

Elcometer 407 Statistical Glossmeter



Elcometer 407 Statistical Glossmeter

The Elcometer 407 Statistical Glossmeter measures gloss at three angles of reflection; 20°, 60° and 85° and uses the internal memory to store readings.

Gloss is measured by directing a constant power light beam at an angle to the test surface and monitoring the reflected light. Different surfaces require different reflective angles.

Gloss measurement is necessary to monitor the uniformity, compatibility, or possibly the deterioration of any protective gloss finish.

The Elcometer 407 Statistical Glossmeter is supplied with Novo-Soft™ software.

At a glance:

Triple angle measurement

Measure any surface from gloss to matt

Statistical readings can be stored internally

Can be used in accordance with:	
AS 1580-602.2	ASTM C 584
ASTM D 523	ASTM D 1455
BS DIN EN ISO 2813	ISO 7668
JIS Z 8741	

- **Triple Angle**
Measure at 20°, 60° and 85° angles.
- **Auto-ranging**
Internal calculation of maximum, minimum, mean standard deviation & coefficient of variation.
- **Multi Language**
Menus in English, French, German, Italian, Spanish & Dutch.
- **Statistical Reading**
Up to 200 readings can be stored internally.
The gauge can be connected to the Elcometer Novo-Soft™ Software for further analysis and archiving.

Appearance

Appearance measurement is a way of putting numbers to characteristics of surfaces that we see. The ability to independently quantify appearance allows for products to be similar whenever and wherever the product is manufactured or coated.

Elcometer provide a comprehensive range of hand held instruments to measure most of the individual characteristics that generate the overall appearance of a material or coating.

Gloss

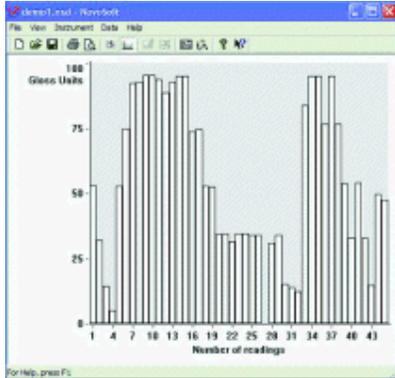
The ability of a surface to reflect light without scattering is known as Gloss. Gloss is measured by directing a constant power light beam at an angle to the test surface and then by monitoring the amount of reflected light. Different surfaces require different reflective angles. Elcometer Glossmeters cover the range necessary to measure almost any surface from high gloss to matt, from large to small surfaces - flat or curved

Haze

Some materials appear to have considerable difference in gloss yet give comparable readings when measured with a glossmeter at one angle. These materials can be separated by measuring at a second angle and comparing the difference of the two readings. Haze is defined by ASTM D4039 as the difference between gloss at 60° and the gloss at 20°.

ELCOMETER Novo-Soft™ SOFTWARE

This purpose designed software, in Windows® format, provides the user with an easy to use package for reporting purposes, archiving gloss measurements and further analysis.



- **Results page**

Numerical data is displayed and may be tagged or edited.

- **Results graph**

This enables display of all results in a simple graph of reading versus gloss.

- **Statistics graph**

Data is displayed as a bar chart (histogram)

A screenshot of the Novo-Soft software interface showing a data table. The window title is 'Novo1.mcd - NovoSoft'. The menu bar includes 'File', 'View', 'Instrument', 'Data', and 'Help'. The table has three columns: 'Number', 'Value', and 'Comment'. The data is as follows:

Number	Value	Comment
1	15.00	
2	32.00	
3	14.00	
4	8.00	
5	53.00	
6	76.00	
7	92.00	
8	92.00	
9	95.00	
10	92.00	
11	92.00	
12	88.00	
13	92.00	
14	92.00	
15	95.00	
16	74.00	
17	74.00	
18	53.00	
19	52.00	
20	76.00	
21	24.00	
22	22.00	
23	24.00	
24	24.00	
25	24.00	
26	24.00	
27	-6.00	
28	22.00	
29	22.00	

Shade

This is the measurement of darkness or lightness of a surface. Only shading is measured, irrespective of colour, and is referred to as 'whiteness'. The test surface is illuminated at an angle of 45° and the intensity of scattered light at the perpendicular (0°), is measured on a grey scale where black is 0% and white is 100%.

Opacity

This is the degree to which a coating will obscure the surface to which it has been applied. Opacity is measured in a similar way to shade, however opacity, or hiding power, as defined by ISO 2814 involves measuring whiteness of a known film of test material on both a black (less than 5%) and a white (greater than 75%, less than 85%) substrate. A full range of opacity test charts are available – See Leneta Test Charts for further information.

Colour

The ability of a material to absorb certain wavelengths of light and reflect others. For example a black material reflects no light across the complete colour spectrum, whereas a pure white material reflects all of the light. All other colours reflect light at different points of the spectrum. Colour is quantified by the material's Red, Green and Blue (RGB) values.

Range	0 - 1,000 GU for 60 degree operation 0 - 2,000 GU for 20 degree operation 0 - 200 GU for 85 degree operation
Accuracy	Reproducibility ± 0.5 Gloss Units (GU)
Resolution	0.1GU
Memory	200 readings
Dimensions	190 x 110 x 60 mm (7.48" x 4.3" x 2.3")
Weight	950g (33oz)
Power Supply	Dry Cells: 4 x LR6 (AA)
Part Number	J407----1
Packing List	Elcometer 407 Statistical Glossmeter, 4 x LR6 (AA) alkaline batteries, Posi-Drive screwdriver, Certified calibration tile in magnetic holder, Calibration certificate for tile, Cleaning cloth for tile, CD-ROM containing Novo-Soft™ software, USB cable, Carrying case and Operating instructions

Spares / Accessories	
High Gloss Tile	T40720091
Zero Calibration Standard	T40720105
USB Cable	T40720093
Posi-Drive Screwdriver	T40720092

Related Products



Elcometer 406

Elcometer 406L Statistical Mini Glossmeter has a memory of up to 200 readings and can be connected to the Elcometer Novo-Soft™ Software for further analysis and archiving. Single and dual angle versions are available.



Elcometer 400

The Elcometer 400 is perhaps the only glossmeter designed specifically for measuring curved surfaces, small components and complex shapes. The continuous reading mode allows the rapid assessment of finish variation and measures a whole range of products and designs.



Elcometer 6014

The Elcometer 6014 Shade and Opacity Meter is a low-cost dual function reflectometer for measuring shade and opacity using 45/0° geometry. This 2-in-1 gauge is the perfect choice for any industry that needs to measure the shade and opacity of their products.

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