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RHOPOINT Qs

Rhopoint IQ-S

- 20/60/85° Glossmeter
- DOI Meter
- Haze Meter
- Goniophotometer

The Rhopoint IQ-S

The Rhopoint IQ-S is designed specifically to match automotive interior gloss measurement standards

The Rhopoint IQ-S quantifies surface quality problems that are invisible to a standard glossmeter

The Rhopoint IQ-S 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.

IQ-S gloss measurements are fully compatible with existing Micro-TRI-gloss - S results and comes with a ISO 17025 / UKAS certified calibration tile.

The Rhopoint IQ-S can measure:

- 20/60/85° Gloss
- RSPEC
- Reflectance haze
- Reflected image quality
- Distinctness of Image (DOI)
- Goniophotometric curves

What the Rhopoint IQ-S measures - in detail

Gloss is measured by shining a known amount of light at a surface and quantifying the reflectance
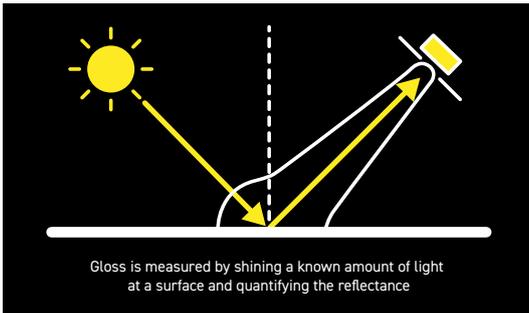
Gloss

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.

Distinctness of Image (DOI)

A measure of how clearly a reflected image will appear in a reflective surface.

Orange peel dramatically reduces appearance quality without affecting gloss readings. These two test panels measure identically with a standard glossmeter. The Rhopoint IQ-S with RIQ/DOI measurement can quantify the differences.

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.

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.

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 IQs.

On surfaces with haze, halos are visible around the reflections of strong light sources

Low Haze   Higher Haze

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.

Features

Measurement

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


```
Trigloss + IQ
▼MENU ▲CURVE
  20°      60°      85°
 79.2     91.9     98.4
  RIQ    logHaze  Rspec
 89.9     35.5     81.4
                01/09/15 12 38
```
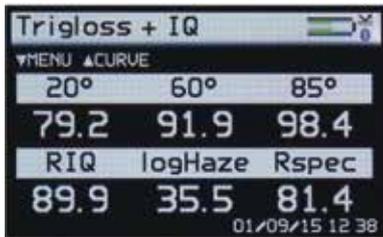
Measurement
Simultaneous measurement of all parameters, results are date and time stamped.


```
IQ Statistics
◄Ω ▲GL-STAT ►IQ-GRAPH    n=2
  RIQ      logHaze   Rspec
  1.1       214       0.8
Max  0.0  Max  12.4  Max  0.1
Min  0.0  Min   6.5  Min  0.1
Mean 0.0  Mean  9.5  Mean 0.1
SD   0.0  SD    2.1  SD   0.0
```
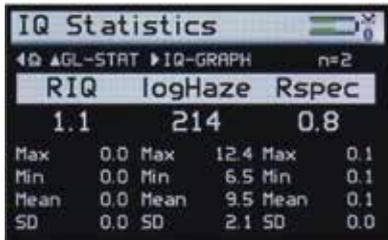
Statistics
Displays full statistics for the number of readings in the current batch.


```
Gloss Graph
◄STAT ▼IQ-GRAPH ►Ω     n=2
                        85°
                        60°
                        20°
```
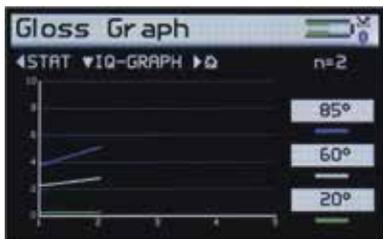
Graphs
Graphical reporting for quick trend analysis.


```
Pass/Fail
◄► ▲▼ ■
Done
              Max      Min
20°       100.0      0.0
60°       100.0      0.0
85°       100.0      0.0
logHaze   100.0      0.0
DOI/RIQ   100.0      0.0
Rspec     100.0      0.0
```
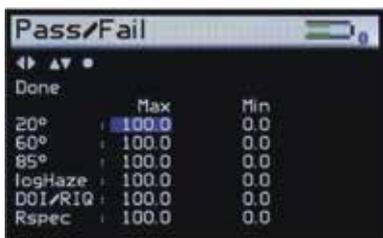
Parameters
Pass / fail parameters can be defined for instant identification of non-conformances.

