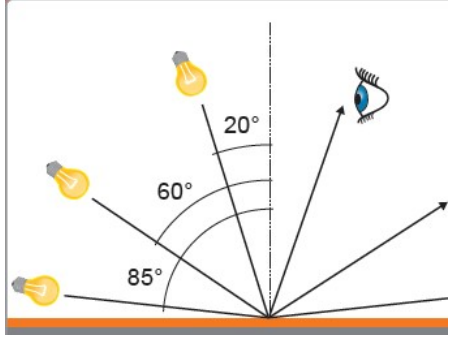


GLOSSMETERS—NOVO-GLOSS RANGE



Gloss has been defined as ‘The attribute of surfaces that causes them to have shiny or lustrous, metallic appearance.’ **Gloss is measured** by shining a known amount of light at a surface and quantifying the reflectance, measured in Gloss Units (GU). The amount of light that is reflected on the surface is dependent on the angle of incidence and the properties of the surface. Gloss is categorised as either matt, semi or high gloss. In order to determine the most appropriate measurement angle start with a glossmeter set at a 60° angle of incidence. If the result is between 10—70GU, the coating is termed ‘semi-gloss’ and should be measured using the 60° angle. If the result is less than 10GU, the product is ‘low gloss’ and should be measured using the 85° angle and if it is greater than 70GU, the product is know as ‘high gloss’ and should be measured using the 20° angle. All three angles should be recorded (20, 50, 85°) when measuring gloss on anodised metals to ensure a complete understanding of the specular reflectance between the coating and the metal substrate.

% Reflectance compares the amount of light energy transmitted and received by a glossmeter and expresses the value as a percentage. The shinier a surface is, the closer the value will be to 100%. Whilst the Gloss Unit (GU) scale is linear, each angle of incidence has a different measurement range; 0 – 2000GU (20°), 0 – 1000GU (60°), 0 – 160GU (85°). % Reflectance displays the measurement value as a percentage relative to the selected angle of incidence. For example, a value of 1000GU at 20° would be expressed as 50%20 and 500GU would be expressed as 25%20, but at 60° this would be expressed as 50%60.

Haze causes a drop in reflected contrast and causes ‘halos’ to appear around the reflected light sources, dramatically reducing the visual quality. In accordance with ASTM D4039 haze is defined as the numeric difference between the specular reflectance at 60° and 20°. This is expressed in Haze Units (HU).

NOVO-GLOSS RANGE

The Novo-Gloss range are easy to use glossmeters which combine high accuracy, repeatability and reproducibility with functionality making them the most advanced glossmeters on the market today suitable for measuring gloss in most applications from matt to high gloss finishes.

The Novo-Gloss range is available as either:

- Single: 60°
- Single: 45°
- Triple: 20°, 60° & 85°
- Triple: Trigloss 20°, 60° & 85° with haze versions.



- Small, robust & ergonomic
- Ultra-fast measurement time
- Time and date stamped results
- Repeatable, reproducible & accurate
- Multiple angles; 20°, 60°, 85°
- Automatic tile detection for faster calibration
- Full on-board statistics
- Graphical trend analysis of results for simple reporting
- Easy batching—user definable batch size and names for more efficient measurement of multiple samples
- Direct data input via Bluetooth –transmit each measured reading directly into Microsoft Excel or other programs
- Auto-ranging, suitable for measuring matt to mirror finishes
- Compliant to major international standards such as ASTM D523, ISO 2813, ASTM D2457
- Differential mode with pass/fail
- Display readings show: Gloss, % Reflectance or Haze readings, statistics, graphs, analogue scan bar & batch review .

Measurement Dimensions

20°: 10 x 10mm 60°: 8 x 16mm 85°: 4 x 55mm

Accuracy & Repeatability Advanced electronics and a superior optical design combines highly accurate, repeatable and reproducible measurements with industry leading inter-instrument agreement across its entire 0 - 2,000GU range.

Range	0 - 10GU	10 - 100GU	100 - 2000GU
Repeatability	±0.1GU	±0.2GU	±0.2%
Reproducibility	±0.2GU	±0.5GU	±0.5%

GLOSSMETERS—NOVO-GLOSS RANGE

Model	20° Gloss High Gloss	45° Gloss Speciality Angle	60° Gloss All Gloss Finish- es	85° Gloss Low Gloss Finish- es	Haze ASTM E430	Haze ASTM D4039
Novo-Gloss 60	-	-	✓	-	-	-
Novo-Gloss 45	-	✓	-	-	-	-
Novo-Gloss Trio	✓	-	✓	✓	-	-
Novo-Gloss 20/60/85 with Haze	✓	-	✓	✓	✓	✓

INSTRUMENT INFORMATION

Battery Type: Rechargeable lithium ion

Operation Time: 17+ hours

Readings per charge: 20,000+

Memory: 8MG, 2,000 readings

Operating Temperature: 15°C - 40°C (60°F - 104°F)

Operating Humidity: Up to 85% (non condensing)

PRODUCT 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

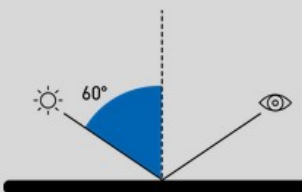
Mirror Gloss Calibration Standard—B6000-101

DIMENSIONS AND WEIGHT

Dimensions: 65mm (H) x 140mm (W) x 50mm (D)

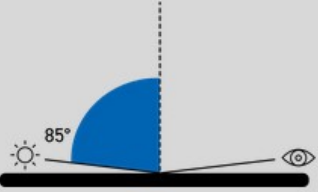
Instrument Weight: 390g

Packed Weight: 1.6kg



Universal Measurement Angle: 60°

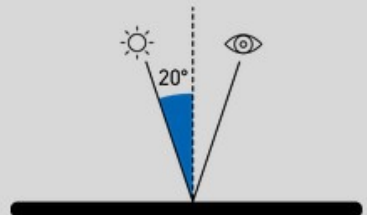
All gloss levels can be measured using the standard measurement angle of 60°. This is used as the reference angle with the complimentary angles of 85° and 20° often used for low and high gloss levels respectively.



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.