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# RHOPOINT

## NOVO-SHADE DUO+

Dual Function 45/0° Reflectometer

MEASURE

■ OPACITY

■ SHADE

■ CLEANLINESS



Rhopoint Instruments Limited  
is a member of the  
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# RHOPOINT

## NOVO-SHADE DUO+

The Novo-Shade Duo+ reflectometer has 3 distinct modes of operation each using the 0/45 geometry



Measure the shade of a surface on a greyscale



Measure substrate opacity/hiding power



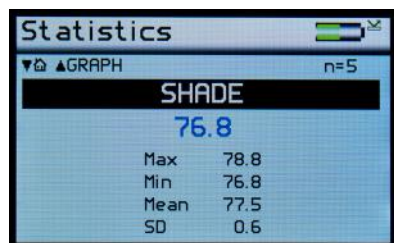
Measure substrate cleanliness

## SHADE

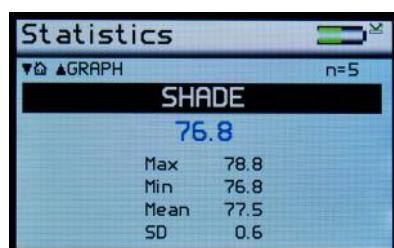
### Features



*Fast measurement*



*On-board statistics*



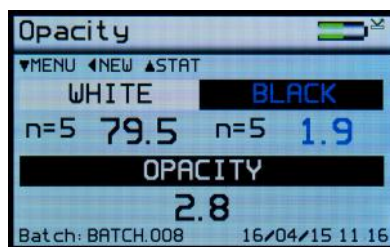
*Trend analysis graph*



*Single button push to make measurements.*

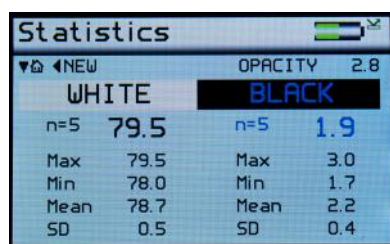
## OPACITY

### Features



*Fast measurement of all parameters*

*Automatic calculation of opacity*



*On-board statistics*



*Measurements are made over a white substrate and then over a black substrate. Opacity is automatically calculated and displayed.*

## APPLICATIONS



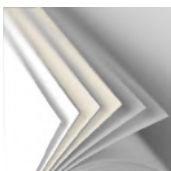
**Shade of paints, inks and coatings**



**Chalking of paint**



**Efficiency of detergents and bleaching agents**

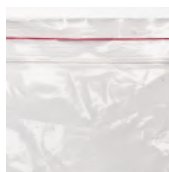


**Whiteness of recycled paper**

## APPLICATIONS



**Hiding power of paints, inks and coatings**



**Transparency of plastic film**

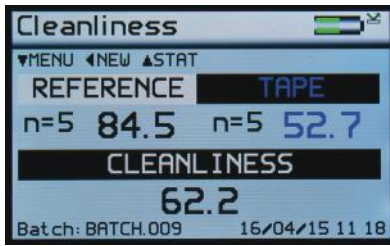


**Opacity of paper**

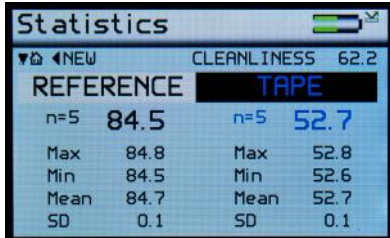


## CLEANLINESS

### Features



### Fast measurement



### On-board statistics



Clear tape is pressed on the measurement surface, torn away and stuck onto white paper - For reference a clean piece of tape is also stuck on the same white paper.

Measurements are made of the reference material and then of the tape, cleanliness is calculated automatically.

## APPLICATIONS



Cleanliness and oxidation on metal surfaces

## INSTRUMENT FEATURES

### Pass / Fail

Easy identification and reporting of non-conformances



### Rapid Data Transfer



Software-free data transfer.

USB connection to PC instantly recognises the device as a drive location which facilitates the quick transfer of files using Windows Explorer or similar.

### Direct data input via Bluetooth



Instantly transmit measured readings directly to programs such as MS Excel on your PC / tablet / smartphone to greatly simplify the reporting process.



### Power



20,000+ readings per charge. The instrument is rechargeable via USB/PC or mains.

### Easy Batching (shade mode only)

User definable batch names and batch sizes for quicker and more efficient reporting.

### Operation

- Full colour easy to read screen
- Adjustable brightness
- 6 button touch sensitive interface

### Construction

- All aluminium construction - enclosure, optics, standard holder
- Integrated calibration holder with in-position detector for error free calibration



# RHOPOINT

## NOVO-SHADE DUO+

### INSTRUMENT SPECIFICATION

#### Statistical Analysis

- Max, min, mean, SD

#### Graphical Analysis

- On board trend analysis

#### Power

- Rechargeable lithium ion
- 17+ hours operation
- 20,000+ readings per charge

#### Recharge Time

- Mains charger: 4hrs

#### Standards

- ISO 2814, 6504, BS 3900-D4, D7, ASTM E97, E1347, D4214 ASTM D2805, D589

#### Memory

- 8 MB = 999 readings
- User definable alphanumeric batching

#### Data Transfer

- Bluetooth
- PC compatible
- USB connection, no software installation required

#### Performance

- Resolution 0.1
- Repeatability 0.2%
- Reproducibility 0.5%
- Operating temperature 15 - 40° C (60 - 104° F)
- Humidity up to 85%, non condensing

#### Dimensions & Weights

- Measurement spot size: 15 x 10mm ellipse
- 65mm x 140mm x 50mm (H x W x D)
- 790g
- Packed weight: 1.75kg
- Packed dimensions: 180mm x 330mm x 280mm (H x W x D)
- Commodity code: 9027 5000

Order Code A4000-010

#### Languages Available



### MEASUREMENT UNITS

#### Shade mode

- 0 = black – no reflectance
- 100 = brilliant white – full reflectance

#### Opacity mode

- 0 = completely transparent
- 100 = fully opaque

#### Cleanliness mode

- 0 = No change
- 100 = Maximum change

### INCLUDED ACCESSORIES

- Calibration tile with certificate
- USB data cable
- Novo-Gloss Multi Gauge Software

- Instruction manual
- Bluetooth data app
- Example Excel spreadsheets
- Instructional videos

### EXTRAS

#### FREE EXTENDED WARRANTY

#### FREE LIGHT SOURCE WARRANTY

Guaranteed for the life of the instrument

#### CALIBRATION AND SERVICE

Fast and economical service via our global network of accredited calibration and service centres. For detailed information, please visit [www.rhopointinstruments.com/support](http://www.rhopointinstruments.com/support)



### LOCAL AGENT



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