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.

Power
20,000+ readings per charge. The instrument is rechargeable via USB/PC or mains

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
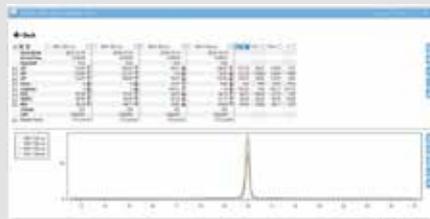
Statistical analysis via Novo-Gloss Multi Gauge Software
This software provides an easy means to measure, import and compare data and export the measurements into several other file formats, e.g. PDF, Excel® or CSV.

Applications

The DOI, Haze and RSPEC values measured by the Rhopoint IQ-S allow the user to quantify and control the surface textures that reduce the perceived quality of manufactured products.

The meter is widely used throughout many industries to assess the reflective qualities of products, in particular automotive exteriors and interiors.

Automotive

Printed Cartons

Printing Ink

Powder Coating

Automotive Re-finish

Yacht Manufacturers

Paints and Coatings

Smart Devices, PC & Laptop Covers

Car Detailing

Aerospace

Plastics Industry

Textile

Furniture

Metal Polishers

Polished Stone

Polished Stone

Specifications

20° Gloss

Range (GU)	0-100	100-2000
Repeatability	0.2 (GU)	0.2%
Reproducibility	0.5 (GU)	0.5%
Resolution (GU)	0.1	
Measurement Area	6.0 x 6.4 (mm)	

60° Gloss

Range (GU)	0-10	10-100	100-1000
Repeatability	0.1 (GU)	0.2 (GU)	0.2%
Reproducibility	0.2 (GU)	0.5 (GU)	0.5%
Resolution (GU)	0.1		
Measurement Area	9.0 x 13.5mm		

85° Gloss

Range (GU)	0-100	100-199
Repeatability	0.2 (GU)	0.2%
Resolution (GU)	0.1	
Measurement Area	4.4 x 44.0 (mm)	

Gloss Standards*

ISO 2813	ASTM D523	ISO 7668
ASTM D2457	DIN 67530	JIS Z 8741

Haze

Range (Log HU)	0-500
Repeatability (Log HU)	1
Reproducibility (Log HU)	10
Resolution	0.1
Measurement Area (mm)	6.0 x 6.4
Standards	ASTM E430 ASTM D4039

	RSPEC	DOI	RIQ
Range	0-2000 GU	0-100	0-100
Repeatability	0.2%	0.2	0.2
Reproducibility	0.5%	0.5	0.5
Resolution	0.1	0.1	0.1
Measurement Area	6.0 x 6.4 (mm)		
Standards	Rhopoint	ASTM E430	Rhopoint

*Verified performance at 20°

Specifications

Instrument information

Battery Type	Rechargeable lithium ion
Operation (hours)	17+
Readings per charge	20,000+
Memory	8MB, 999 readings
Operating Temperature	15-40°C (60-104°F)
Operating Humidity	Up to 85%, non condensing
Commodity Code	9027 5000

Dimensions & Weights

Dimensions	65mm x 140mm x 50mm (H x W x D)
Weight	390g
Packed weight	1.6kg
Packed dimensions	110mm x 280mm x 220mm (H x W x D)

Included Accessories

Certifications	· ISO 17025 / UKAS calibration certificate · Values at 20/60/85 = 100 GU · As recommended in ISO 2813 / ASTM D523
Cables	· USB data & mains cable · Wrist strap
USB Contains:	· Instruction manual · Bluetooth data app · Example Excel spreadsheets
Novo-Gloss Multi Gauge software	
Instructional videos	

Also available
Rhopoint IQ Flex 20 S
For gloss, haze and DOI
measurement of curved
or small surfaces.

Free extended warranty: Please register your product at **www.rhopointinstruments.com/instrument-registration**

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**

Languages:

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