

Manufactured by
VeriVide Ltd

The DigiEye System

a complete non-contact color
measurement and imaging
solution.



The challenge of colour managing carpet

The challenge faced by carpet manufacturers

- Carpet has a heavily textured surface influencing colour measurement
- Traditional colour measurement equipment is heavily influence by this pile structure
- This leads to repeatability and accuracy issues
- Pass/fail is very subjective



The challenge of colour managing carpet

The traditional method of Quality Control has been either:

Visual Assessment

with uncontrolled or inconsistent viewing methods in terms of :

- The Observer - subjectivity
- Light Source
- Angle of Observation
- Orientation of pile



OR

Instrumental Measurement (Spectrophotometer / Colorimeter)

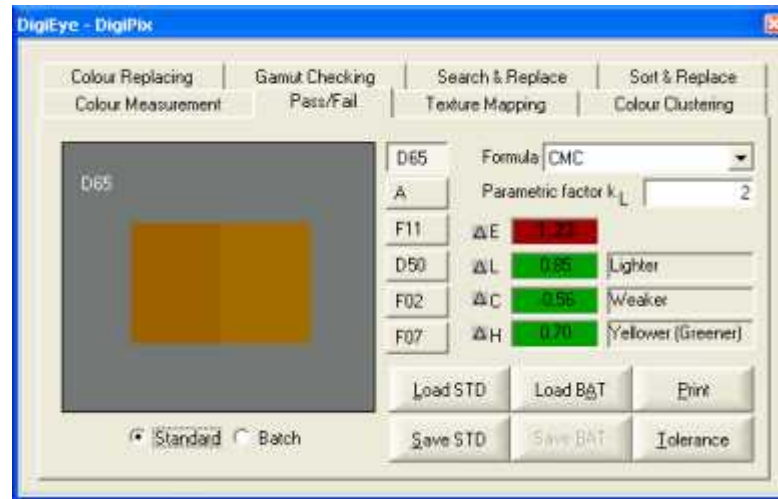
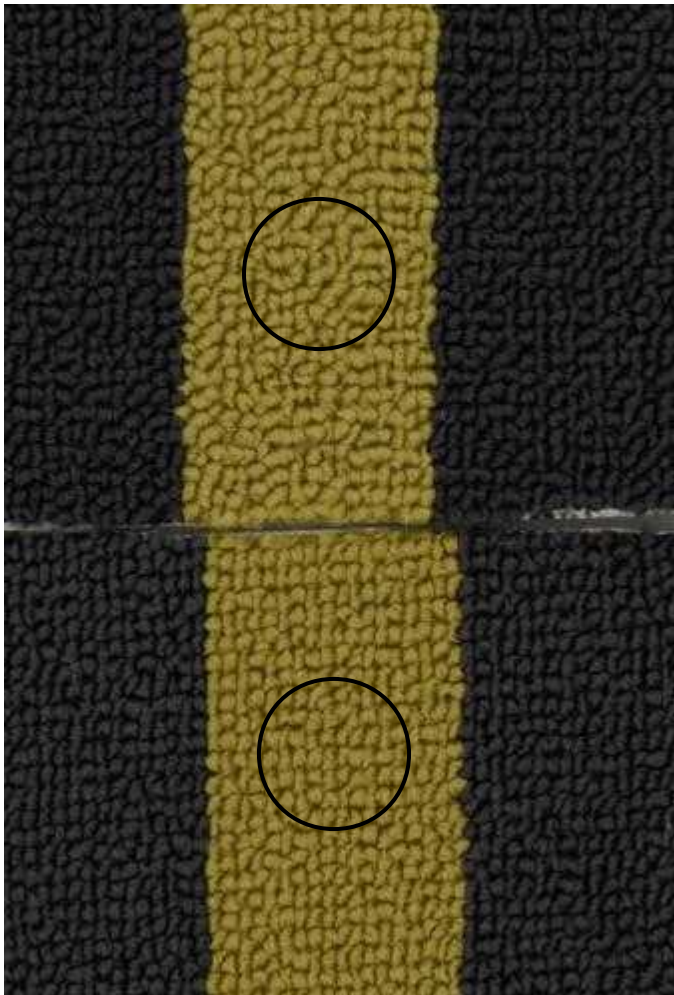
with restrictions and limitation

- Works well on flat, opaque objects – Very limited on highly textured surfaces.
- Limited by aperture size, averaging the colour of the selected area. The colour is therefore heavily influenced by the pile
- Crucially, the results bear little relationship as to how the human eye see colour or the overall product appearance.



The challenge of colour managing carpet

Spectrophotometer – An Example



- These 2 carpets are intended to be the same colour but have a slightly different loop construction
- A spectrophotometer does not make allowance for the structure
- It simply averages the whole measured area
- The structure will influence the colour measurement and colour difference

The Challenge of colour managing carpet

The Solution:

DigiEye - Measuring Colour in Context

The DigiEye System from VeriVide is different.



- Digitally capturing and measuring
 - Texture, Colour & Appearance
- High Resolution - Great Precision.
- Consistent and Repeatable results.
- Calibrated images - Colour visualisation.
- Measures colour in context not in isolation.
- Colour as seen by the consumer.

What is DigiEye?

- DigiEye is a digital colour imaging system with many proven applications in the textile sector.
- Offers the ability to consistently and reliably measure colour & appearance using a non-contact method.



- Characterized SLR Camera.
 - Recording colour data at millions of points
- Calibrated Monitor & Printer.
 - Accurate on-screen product representation.
 - Colour accurate photographic images.
- Enclosed 'DigiEye Cube'.
 - Eliminating all ambient light.
 - Product capture in Consistent lighting
 - Both Angled and Diffuse lighting.

