RHOPOINT
INSTRUMENTS

RHOPOINT
AMERICAS

NOVO–CURVE™

Novo-Curve 4 Glossmeter

- Curved & flat surfaces
- Small areas
- Irregular shapes

Manufactured by Rhopoint Instruments in the United Kingdom 🇬🇧

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.

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.
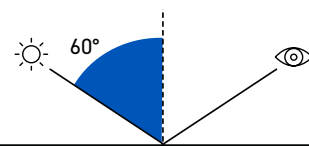
Universal Measurement Angle: 60°

All gloss levels can be measured using the standard measurement angle of 60°. 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.

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

The Novo-Curve 4 Glossmeter

WATCH VIDEO

Manufactured by Rhopoint since 1997, the Novo-Curve is the industry standard instrument for measuring the gloss of curved and small parts which cannot be measured with standard hand held units

The Novo-Curve 4 is a unique instrument with specially designed optics for accurately measuring the gloss at 60° of curved surfaces and small areas. Multiple options exist to increase the repeatability of gloss measurement of irregular sample shape. Moveable jigging posts ensure cylindrical objects can be positioned correctly and measured in the same place each time.

Benefits of using the Novo-Curve 4

- ✓ Measures small, curved or irregular surfaces
- ✓ Simple jigging system
- ✓ 2mm x 2mm measurement spot
- ✓ Hands free operation, easy sample manipulation
- ✓ Full statistical analysis
- ✓ Constant read feature
- ✓ Download, analyse and store readings in Novo-Gloss Multi Gauge software (included)
- ✓ Direct transfer of reading to PC

For an exact fit for small complex shapes, a custom cutout enables the sample to measured in exactly the same spot each time

Other options for gloss measurement of small and curved parts

Novo-Gloss Flex 60

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.

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.

With the ability to measure the the gloss of surfaces that cannot be accessed 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.

Measured parameters:

- 60° Gloss GU
- 60° Gloss GUh

Rhopoint IQ Flex 20

The Rhopoint IQ Flex 20 quantifies surface quality problems such as orange peel and haze that are invisible to a standard glossmeter. It profiles how light is reflected from a surface.

This handheld instrument has been specifically designed for the measurement of high gloss curved surfaces, as well as small and delicate parts.

Flex 20 gloss measurements are fully compatible with existing Rhopoint IQ results.

Measured parameters:

- 20° Gloss
- Reflectance haze
- Reflected Image Quality (RIQ)
- Distinctness of Image (DOI)
- Goniophotometric curves
- RSPEC (peak specular reflectance)
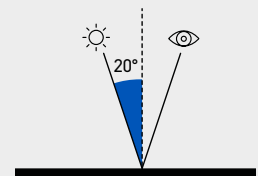
# How to choose the correct product for my application

	Novo-Curve 4	Novo-Gloss Flex 60	Rhopoint IQ Flex 20
Measures curved surfaces	✓	✓	✓
Measures small surfaces	✓	✓	✓
Measures hard-to-reach surfaces		✓	✓
Designed for very low gloss finishes		✓	
Designed for very high gloss finishes			✓
Suitable for mirror finishes	✓		✓
Custom adaptor jigs available	✓	✓	✓
Benchtop instrument	✓		
Handheld instrument		✓	✓
Measures DOI (orange peel) and haze			✓

Measurement advice and custom design service

Custom Small Part Adaptor System

The New Novo-Curve 4 includes an indented platen to accept complex parts which could not be measured on the previous instrument.

The indented platen also accepts 3D printed jigs to allow accurate placement of small switches, decals or irregular shapes.
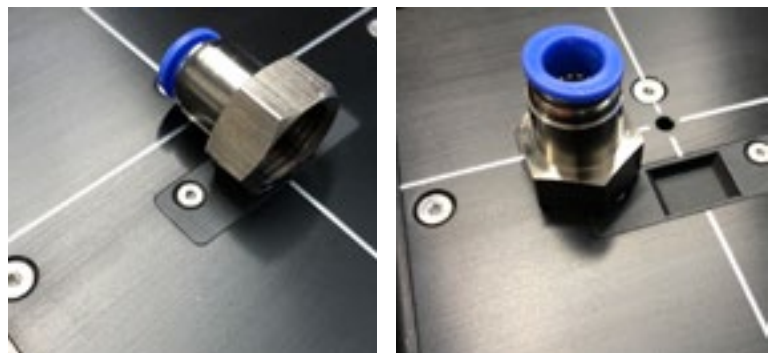
Contact our experienced applications team who can advise on the best way to measure small parts curved surfaces or difficult to measure areas- we also design and supply 3D printed adaptors and jigs bespoke for many applications.

Features

Simple checking of curved surfaces
For curved surfaces, the correct gloss value is the peak value identified on the sample. Continuous read mode on the Novo-Curve 4 greatly simplifies this process.

