

Elcometer 408 Triple Angle Gloss & DOI Meter

Can be used in accordance with:
 ASTM D523, ASTM D2457, ASTM E430, ASTM D5767, DIN 67530
 DIN EN ISO 2813, JIS Z 8741, ISO 7668



The Elcometer 408 provides the very latest in gloss measurement technology, providing accurate gloss, haze and distinctiveness of image (DOI) analysis in a single reading.

Key features of the Elcometer 408 Gloss Meter include:

Accurate

- Fast and simultaneous measurement of gloss, haze, DOI, Rspec and RIQ
- Each instrument is supplied with a Calibration Certificate

Simple

- Bright, easy to read LCD screen displays the gloss value, statistics & graphs
- Display measurements are user definable
- Each set of readings is time & date stamped

Flexible

- Triple (20/60/85°) angle for maximum accuracy and resolution in all gloss applications
- Bluetooth® or USB download to ElcoMaster® data management software for instant analysis

Durable

- Robust aluminium construction ensures optical stability
- 17hrs+ continuous operation or 20,000+ readings
- Compact & portable instrument with integrated tile holder

Efficient

- Easy menu-driven user interface in multiple languages
- Clear, illuminated display showing up to five parameters on screen
- On board trend analysis with gloss and image quality (IQ) values

Powerful

- On board memory for 999 readings with full goniophotometric profiles
- Internal battery is fully rechargeable in 2.5 hours

Gloss & DOI Meter Definitions

Gloss (GU)

- A simple measurement proportional to the amount of light reflected from a surface determining how shiny a surface appears.
- Surface texture can reduce appearance quality, without affecting gloss. These two test panels have identical readings when measured with a standard glossmeter.

Haze (HU) & Log Haze (HULog)

- High quality gloss surfaces have a clear, deep, brilliant finish. Haze causes a drop in reflected contrast and causes halos to appear around light sources, these unwanted effects dramatically reduce visual quality.
- Undetectable by traditional gloss meters the Elcometer 408 measures Haze Units in accordance with ASTM E430 at the same time as simultaneously measuring gloss and DOI.

Peak Reflectance (Rspec)

- Rspec is the peak reflectance measured over a very narrow angle in the specular direction and is very sensitive to any surface texture, waviness or rippling. When Rspec is equal to the gloss the surface is smooth. Rspec drops as the surface texture increases.

Distinctness of Image (DOI)

- Distinctness of Image measures the sharpness of a reflected image in a coating surface. Similar coatings may have identical gloss values but visually the quality may be very different. A visually poor coating may have a highly textured dimpled appearance known as "orange peel". When a reflected object is viewed in such a coating the image becomes fuzzy and distorted.
- A surface that has a perfect undistorted images returns a value of 100. As the value decreases the image becomes more distorted.

Reflected Image Quality (RIQ)

- Reflected Image Quality provides greater sensitivity when evaluating highly reflective coatings and the specular / diffuse element of lower gloss materials.
- A surface that exhibits a perfect undistorted image returns a value of 100, as the values decrease higher surface texture is present and the image sharpness reduced.

Goniophotometric Profile

- The gloss, haze, DOI and Rspec values produced by the Elcometer 408 can be used to assess the visual quality of any surface. The full range of goniophotometric curves can be downloaded to a computer for detailed understanding of specular reflectance. The Elcometer 408 can also be used to quantify an orange peel finish or a substandard coating with a low DOI.

Product Features

Bright colour screen; with permanent back light	Adjustable brightness, 6 button touch sensitive interface
User definable measurement display	•
Scratch & solvent resistant display	•
USB power supply	•
Calibration certificate	•
Data output	•
USB to PC	•
Bluetooth®: to PC or Android™ mobile device	•
On screen statistics	x, σ , maximum & minimum value
USB cable	•
Date and time stamp	•
Gauge memory; number of readings	up to 999 readings & curves
Repeat measurement mode	user definable: 2, 5 or 10 seconds
Delete last reading	•
Standard & fixed batch sizes	•
Trend, gloss & image graphs	•
Measurement modes	Gloss (GU): 20°, 60°, 85°; Haze (HU) & Haze Log (HU Log); Distinctiveness of Image (DOI); Peak Reflectance (Rspec) & Reflected Image Quality (RIQ)

Technical Specification



Part Number	Description					Certificate
J408--268	Elcometer 408 Triple Angle Gloss & DOI Meter (20, 60 & 85 Degree)					•
Power Supply	Rechargeable Lithium Ion (17+ hours/20,000 readings)					
Recharge Time	USB 4.5 hours, Mains Charger 2.5 hours					
	Gloss	Haze	DOI	RIQ	Goniophotometric	
Measurement Range	20°: 0-2,000GU; 60°: 0-1,000GU; 85°: 0-150GU	0-2,000GU	0-100 DOI	0-100 RIQ	-	
Resolution	0.1GU	0.1HU	0.1		0.1GU	
Repeatability	0.2GU	0.2HU	0.2		0.2GU	
Reproducibility	0.5GU	0.5HU	0.5		0.5GU	
Peak Specular Reflectance	-20° ± 0.09375°					
Dimensions(HxWxD)	65 x 140 x 50mm					
Weight	790g					

Packing List

- Elcometer 408 Gloss & DOI Meter
- High gloss calibration tile with calibration certificate
- Gloss tile cleaning cloth
- Transit case
- USB cable
- Novo-Gloss Multi Gauge Software
- Mini CD (Instruction manual, Bluetooth® data app, Example Excel spreadsheets)
- Instructional videos & operating instructions

Accessories

T40823532	High Gloss Calibration Tile with Calibration Certificate
T40823533	Mirror Gloss Calibration Tile with Calibration Certificate
T99923535	Gloss Tile Cleaning Cloth
T99921325	USB Cable