40° C (60 - 104° F)
- Humidity: up to 85%, non condensing

### Dimensions & Weight

- 65mm x 140mm x 50mm (H x W x D)
- 790g
- Packed weight: 1.75kg
- Packed dimensions: 180mm x 330mm x 280mm (H x W x D)
- Commodity code: 9027 5000

### Order Codes

- A6000-001: Rhopoint IQ 20/60/85°
- A6000-002: Rhopoint IQ 20/60°

### Languages Available



## INCLUDED ACCESSORIES

- Calibration tile with certificate
- USB data cable
- Mini CD
  - Instruction manual
  - Bluetooth data app
  - Example Excel spreadsheets
- Instructional videos

## EXTRAS

### FREE EXTENDED WARRANTY

### FREE LIGHT SOURCE WARRANTY

Guaranteed for the life of the instrument

### CALIBRATION AND SERVICE

Fast and economical service via our global network of accredited calibration and service centres. For detailed information, please visit [www.rhopointinstruments.com/support](http://www.rhopointinstruments.com/support)

## ALSO AVAILABLE

### RHOPOINT IQ FLEX

For gloss, haze and DOI measurement of curved or small surfaces.



Certificate no: FM 29741  
ISO 9001:2008



### LOCAL AGENT

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