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instruments

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NK Novo-Gloss Glossmeters

- 60° Glossmeter
- 20/60/85° Glossmeter

Manufactured by Rhopoint Instruments in the United Kingdom

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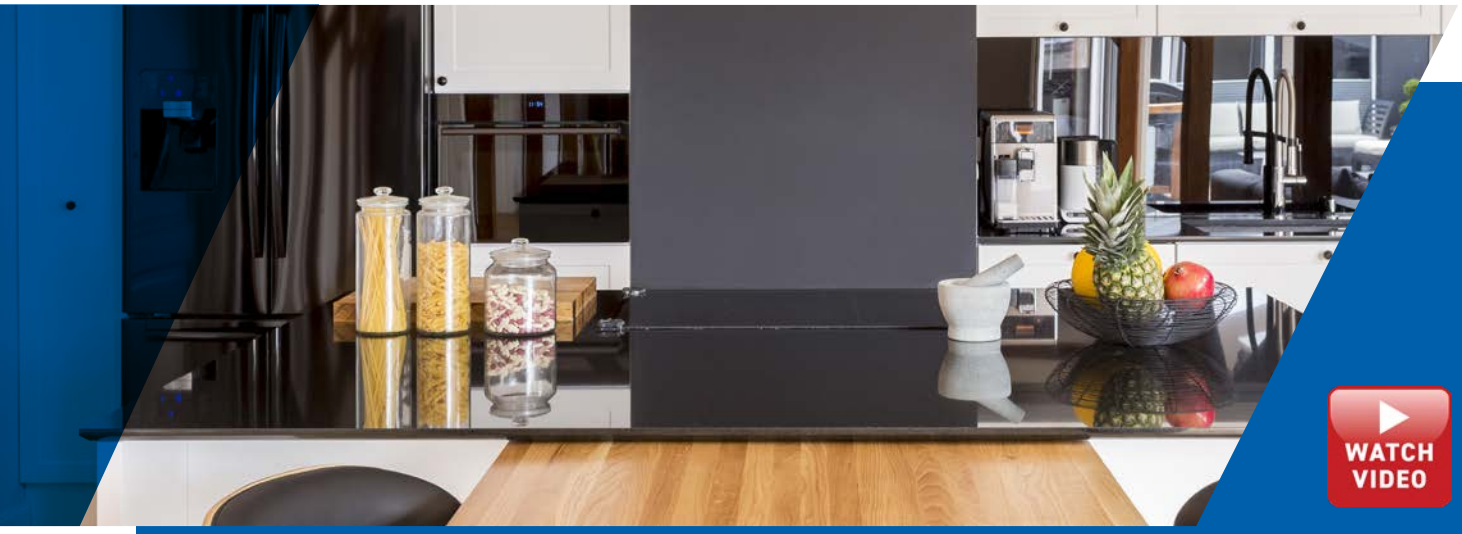
Why measure gloss?



The gloss level of an object is one of the visual attributes used by a consumer to determine whether or not that object is fit for purpose.

Gloss has been defined as 'The attribute of surfaces that causes them to have shiny or lustrous, metallic appearance.

Manufacturers design their products to have maximum appeal: from highly reflective car body panels to glossy household appliances or matt finish automotive interior trim.

This is especially noticeable where parts may be produced by different manufacturers or factories but will be placed adjacent to one another to create the finished product.

It is important therefore that gloss levels are achieved consistently on every product or across different batches of products.

Gloss can also be a measure of the quality of the surface, for instance a drop in the gloss of a coated surface may indicate problems with its cure, leading to other failures such as poor adhesion or lack of protection for the coated surface.

The gloss of a surface can be greatly influenced by a number of factors, for example the smoothness achieved during polishing, the amount and type of coating applied or the quality of the substrate.

It is for these reasons that many manufacturing industries monitor the gloss of their products, from cars, printing and furniture to food, pharmaceuticals and consumer electronics.