Certainty of measurement
For improved gloss control, calibrate on a standard that matches closest to your sample. Additional standards are available from matt to mirror finish.
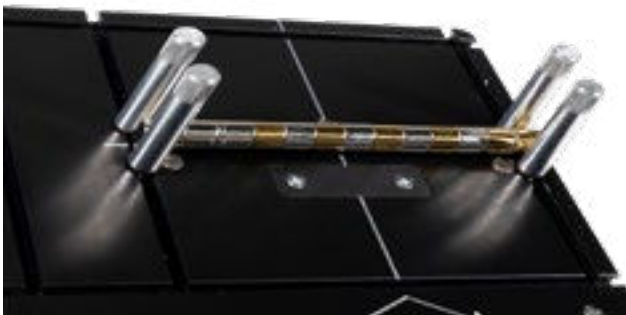
Repeatable sample positioning
Bespoke sample securing systems allow multiple samples to be measured in exactly the same place*.
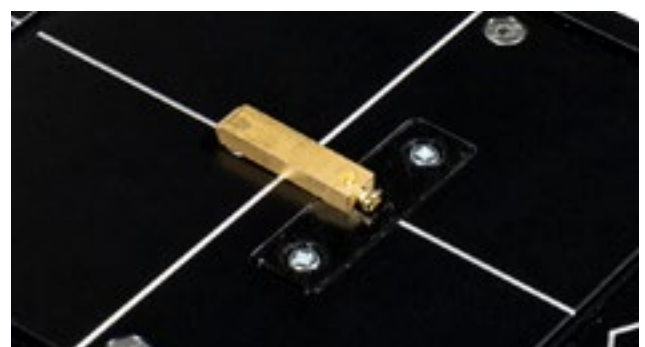
*Requires additional accessory

Hands free sample measurement
The optional footswitch enables the user to easily manipulate the sample for measurement.
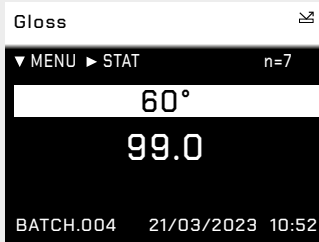
Measurement of small samples
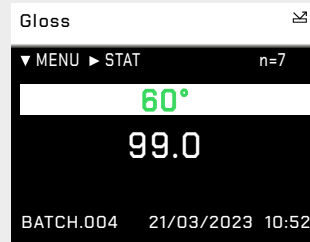Measure samples too small to be measured with a standard glossmeter.

Custom Part Adaptors
For an exact fit for small complex shapes, a custom cutout enables the sample to measured in exactly the same spot each time.
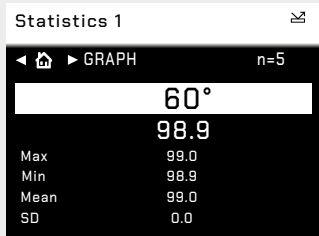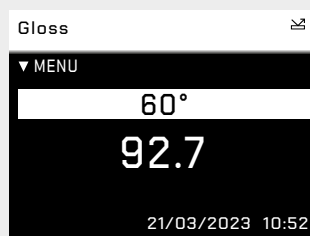
Measurement Function

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.
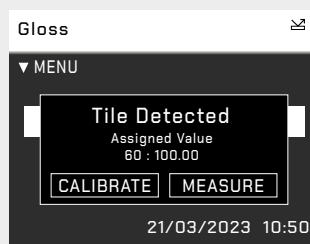
Automatic Tile Detection
For faster calibration, the instrument automatically detects when the calibration standard is attached to the instrument.

Applications

Plastic parts
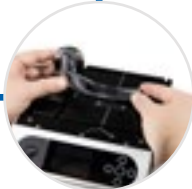From small items such as mobile phone buttons to large extruded pipes

Automotive
Switches and buttons, chromed exhausts, curved body and interior parts

Furniture
Wood, plastic and metal

Ceramics
Porcelain, tiles and glazed crockery

Electroplating
Chromed pipes, jewellery, handles, surgical instruments and prosthetics

