RHOPOINT INSTRUMENTS

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RHOPOINT NOVO-GLOSS™

Novo-Gloss Flex 60

- Measures small footprint areas
- Measure curved and hard to reach surfaces
- Enhanced accuracy measurement of low gloss finishes

The Rhopoint Novo-Gloss Flex 60

Designed specifically to measure the gloss of surfaces that cannot be measured using traditional glossmeters, the Novo-Gloss Flex 60 Glossmeter combines the functionality and reporting of an advanced glossmeter with an ultra-lightweight remote measuring head.

Improved performance in low gloss applications

The Novo-Gloss Flex 60 has been designed specifically to measure low gloss surfaces. It features an additional measuring scale with a resolution 10 times greater than standard glossmeters. This increased resolution gives a far superior level of control of surface finish.

The Novo-Gloss Flex 60 complies to ISO 2813 and measurements made with the instrument are compatible with traditional glossmeters complying to these standards.

Previously only available for measuring flat surfaces, this technology is now available in a new format specifically designed for curved surfaces, as well as small and delicate parts.

The Novo-Gloss Flex 60 can measure:

- 60° Gloss
- Small surface areas
- Curved surfaces
- Hard to reach surfaces

Why measure gloss?

Gloss is an aspect of the visual perception of objects that is as important as colour when considering the psychological impact of products on a consumer.

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

Manufacturers design their products to have maximum appeal: from highly reflective car body panels to glossy magazine covers 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.

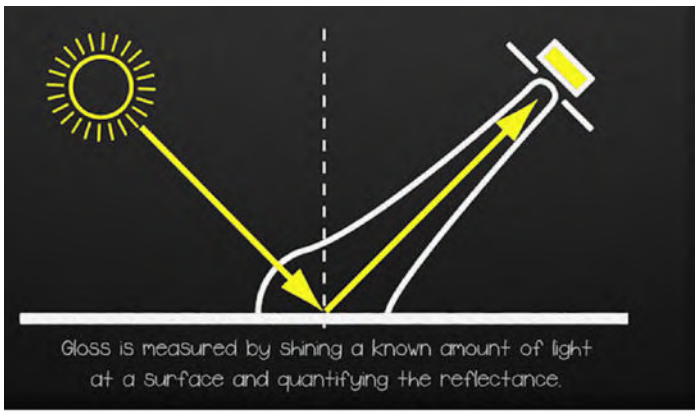
It is important therefore that gloss levels are achieved consistently on every product or across different batches of products.

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.

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.

How is gloss measured?

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

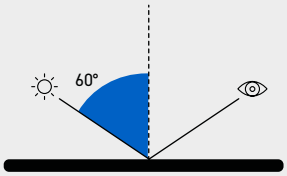


The angle of the light and the method by which the reflectance is measured are determined by the surface material and which aspect of the surface appearance is to be measured.

Which angle should I use for my application?

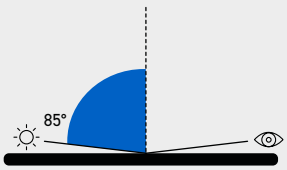
ISO 2813 and ASTM D523 (the most commonly used standards) describe three measurement angles to measure gloss across all surfaces.

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



Universal Measurement Angle: 60°

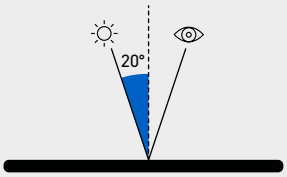
All gloss levels can be measured using the standard measurement angle of 60°. This is used as the reference angle with the complimentary angles of 85° and 20° often used for low and high gloss levels respectively.



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.

Features and Applications

Designed for the measurement of small and curved surfaces.

Full colour easy to read screen, display can be rotated from landscape to portrait

Integrated measurement button for single handed operation

Measuring head

Touch sensitive button interface

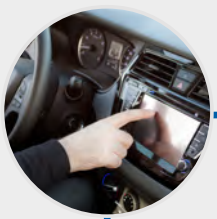
Easy to control and take measurements

Easy batching

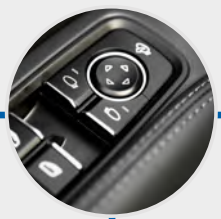
User definable batch names and batch sizes for quicker and more efficient reporting

Automatic measurement

Single button push to initiate a defined number of measurements



Curved plastic parts



Automotive interior trim

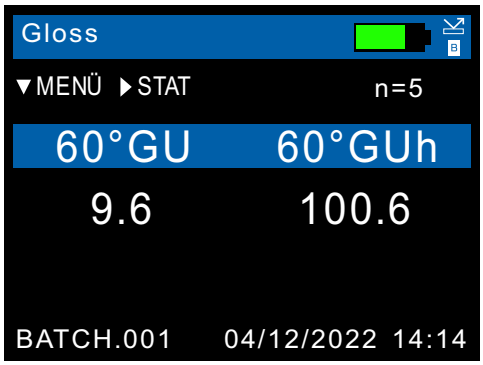
Plastics industry

Furniture

The gloss measured by the Novo-Gloss Flex 60 allows the user to quantify and control the surface textures that reduce the perceived quality of manufactured products.