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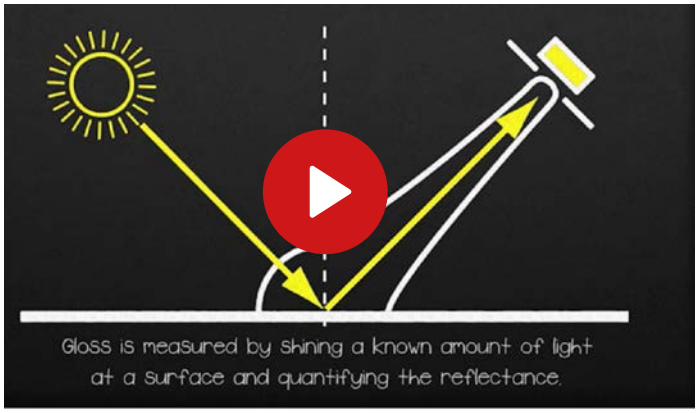
How is gloss measured?

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

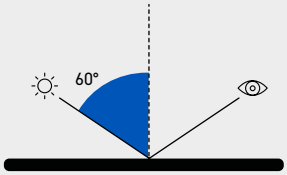


The angle of the light and the method by which the reflectance is measured are determined by the surface material and which aspect of the surface appearance is to be measured.

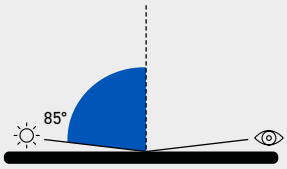
Which angle should I use for my application?

ISO 2813 and ASTM D523 (the most commonly used standards) describe three measurement angles to measure gloss across all surfaces.

Gloss is measured in gloss units (GU) and is traceable to reference standards held at NIST (USA).

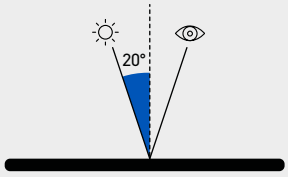


Universal Measurement Angle: 60°
All gloss levels can be measured using the standard measurement angle of 60°. This is used as the reference angle with the complimentary angles of 85° and 20° often used for low and high gloss levels respectively.



Low Gloss: 85°
For improved resolution of low gloss a grazing angle of 85° is used to measure the surface. This angle is recommended for surfaces which measure less than 10GU when measured at 60°.

This angle also has a larger measurement spot which will average out differences in the gloss of textured or slightly uneven surfaces.



High Gloss: 20°
The acute measurement angle of 20° gives improved resolution for high gloss surfaces. Surfaces that measure 70GU and above at the standard angle of 60° are often measured with this geometry.

The 20° angle is more sensitive to haze effects that affect the appearance of a surface.

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Rhopoint NK Novo-Gloss Glossmeter Range

Single 60°, Single 45°, Trio 20/60/85° and Trigloss 20/60/85° with haze versions for maximum accuracy and resolution in all gloss applications.

NK Novo-Gloss Trio

NK Novo-Gloss 60

Model	20° Gloss HIGH GLOSS	60° Gloss ALL GLOSSY FINISHES	85° Gloss LOW GLOSS FINISHES	
NK Novo-Gloss 60	-	✓	-	SHOP
NK Novo-Gloss Trio	✓	✓	✓	SHOP

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Applications

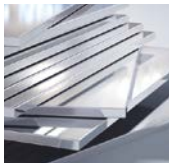

Paints and Coatings


Yacht Manufacturers


Automotive Re-finish


Smart devices, PC & Laptop Covers

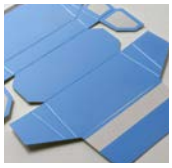

Furniture


Metal Polishers


Polished Stone


Wood Coatings


Automotive


Printed Cartons


Plastics Industry


Printing Ink


Aerospace

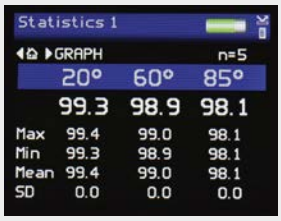

Detailing


Textile

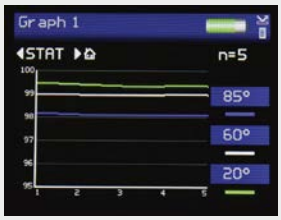

Powder Coating

Features

Measurement
Simultaneous measurement of all parameters in GU or % reflectivity, date and time stamped.



Statistics
Displays full statistics for the readings in the current batch.

