

DPM 100

Digital Pocket Microscope

The NEW DPM 100 Digital Pocket Microscope offers varying magnification up to 200x suitable for most quality inspection work. The microscope features integrated LED illumination which can be turned on and off depending on the application. The DPM contains a high-resolution color camera which provides crisp, clear images. To capture an image simply press the red button on the microscope. The microscope can be used for many applications, such as print quality, paper structure, coatings, textiles, plastics, etc.

DPM 100 Digital Pocket Microscope

Features:

- High resolution CCD-camera offering clear images
- Very Portable and easy to use
- USB cable connection for data transfer
- Auto Gain function to adjust lightness differences
- 4 LED Illumination for crisp images
- Capture button to save an image

DPM 100 Software

Features:

- Database function to store images and test results
- DPM Standard Measurement:
Region Tool, Distance Tool, Angle Tool, Circle Tool,
Area Tool, Step Distance Tool
- Automatic Image Analysis:
Dots, Lines, Text, Barcodes, Shapes, Satellites,
Voids, Graininess, Mottling, Missing Dots etc.
- Calibration function for the camera with calibration sheet



Ordering Information

Cat. No.	Description
PO-9091	DPM 100 Digital Pocket Microscope

Comes complete with:

DPM 100 Instrument
DPM Software
Metal Cup
Instrument Metal Stand
Carrying Case
Operating manual (English)

Technical Specifications

Resolution	Magnification	Power supply
1600 x 1200 Pixel (≈ 1.4 µm per pixel)	200x	USB Port (5 VDC)
Interface	USB 2.0 Cable 1.4 m	
Dimensions	ø 32 mm x 114 mm	
Weight	90 gr.	

Typical Application

Print and Paper Industry

Dots & Satellites

The "Dot" function determines the number of dots, average area size (mm²) and their covered area (%) together with the corresponding data for detected satellites inside the defined region.

Lines

The "Line" function will automatically characterize the leading and trailing edges of the line with respect to the angle, blurriness, raggedness together with the width (mm) and contrast of the line according to the ISO 13660 specifications.

Shapes

The "Shape" function will automatically characterize the area (mm²), width (mm), height (mm) and perimeter (mm) of the selected object inside the defined region.

Voids

"Voids" are detected when a solid black area has white, unprinted spots in it. The voids must be within the size limits defined by the voids parameter. The DPM software will count the number of detected voids inside the selected area.

Mottling & Graininess

This function characterizes how evenly a uniform printed area appears to the human eye.

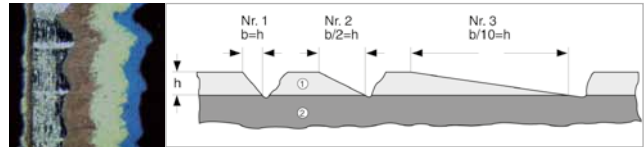
For "Graininess", the high frequency variations are characterized from sub-images (tiles) of different sizes from 0.042 mm (0.0018 mm²) up to 1.02 mm where the smaller tiles will divide the defined region into more sub-images (counts). The variation between the sub-images of a particular grid size (Grid) is then calculated as the standard deviation (S.D). Finally the different standard deviations are averaged into one single "Total" number.

The "Mottling" describes the low frequency pattern and here only a single grid size of 1.27 mm is used to calculate the variation. According to ISO 13660, the region must be at least 161 mm² (12.7 mm x 12.7 mm) in which case the DPM instrument must be installed on a stand to obtain 100 tiles for mottling.

Paint and Coating Industry

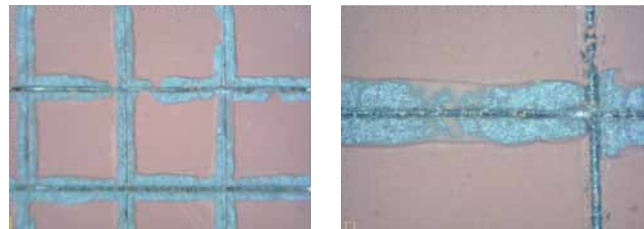
Destructive Film Thickness

The V-shaped cut from the byko-cut can be easily stored as an image with film thickness info in mm. Also the width from the cut can be detected and recalculated to the film thickness of the coating depending on the cut-Angle.



Adhesion Test

Evaluation of the adhesion of a coating. Store the image into the DPM Software database and view the cross-cut on the screen and evaluate the edges, lines, shapes and defects of the cross-cut image.



Buchholz Indentation

The indentation test as per Buchholz is a reliable test method for evaluation of indentation resistance of plastic deformable coatings. Evaluate the length after the test with the function "Distance Tool" and convert the values with the "Buchholz Indentation Table".



Elasticity and flexibility

Document your impact / cupping test or mandrel bending test result with a digital image.



Impact Test

Cupping Test

Mandrel Bending