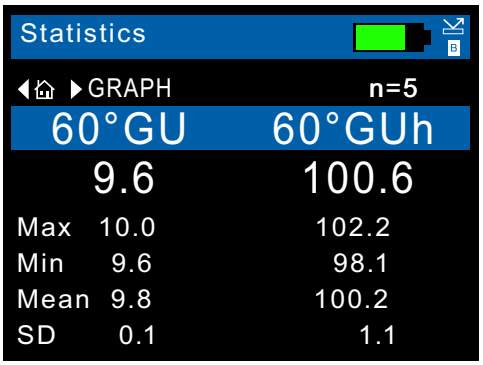
Measurement features

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



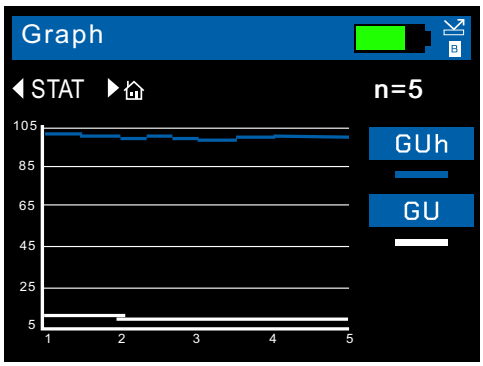
Measurement

Simultaneous measurement of all parameters, date and time stamped.



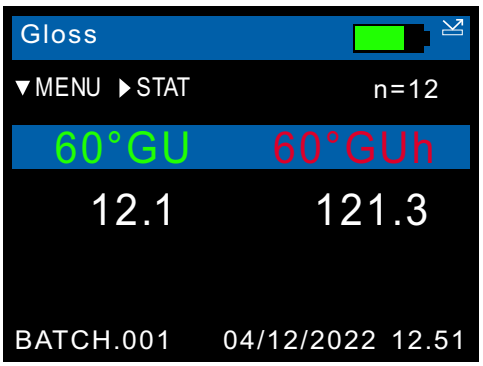
Statistics

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



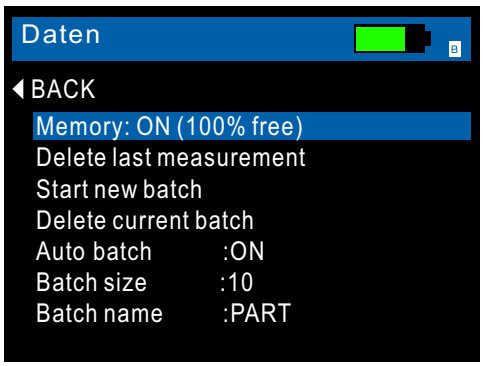
Graphs

Graphical reporting for quick trend analysis.