Coins
Polished metals

Banknotes
Holograms and watermarks

Dental research
Tooth samples and prosthetics

All paints & coatings

Medical
Tablets, surgical instruments and prosthetics
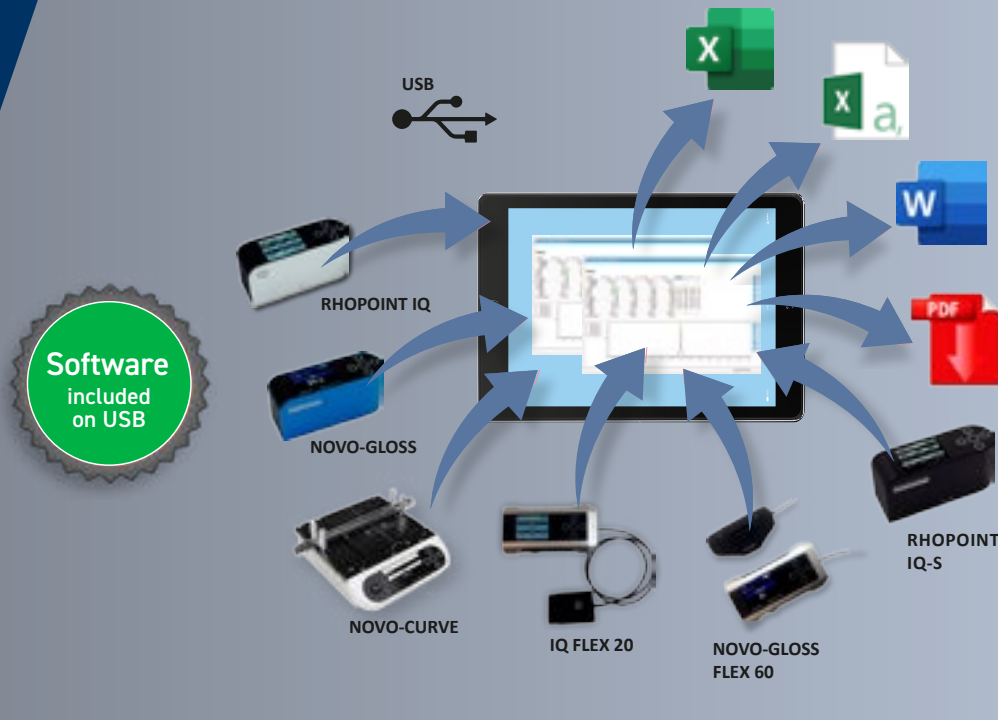
Confectionery
Chocolates and sweets

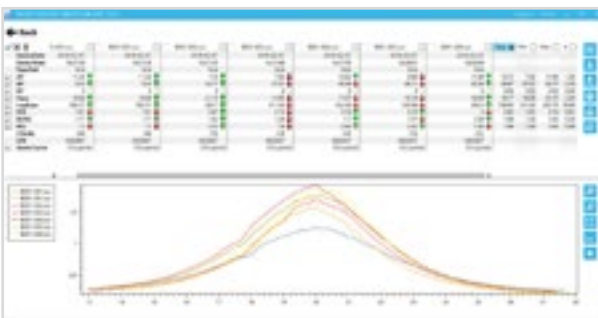**Food products**
Fruit, vegetables and nuts

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.

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.
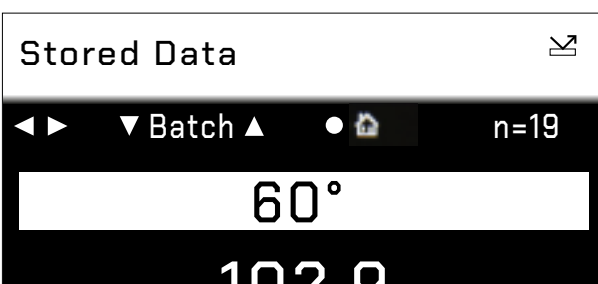
View and inspect data saved on the instrument
Measurements can be recalled and displayed from any batch stored in the memory.

Specifications

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 Spot		2.0 x 2.0 (mm)	
Standards		ISO 2813 ASTM D523	

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

Instrument Specifications	Details
Power	110 –120V AC or 220 –240V AC to power external 9V DC power pack
Measurement Aperture	4.5mm ø
Operation	Full colour easy to read screen Adjustable brightness 5 button touch sensitive interface, measurement button or optional footswitch
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.
Memory	8MB, 2,000 readings
Operating Temperature	15-40°C (60-104°F)
Operating Humidity	Up to 85%, non condensing

Dimensions and Weights	Details
Dimensions	70mm x 190mm x 230mm (H x W x D)
Weight	2.2kg
Packed weight	3.4kg
Packed dimensions	110mm x 280mm x 220mm (H x W x D)
Languages	🇬🇧 🇩🇪 🇪🇸 🇮🇹 🇫🇷 🇹🇷 🇨🇳 🇯🇵
Commodity code	9027 5000

Order Codes	Details
Novo-Curve 4 Glossmeter	A1277-600
4x Jigging posts	B1277-602
Mirror gloss calibration standard	B6000-101

Included Accessories:

- UKAS calibration standards in protective case
- Power supply unit
- USB data cable
- Tile cleaning cloth
- USB containing instrument manuals

Optional Accessories:

- 4 x jigging posts
- Replacement calibration tile
- Supplementary calibration/checking standards
- Novo-Curve cylinder measurement jig
- Custom fixture jigs
- Footswitch

To ensure accurate and reliable results, Rhopoint Novo-Gloss Instruments are supplied with standards calibrated and certified according to ISO 17025 UKAS.

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

Calibration and service: Fast and economic service via our global network of accredited calibration and service centres. Please visit **www.rhopointinstruments.com** for detailed information.

TRY BEFORE YOU BUY

We offer two options for you to try out the Novo-Curve 4 before buying

1 **Online demonstration:** Online presentation of the Novo-Curve 4 with your samples measured LIVE on Zoom, Microsoft Teams or Skype. Includes a consultation with an application specialist

2 **Factory sample testing:** Send in samples of your material for testing and receive a comprehensive test report

Arrange a demo

Ready to receive a quote? **Click here**

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Management
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