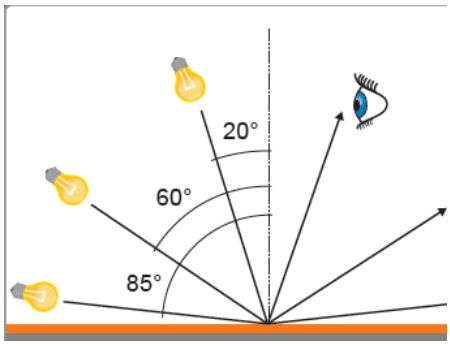
Glossmeters—480 Range

Gloss measurement is based on the amount of light reflected on the surface relative to a polished glass reference standard, 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).

Elcometer 480

The Elcometer 480 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.

The Elcometer 480 is available as either a simple entry level 60° glossmeter or state of the art Single, Dual or Triple angle variants.

- Single: 60°
- Dual: 20° & 60°
- Triple: 20°, 60° & 85°

□ Small, robust & ergonomic □ Multi-lingual menu structures □ 3 - 10 readings per second □ Repeatable, reproducible & accurate □ Multiple angles; 20°, 60°, 85° □ 40,000 reading memory in up to 2,500 batches □ Date and time stamped readings □ USB & Bluetooth® data output □ PC, iPhone or Android™compatible □ Automatic gauge & tile diagnostics □ Auto calibration tile recognition via RFID† □ 40 user definable limit standards □ Standard, auto repeat and scan modes □ 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 op□cal design combines highly accurate, repeatable and reproducible measurements with industry leading inter□instrument agreement □ across its en□re 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%

STANDARDS:AS/NZS 1580.602.2, ASTM C584, ASTM C523, ASTM D523, ASTM D1455, ASTM D2457, ASTM D4039, ASTM D4449, ASTM D5767, ASTM E430, ASTM E2387, BS 3900 D5, DIN 67530, ECCA T2,EN 12373-11, EN 13523-2, ISO 7668, ISO 2813, ISO 13803, JIS K 5600-4-7, JIS Z 8741, TAPPI T 653 (20°)

	Model B	Model T
Measurement geometries	60°	60°, 20/60° or 20/60/85°*
Measurement units	GU	GU, HU† & %
Fast, accurate reading rate	■	■
Repeatable & reproducible measurements	■	■
Easy to use menu structure; in 30+ languages	■	■
Tough, impact, waterproof & dust resistant	■	■
Scratch & solvent resistant colour display; 2.4" (6cm) TFT	■	■
Rotating display: auto, 0°, 180°	■	■
Ambient light sensor; with adjustable auto brightness	■	■
Data Output		
USB live readings	■	■
USB batch download		■
Bluetooth®: to PC, iOS or Android™ mobile devices		■
USB & battery powered	■	■
Calibration Certificate	■	■
Manual gauge calibration	■	■
Auto gauge calibration; via RFID tagging of integrated calibration tile		■
On screen statistics - user selectable		
Number of readings, Mean (average), Standard deviation	■	■
Highest reading, Lowest reading, Range		■
Coefficient of variation,		■
Nominal value, High Limit value, Low Limit value		■
Number above high limit, Number below low limit		■
Measurement modes		
Standard Mode	■	■
Auto Repeat Mode; programmable 10-180 readings per minute		■
Scan Mode; 10 readings per second		■
Differential Mode with Pass/ Fail mode;		■
Limit Standards; up to 40 programmable standards		■
Gauge & batch specific standards limits		■
Gauge memory 40,000 readings in up to 2,500 batches		■
Alpha-numeric batch names		■
Fixed batch size mode		■
Date and time stamp		■
Gauge auto diagnostics	■	■
Display modes; user selectable		
Readings; gloss, % reflectance†, haze†	■	■
Selected statistics	■	■
Live trend graph; last 20 readings		■
Scan bar		■
Readings and differential (with pass/fail)		■
Delete last reading	■	■
2 year extended warranty	■	■

Product Codes

J480B-6	Model 480B 60° Glossmeter
J480T-6	Model 480T 60° Glossmeter
J480T-26	Model 480T 20/60° Glossmeter
J480T-268	Model 480T 20/60/85° Glossmeter

Packing List:
480 Glossmeter, integrated calibration tile, calibration certificate, 2 x AA batteries, wrist strap, operating instructions, plastic carry case, ElcoMaster™ software (Model T) and USB cable (Model T)

Dimensions: 68 x 155 x 50mm
Weight: 534 grams (including batteries)

e.j.payne ceramic

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