Pass / Fail Parameters

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



Batch names

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

Data transfer options

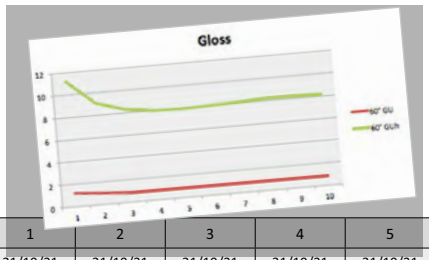
Software-free data transfer

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

Batch	BatTime	Date	Time	Pass / Fail	GLOSS 20	HAZE	LOG HAZE	DOI	RSPEC	Cdiode	CALIBRATED	CERTIFIED	SERIAL NO	RIQ	PCB. temp	Env. temp. deg C
001	10:50:30	02/07/19	10:50:30	N/A	100.35	0	0.34	99.07	97.17	230	02/07/19	02/07/19	1181180	96.62	26.83	26.56
001	10:50:30	02/07/19	10:50:32	N/A	100.43	0	0	99.07	97.16	230	02/07/19	02/07/19	1181180	96.63	26.64	26.56
001	10:50:30	02/07/19	10:50:34	N/A	100.43	0.01	0.17	99.08	97.09	230	02/07/19	02/07/19	1181180	96.62	26.64	26.62
001	10:50:30	02/07/19	10:50:36	N/A	100.47	0	0	99.08	97.08	230	02/07/19	02/07/19	1181180	96.64	26.83	26.69
001	10:50:30	02/07/19	10:50:38	N/A	100.52	0	0	99.08	97.06	230	02/07/19	02/07/19	1181180	96.65	27.01	26.69
001	10:50:30	02/07/19	10:50:40	N/A	100.51	0.01	0	99.08	97.16	230	02/07/19	02/07/19	1181180	96.63	26.83	26.75
001	10:50:30	02/07/19	10:50:42	N/A	100.47	0	0.01	99.08	97.14	230	02/07/19	02/07/19	1181180	96.62	26.83	26.76
001	10:50:30	02/07/19	10:50:44	N/A	100.54	0	0	99.09	97.18	230	02/07/19	02/07/19	1181180	96.65	26.83	26.75
001	10:50:30	02/07/19	10:50:46	N/A	100.47	0	0	99.08	97.18	230	02/07/19	02/07/19	1181180	96.63	27.01	26.81
001	10:50:30	02/07/19	10:50:48	N/A	100.54	0	0	99.09	97.19	230	02/07/19	02/07/19	1181180	96.64	26.73	26.81
002	10:54:33	02/07/19	10:54:33	N/A	100.47	0	0	99.08	97.15	230	02/07/19	02/07/19	1181180	96.68	27.01	26.81
002	10:54:33	02/07/19	10:54:35	N/A	100.39	0.01	0.26	99.08	97.14	230	02/07/19	02/07/19	1181180	96.68	27.01	26.88
002	10:54:33	02/07/19	10:54:37	N/A	100.5	0	0	99.07	97.16	230	02/07/19	02/07/19	1181180	996.67	27.01	26.94
002	10:54:33	02/07/19	10:54:39	N/A	100.6	0	0	99.06	97.16	230	02/07/19	02/07/19	1181180	96.68	27.01	26.04
002	10:54:33	02/07/19	10:54:41	N/A	100.52	0	0	99.07	97.19	230	02/07/19	02/07/19	1181180	96.68	27.01	26.94
002	10:54:33	02/07/19	10:54:43	N/A	100.57	0	0	99.09	97.18	230	02/07/19	02/07/19	1181180	96.63	27.01	27
002	10:54:33	02/07/19	10:54:45	N/A	100.55	0	0	99.08	97.18	230	02/07/19	02/07/19	1181180	96.63	27.19	27
002	10:54:33	02/07/19	10:54:47	N/A	100.61	0	0	99.08	97.18	230	02/07/19	02/07/19	1181180	96.62	27.19	27
002	10:54:33	02/07/19	10:54:49	N/A	100.5	0.01	0.28	99.09	97.15	230	02/07/19	02/07/19	1181180	96.64	27.19	27
002	10:54:33	02/07/19	10:54:51	N/A	100.21	0.01	0.17	99.07	97.18	230	02/07/19	02/07/19	1181180	96.64	27.01	27.06
002	10:54:33	02/07/19	10:54:53	N/A	100.87	0	0	99.12	97.20	230	02/07/19	02/07/19	1181180	96.66	27.19	27.06

Direct data input via Bluetooth

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



	1	2	3	4	5	6
Date	31/10/21	31/10/21	31/10/21	31/10/21	31/10/21	31/10/21
Time	15:17:37	15:17:39	15:17:42	15:17:44	15:17:47	15:17:50
Pass/Fail	N/A	N/A	N/A	N/A	N/A	N/A
60° GU	1.22	0.97	0.84	0.82	0.82	0.82
60°GUh	11.14	8.99	8.29	8	7.88	7.97
Calibrated	31/10/21	31/10/21	31/10/21	31/10/21	31/10/21	31/10/21
Serviced	31/10/21	31/10/21	31/10/21	31/10/21	31/10/21	31/10/21
S/N	9001004	9001004	9001004	9001004	9001004	9001004

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, XLS or CSV.

