

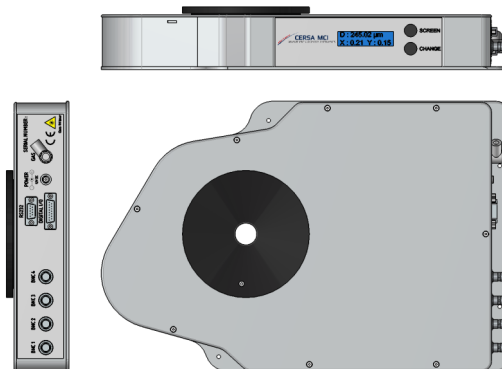
SPECIFICATIONS

CM5 Coating Monitor 5 axis

The **CM5** is designed for coated optical fiber measurement and defect check during drawing.

It includes several different principles:

- * Laser diffraction for diameter measurement.
- * Shadow energy fluctuation on 5 axes for Lump & Neck fast detection.
- * Diffused energy fluctuation for internal defect detection.
- * Laser interferometry for asymmetry measurement.



PRODUCT		CM5 Base	CM5 Full
Performances (traceable calibration to international standards - METAS)			
Measurement window	Disk diameter	2.0mm	
Diameter measurement (OD)	Diameter range	50 - 400µm	
	Uncertainty ^{*1}	+/-0.10% of OD (+/-0.20µm for 245µm)	
	Repeatability	+/-0.07% of OD (+/-0.17µm for 245µm)	
Lump / Neck-down detection	Nb of axis	5	
	Min fault length	30µm @ 3000 m/min	
	Min fault height	5 µm	
Internal defect detection (bubbles, delamination, particles, impurities)	Min fault length	-	10µm @ 3000 m/min
Coating asymmetry measurement ^{*2}	Measurement rate	-	30 measurements/sec
X&Y position measurement	Range	+/-2mm	
	Uncertainty	+/-0.1mm	
	Measurement rate	1000 measurements/sec	
Vibration frequency measurement	Method	Compute by FFT	
Communications			
Serial RS232 (SUB-D 9 pins)	Baudrate	115200	
Digital (SUB-D 15 pins)	Digital output (open collectors)	8	
	Digital input (length counting and reset)	2	
Analogic output	BNC (+/-10V)	4	
Environmental & general data			
Temperature	Ambient T°	10 - 40°C	
	Max internal T° ^{*3}	55°C	
	Storage T°	0 - 60°C	
Laser source	Laser type	Class 1M	
Power	Power supply	12Vdc 45W	
Dimensions	Dimensions (LxWxH)	449.2 x 297 x 67.8 mm	
	Weight	4.7 kg	

Remarks:

¹ includes slow ambient temperature fluctuation within 10-40°C and fiber moves within the measurement window.

² mainly used on wet on dry process on the primary layer. Refer to asymmetry principle and limitations in CM5 manual

³ provide air flow of 5 to 20l/min to clean the optics and cool down the electronic

Technical data are subject to change without notice