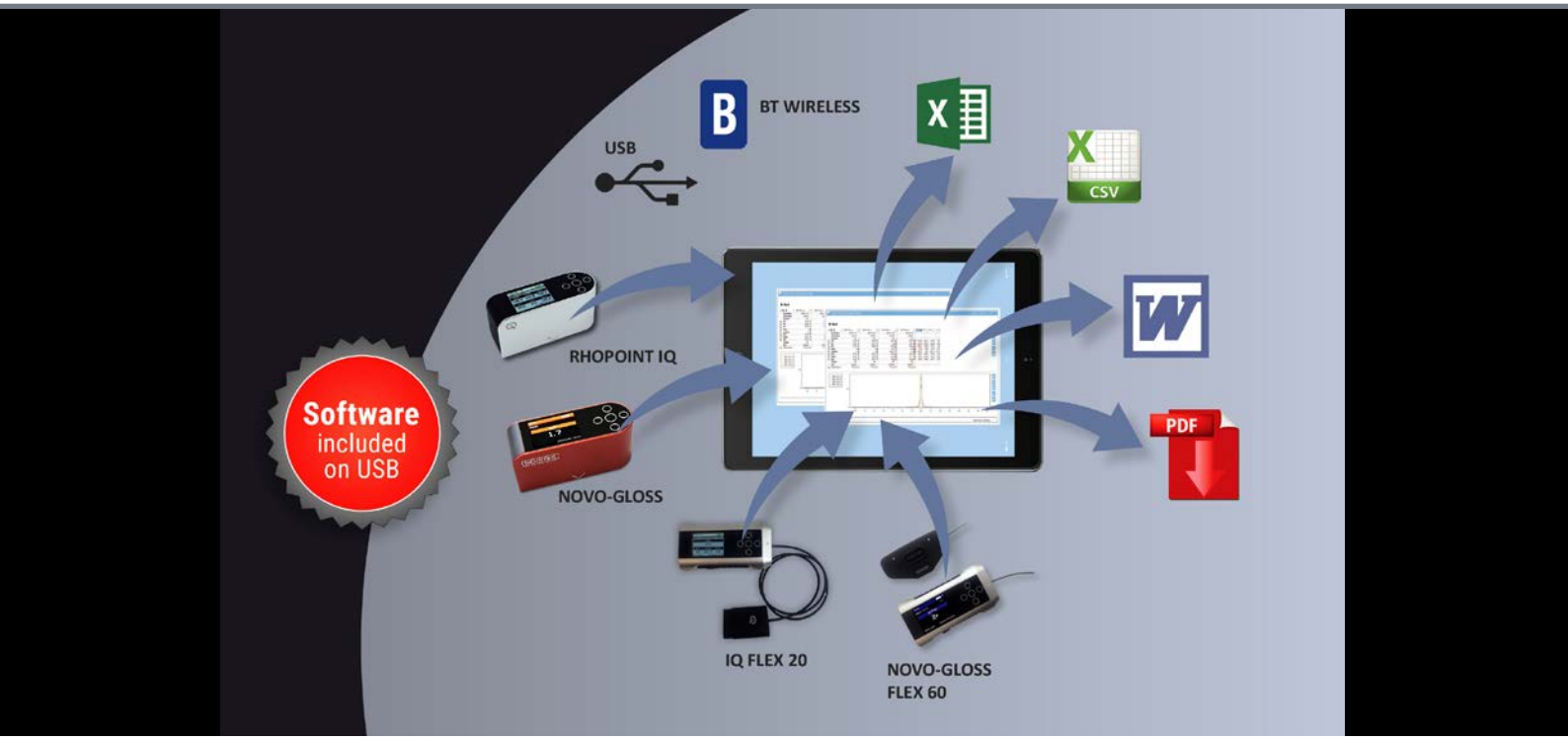


Graphical
Graphical reporting for quick trend analysis.

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

Automatic Measurement
Automatic measurements at pre-defined intervals for easy checking of large surface areas.

