



## **Rheology Solutions**

*Rheology Solutions is the sole Australian distributor of this product range and we welcome the opportunity of discussing your application requirements.*

*We hope the information you are seeking is contained within this file.  
If you have any questions, or require further information please contact us.  
We look forward to being of further service.*

*Regards from the Team at Rheology Solutions.*

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# On-line Gloss Measurement System GM5

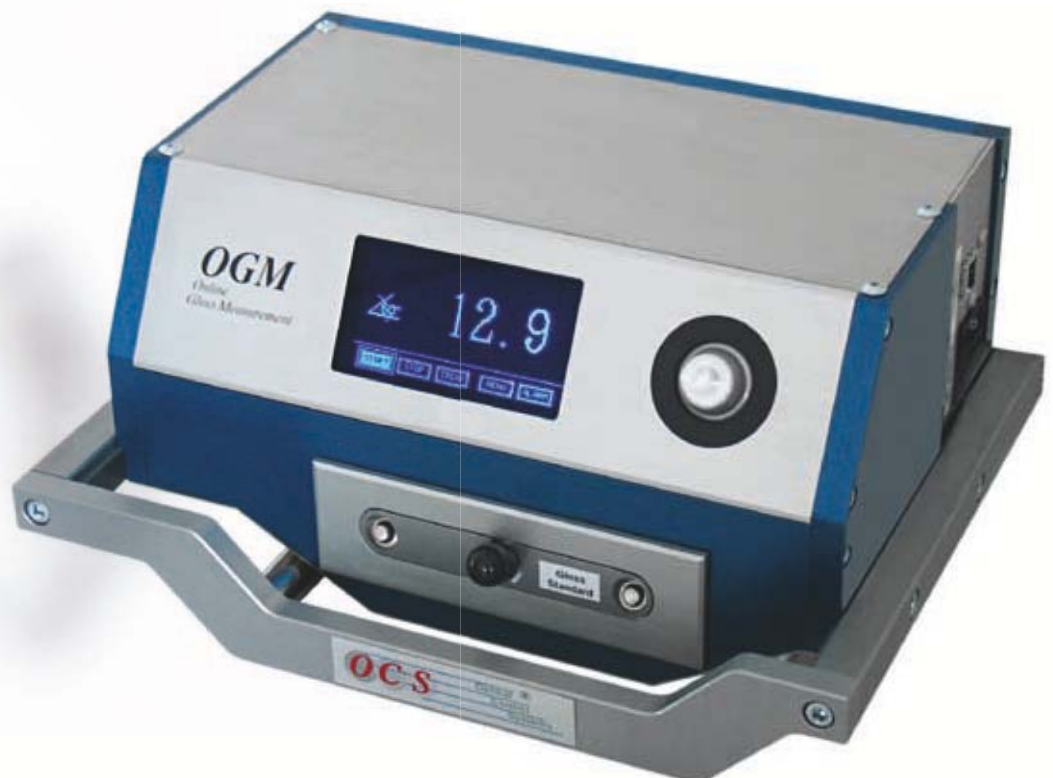
The gloss measurement system GM5 was designed for an everlasting and precise control of film gloss properties and is used in laboratory as well as on production lines.

It detects the particular gloss characteristics of films by using their differential ability to reflect light, according to the knowledge that films are not to be ended of the same reflection force. It measures specular reflection. A special LED lighting unit lights the running film. A photo-detector collects the beams of coherent light which is glossed back and measures the quantity of gloss on a continuum from matt to illustrious. The user achieves only one result in GU (Gloss Units).

The measurement process is automatically controlled by background measuring and calibration. Furthermore the sensor signals are digitised after analogue processing.

Moreover, the gloss measurement was constructed to optimise the film production. To meet this requirement it can be optimally used in combination with OCS` measuring extruder (ME) and chill roll/winder unit (CR9/WU9). By mounting the GM5 on the CR9/WU9 it can be controlled by the same PC like other OCS quality control add ons, e.g. FSA100 and Gamma12. The same software which receives information from FSA 100 surface measurement processes sensor information from thickness and gloss measurement- as a result the user is simultaneously supplied with all necessary data during the film inspection process.

OCS gloss measurement is certified under ASTM D 523, DIN 67530, EN 14086. ASTM D 2457





## Performance Characteristics

- **On-line measurement**  
Measurement can be taken during running production
- **Control**  
Rotary encoder and graphic panel
- **Optimum lighting technology**  
Modulated LED light source in order to avoid temperature- and ambient light influence
- **Integrated reference standard**  
Automatic calibration process
- **Fault diagnosis**  
System monitoring by means of a continuous self-test of the hardware components
- **Data interface**  
Data transfer and remote control via Ethernet interface and MODBUS TCP protocol

## Technical Data

- Measuring angle  
60° : DIN 67530  
45° : EN 14086  
45° : ASTM D 2457 (0 - 150 GU)
- Measuring  
Range 0 - 200 Gloss units (GU)  
Speed 1/sec  
Area 3 cm<sup>2</sup>
- Indicator's resolution  
0,1 Gloss unit (GU)
- Averaging  
1 - 50 sec
- Lighting  
Special LED lighting
- Detector  
Silicon photo detector  
Spectral evaluation V (λ)
- Device interface  
Ethernet 10/100 M Base T  
MODBUS TCP protocol
- Size dimension  
(l, w, h) 16 x 31,5 x 32,5 cm  
Weight approx. 13 kg
- Power supply  
115 V AC - 230 V AC, 50/60 Hz
- Temperature  
10 - 40 °C





**Optional**

- Computer  
Industrial Intel®Core™ 2 Duo  
Up-to-date-technology
- Software  
Operating system Windows XP Professional  
(latest technology)
- Physical interfaces  
[DC per external server]  
Ethernet 10/100/1000 M Base T, USB,  
RS 485, RS 232, digital & analogue I/O
- Communication protocol  
[DC per external server]  
MODBUS RTU, MODBUS TCP/IP, OPC, SQL,  
file transfer, PROFIBUS  
Implementation to other Fieldbus-Systems  
possible

Technical alterations are subject to change  
without prior notice