KONICA MINOLTA | SENSING

RHOPOINT QS

Glossmeter • Haze Meter • DOI Meter • Goniophotometer

- Gloss (20/60/85°)
- RSPEC
- Reflection Haze
- Distinctness Of Image (DOI)
- Reflected Image Quality (RIQ)

Designed For Appearance Measurement Applications

Paints & Coatings Manufacturers and Applicators • Polishers • Metal Polishers • Powder Coaters Plastics Manufacturers • Inks & Printing • Additives Manufacturers • Automotive Industry Wood Coatings • Coil Coaters • Yacht Manufacturers

The Standard in Measuring Color & Light

Giving Shape to Ideas

The **Rhopoint IQ-S** quantifies surface quality issues invisible to normal glossmeters

An innovative advanced measuring instrument that provides key measures of surface appearance; gloss, reflection haze, DOI and RIQ, for detecting surface defects like surface haze and orange peel.

The Rhopoint IQ-S measures reflected image quality; not only measures gloss but aso profiles how light is reflected from a surface. Normal glossmeters only measure how much light is reflected and are not sensitive to effects which dramatically reduce appearance quality.

Gloss

A measurement proportional to the amount of light reflected from a surface.

Geometry: For best results the correct measurement geometry should be chosen based on the reflectance of the material:

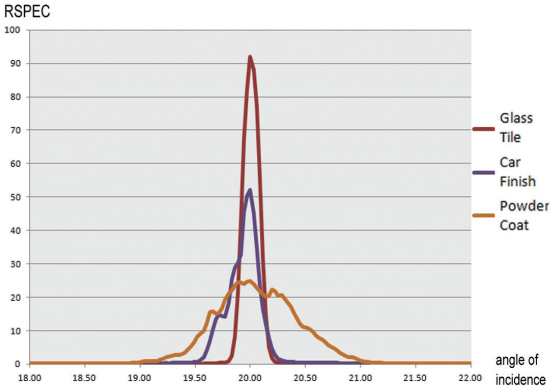
Matt Finish	Mid Gloss	High Gloss and Metallics
85°	60°	20°

Measurement Unit: GU

RSPEC

The peak gloss value over a very narrow angle.

Usage – RSPEC is sensitive to small changes in texture and is used to identify subtle differences in surface smoothness.



Measurement Unit: GU

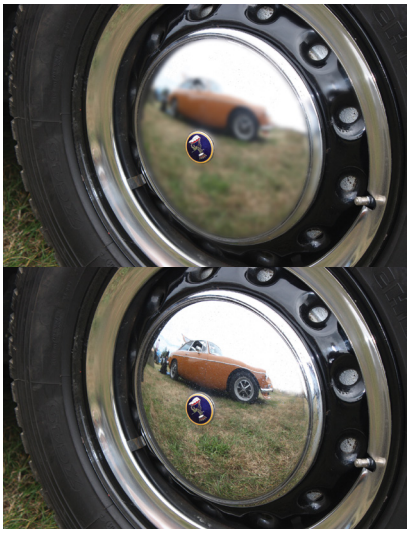
Reflection Haze

An optical effect caused by microscopic textures or residue on a surface.

Visible Symptoms: Milky finish apparent on surface, loss of reflected contrast, halos and patterns can be seen around reflections of high intensity light sources. A Common problem in coating applications like automotive, powder coatings and high gloss coatings.

Causes: Poor dispersion, raw material incompatibility, additive migration, vehicle quality, stoving/drying/curing conditions, polishing marks, fine scratches, ageing, oxidisation, poor cleanliness/surface residue.

Measurement Unit: HU And LogHU



Distinctness Of Image (DOI)

A measure of how clearly a reflected image will appear in a reflective surface.

Symptoms of Poor DOI: Orange peel, brush marks, waviness or other structures visible on the surface. Reflected images are distorted.

Causes: Application problems, incorrect coating flow, coating viscosity too high/low, sag or flow of coating before curing, incorrect particle distribution, overspray, improper flash/recoat time, inter coat compatibility, incorrect cure times and cure temperature.

Measurement Scale: 0-100, where 100 is a perfect smooth surface with sharp reflection.

Reflected Image Quality (RIQ)

Similar to DOI, Reflected Image Quality (RIQ) is used to detect Orange peel effects.