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

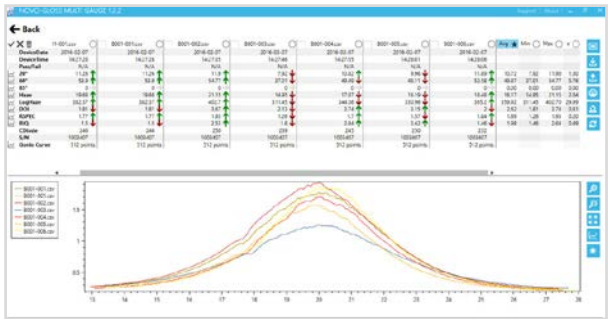


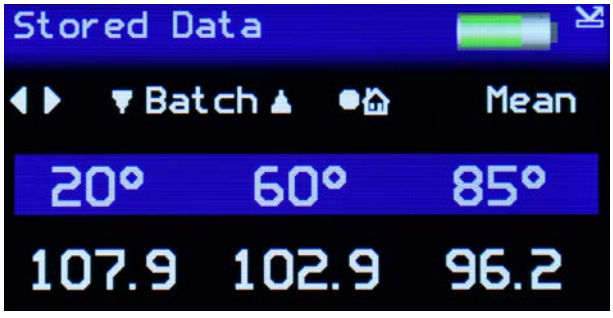
Data analysis and transfer

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

Direct data input via BT wireless
Instantly transmit measured readings directly to programs such as MS Excel on your PC / tablet to greatly simplify the reporting process.

Statistical analysis via Novo-Gloss Multi Gauge software
The included 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.





View and inspect data saved on the instrument.

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Specifications

20° Gloss		
Range	0–100	100-2000
Repeatability	0.2 GU	0.2%
Reproducibility	0.5 GU	0.5%*
Resolution	0.1	
Measurement Area	6mm x 6.4mm	
Standards	ISO 2813 ASTM D523 ISO 7668 ASTM D2457 IN 67530 JIS Z 8741	

45° Gloss		
Range	0-60	60-1000
Repeatability	0.2 GU	0.2%
Reproducibility	0.5 GU	0.5%*
Resolution	0.1	
Measurement Area	8mm x 12mm ellipse	
Standards	ASTM D2457 ASTM C346	

60° Gloss			
Range	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	0.1		
Measurement Area	6mm x 12mm		
Standards	ISO 2813 ASTM D523 ISO 7668 ASTM D2457 DIN 67530 JIS Z 8741		

85° Gloss		
Range (GU)	0–100	100–199
Repeatability	0.2 GU	0.2%
Reproducibility	0.5 GU	0.5%*
Resolution (GU)	0.1	
Measurement Area	4.4mm x 44mm	
Standards	ISO 2813 ASTM D523 ISO 7668 ASTM D2457 IN 67530 JIS Z 8741	

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

	20° Gloss	45° Gloss	60° Gloss	85° Gloss	Haze
NK Novo-Gloss 45		✓			
NK Novo-Gloss 60			✓		
NK Novo-Gloss Trio	✓		✓	✓	
NK Novo-Gloss with Haze to ATSM E430	✓		✓	✓	✓

* A mirror gloss calibration standard is required to achieve this reproducibility

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Specifications

Battery Type	Rechargeable lithium ion
Operation	17+ hours
Readings per charge	20.000+
Memory	8MB, 2,000 readings
Operating Temperature	15-40°C (60-104°F)
Operating Humidity	Up to 85%, non condensing
Commodity Code	9027 5000

Dimensions & Weights

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

Order Codes

Novo-Gloss 60	A4000-008
Novo-Gloss Trio 20/60/85	A4000-006
Novo-Gloss 20/60/85 with Haze	A4000-009
Novo-Gloss 45	A4000-011
Mirror gloss calibration standard	B6000-101

Free extended 2 year warranty:
Requires registration at www.rhopointinstruments.com within 28 days of purchase. Without registration, 1 year standard warranty applies.

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.
Please visit www.rhopointinstruments.com for detailed information.

Languages:

Included accessories

- Certified calibration tile with certificate
- USB data cable
- Wrist strap
- Novo-Gloss Multi Gauge software
- Instructional videos
- USB data stick
  - Instruction manual
  - BT wireless data app
  - Example Excel spreadsheets