Measuring carpet on DigiEye

- DigiEye does not have the aperture restrictions of a spectrophotometer

- We can measure the whole imaged area

- Much more representative of true colour

- Much less influenced by textured surfaces

- Measure finished product and yarns

- Visualise AND measure the colour differences

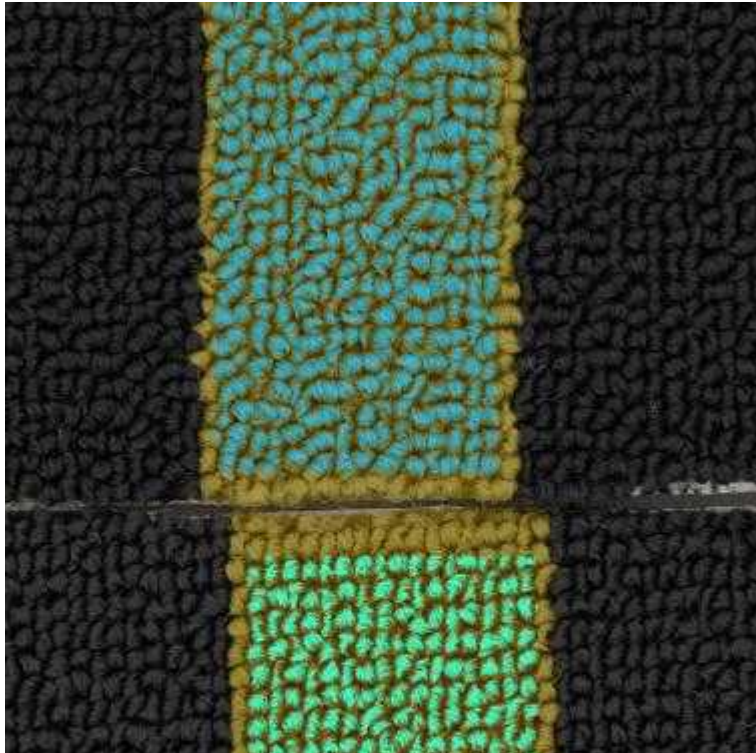


Measuring carpet on DigiEye



- Having an image allows you to be very selective of what you measure
- We can measure the colour of yarns and finished carpet
- We can compare colour difference of finished carpet and Yarns
- Much more representative of how the consumer will view the item

DigiEye – Carpet - An Example



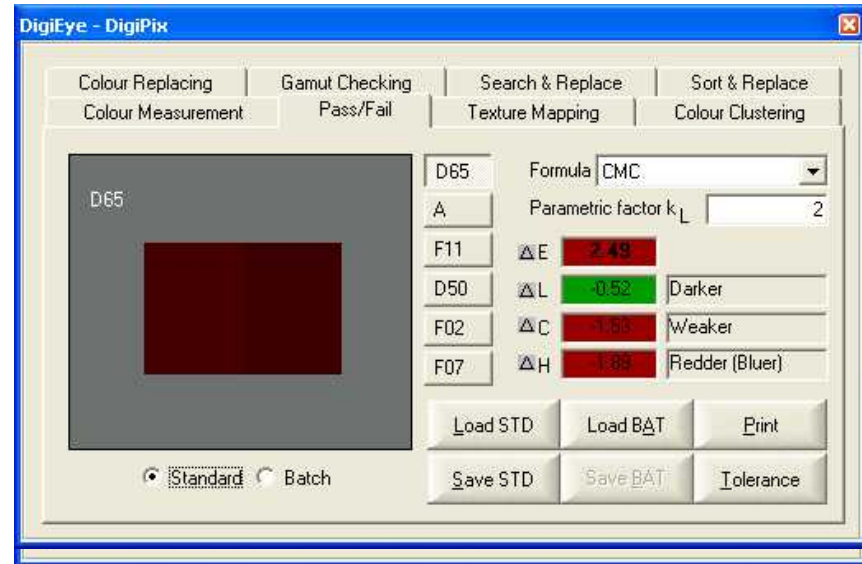
- Using a sophisticated method of selection we can exclude areas that influence the colour
- The 'false coloured' areas highlight the measure portion of the carpet
- Note that only the tops of the turfs are measured
- No influence from the carpets structure

Sample / Illuminant	dE	dL	dC	dH	Sample is	
batch	D65	0.70	0.42	0.08	0.56	Lighter, Stronger, Yellower (Greener)
	F11	0.60	0.40	0.11	0.43	Lighter, Stronger, Greener (Bluer)



Measuring carpet on DigiEye

DigiEye – Yarn - An Example



- It is very difficult to prepare this type of sample repeatedly
- This non-uniformity would influence a spectrophotometer
- Using DigiEye We can measure the whole area in one selection
- DigiEye has 'enhanced' selection to compensate for structure
- Measurements of this type are much more repeatable on DigiEye

Virtual Sampling Using DigiEye



- The virtual sample has been retextured to ensure all of the original detail is retained.
- Save time in the development process and speeds up time to market.
- LAB data can be extracted from the virtual sample and used in formulation software.

The DigiEye System

Manufactured in the UK by VeriVide Ltd



Registered under BS EN ISO 9001 Certificate No. 3393.

VeriVide Limited. Quartz Close
Warrens Business Park
Enderby, Leicester. LE19 4SG
United Kingdom

Tel: **+44 (0) 116 284 7790**

Fax: **+44 (0) 116 284 7799**

Email: **enquires@verivide.com**

www.verivide.com/digieye

www.digieye.co.uk