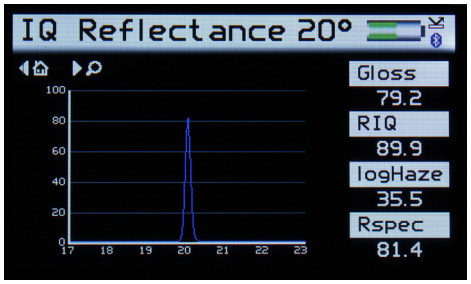
However, the RIQ value provides high resolution results with better correlation to the human perception of surface textures, especially on high quality surfaces such as automotive paints.

Measurement Scale: 0-100 whereas 100 represents a perfect smooth surface with sharp reflection.

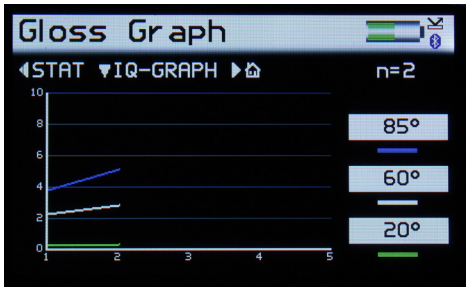
Goniophotometric Profile

The instrument displays surface reflectance profiles 17-23°. The shape of the curve describes how the light has interacted with the surface.

Sharp curves close to the specular direction indicate smooth highly reflective surfaces.



On screen goniophotometric profile displaying the distribution of the reflected light



On screen graphs highlighting trends in the measured batch

Different textures and distortions produce identifiably shaped profiles depending on their size and frequency. Full goniophotometric information can be downloaded to PC for further analysis and comparison, without the need for interface software.

Best In Class Accuracy And Traceability

- ISO 17025 / UKAS certified calibration tile.
- Advanced standard verification system guarantees error free calibration.

Specifications			Rhopoint IQ-S 20/60/85°		
Gloss	Measuring Geometry		20°, 60°, 85°		
	Measurement Range		20°: 0 - 2,000 GU 60°: 0 - 1,000 GU 85°: 0 - 199 GU		
	Measurement Area		20°: 6mm x 6.4mm 60°: 9mm x 13.5mm 85°: 4.4mm x 44mm		
	Measurement Accuracy	Resolution	0.1 GU		
		Measurement Range	0 - 10 GU	10 - 100 GU	100 - 2,000 GU
		Repeatability	± 0.1 GU	± 0.2 GU	± 0.2%
		Reproducibility	± 0.2 GU	± 0.5 GU	± 0.5%
	Standards		STANDARDS: ISO 2813, ISO 7668, ASTM D523, ASTM D2457, DIN 67530, JIS 8741, JIS K 5600-4-7 - Conforms at 60° and 85° - Verified performance at 20°		
RSPEC	Peak Specular Reflectance		20° +/-0.09912°		
	Measurement range		0 - 2,000 GU		
Reflection Haze	Near Specular Reflectance		Measured at 17.2-19°, 21-22.8°; Switchable between Haze Units (HU) and Log Haze Units (LogHU)		
	Resolution		0.1 HU		
	Repeatability		±0.5 HU		
	Reproducibility		±1.5 HU		
	Standards		ASTM E430, ISO 13803		
DOI	Resolution		0.1		
	Repeatability		±0.2		
	Reproducibility		±0.5		
	Measurement range		0 - 100		
	Standards		ASTM D5767		
RIQ	Resolution		0.1		
	Repeatability		±0.2		
	Reproducibility		±0.5		
	Measurement range		0 - 100		
Goniophoto-metric	Measurement range		14-26°		
	Angular Resolution		Approx. 0.02832°		
	Resolution		0.1 GU		
Instrument Specifications	Operation		Full color easy-to-read screen with adjustable brightness and touch sensitive interface		
	Statistical Analysis		Max, Min, Mean, S.D.; All measured Parameters		
	Graphical Analysis		On board trend analysis; Gloss and IQ Values		
	Power		Rechargeable Lithium Ion >17 Hours operation >20,000 Readings/Charge		
	Recharge Time		Mains Charger 4 Hrs		
	Memory		999 Readings; User definable alphanumeric batching		
	Data Transfer		Bluetooth; PC compatible; USB Connection (no software install required for CSV file transfer)		
	Dimensions & Weight		65mm x 140mm x 50mm (H x W x D); 790g		
	Language		English, German, French, Spanish, Italian, Turkish, Japanese		

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