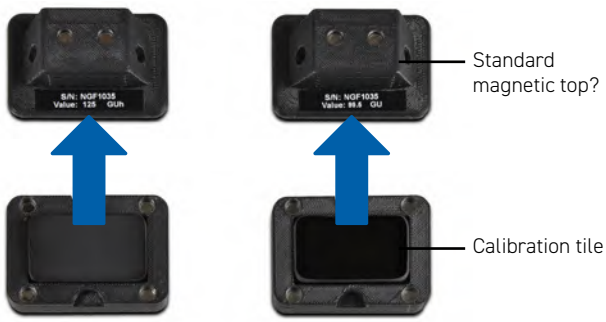
	B001-001.csv	B001-002.csv	B001-003.csv	B001-004.csv	B001-005.csv	Avg ★	Min	Max	o	
DeviceDate	2016-11-10	2016-11-10	2016-11-10	2016-11-10	2016-11-10					
DeviceTime	14:49:56	14:49:58	14:49:59	14:50:00	14:50:01					
Pass/Fail	N/A	N/A	N/A	N/A	N/A					
60°	10.99 →	10.99 →	10.99 →	10.99 →	10.99 →	10.99	10.99	10.99	0.00	
60GUh	107.71 ↑	107.6 ↑	107.28 ↓	107.17 ↓	107.28 ↓	107.41	107.17	107.71	0.21	
S/N	9001036	9001036	9001036	9001036	9001036					

Calibration Standards

For accurate measuring, calibrating the Novo-Gloss Flex 60 every day, when changing between the standard head and adaptor is essential.

Step 01

The Novo-Gloss Flex 60 is supplied with 2 calibration standards for low and high gloss which gives increased accuracy and resolution for low gloss surfaces.



Step 02

The calibration standards are magnetically enclosed which offers superior protection from contamination.

The top and bottom snap together magnetically to create one sealed calibration standard

Step 03

The standards are magnetically attached to the instrument measuring head to ensure repeatable calibration.

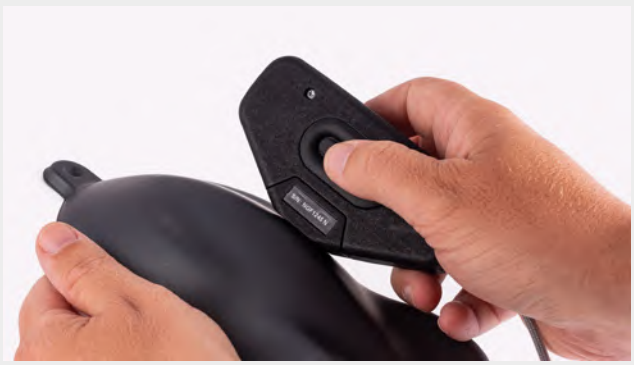
Measurements head

The instrument is supplied with interchangeable measurement adaptors.

The measuring head is ultra lightweight with integrated measurement buttons for single handed operation. Both adaptors can be replaced if they are damaged.

Measures curvature in a single direction

Measures ultra-matt finishes



Measures curvature in both directions

Measures small parts

Accessories

Instrument with 60° Flex head and USB data cable

Certified high and low gloss calibration tiles

Standard and steel surface measuring head adaptors

Calibration certificates for the instrument and tile

Also included:

1 x USB drive containing:

- Instruction manual
- Bluetooth data app
- Example Microsoft Excel spreadsheets
- Instructional video
- Novo-Gloss Multigauge software

Order Codes	
Novo-Gloss Flex 60	A4000-020.1
Customer adaptor (requires drawing of the part to be measured in .dxf format)	M4000-505

Specifications

Operation	Full colour easy to read screen Adjustable brightness 6 button touch sensitive interface with measurement
Construction	Integrated calibration holders for error free calibration
Measurement	Fast measurement Results batching with user definable names
Graphical Analysis	On board trend analysis
Statistical Analysis	Max, min, mean, S.D.
Power	Rechargeable lithium ion - 14,000 readings per charge
Memory	8MB = 2950 readings

Measurement Area	
60°	6mm x 12mm
Operating Temperature	15 - 40° C (60 - 104° F)
Humidity	Up to 85%, non condensing

Dimensions & Weights	
Instrument	80 (H) x 150 (W) x 35mm (D), 392g
Measurement head	60 (H) x 110 (W) x 28mm (D),109g
Packed weight	1.6kg
Packed dimensions	110mm (H) x 280mm (W) x 220mm (D)
Commodity code	9027 5000

	GU	GUh
Measurement range	0-125 GU	0 -125 GUh (0-12.5 GU)
Resolution	0.1 GU	0.1 GUh (0.01 GU)
Repeatability	±0.2 GU	±0.5 GUh (0.05 GU)
Reproducibility	±0.5 GU	±2.0 GUh (0.2 GU)
Standards	ISO 2813, ASTM D523, ASTM D2457, DIN 67530, JIS Z 8741, JIS K 5600-4-7	

60°: Universal angle – all gloss levels

GUh: Improved resolution for low gloss finishes

Khushboo Scientific Pvt. Ltd.
NABL Accredited Calibration Lab
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GEM Seller Id : BAB7190000927726

Certifications
NABL (CC-4436) ISO CRISIL