

WOOD COLOR PLUS

## INDEX

- page 3 Introduction to the tinting and color matching system
- page 4 Products - **Pigmented Pastes**
- page 6 **Converters**
- page 10 Formula database
- page 12 Equipment needed for the system
- page 13 **Dispensers**
- page 15 **Spectrophotometers**



# INTRODUCTION TO THE TINTING AND COLOR MATCHING SYSTEM

The new WOOD COLOR PLUS tinting and color matching system allows for simple, rapid and repeatable tinting of all types of wood finishes by dispensing colorants into a premixed tint base. To prepare a pigmented product, a paste is dispensed into a Tint base, usually called Converter. This process is far more efficient and accurate when performed using a volumetric rather than a gravimetric dosing method.

The tint Bases, Colorants, colorant dispenser, software and accessories that make up the Wood Plus system allow for the following:

- Formulation of accurate color matches using Corob World color matching software and the X-RITE spectrophotometer. Spectrophotometers that are not connected to the system dispenser can also be used. In this case, you need only record the relevant proportions of tint bases and colorants, and then enter them manually in the computer that controls the color matching system when a new tint is formulated.
- Accurate re-matching of any color formula that the system has previously memorized.
- Using Corob World color matching software, formulas can be input manually by weight (grams) or volume (cubic centimeters (cc's)). However, since the system is geared to volume, it is recommended that products be dispensed in cubic centimeters rather than in grams.
- Extremely rapid output (a 25 liter can of coating can be mixed in 1-2 minutes using a preweighed Tint base).

The minimum dispensed colorant quantity is 0.077 cc. Therefore, if you intend to mix a relatively small amount of a color (e.g. one liter or less) for which 0.077 cc of Colorant or less would be required, it is best to prepare a larger amount instead so that the color can be matched accurately later on.

Virtually all colors can be matched perfectly when mixed in volumes of five liters or more. The aforementioned scenario will occur solely in the case of volumes of one liter or less.



## PRODUCTS

To prepare a pigmented coating, a Colorant is dispensed (using a suitable dispenser) into a Sayerlack Tint base (i.e. one that is designed to be mixed with a colorant).

Each type of Finish has a dedicated Tint base.

When coloring different types of products, it's absolutely necessary to have a different type of Converter for each one of them.

The system consists of a sufficient number of products to allow the user to match virtually any color by combining a specific Tint base and Colorant.

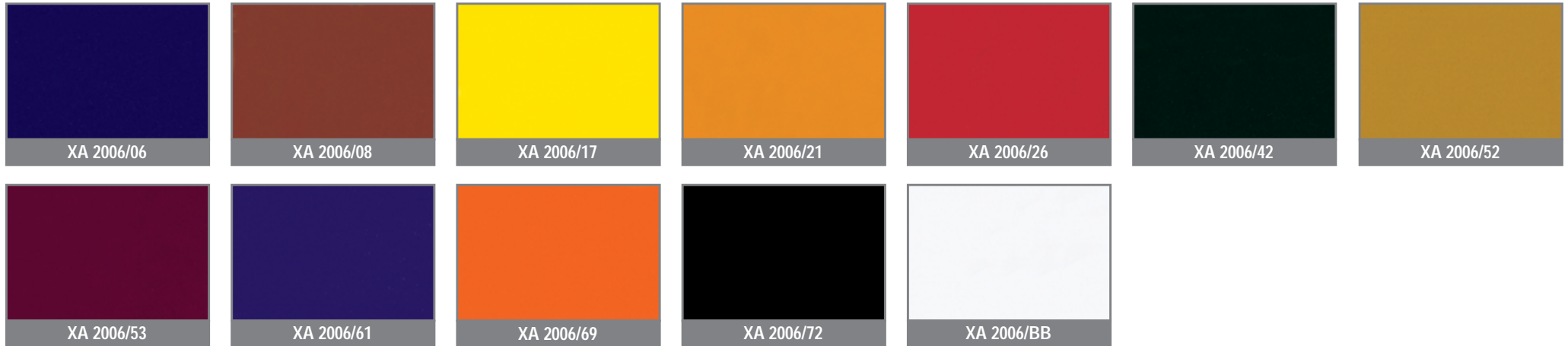
## PIGMENTED PASTES

A single type of general purpose pigmented Pastes could be used to develop both water based and solvent based coatings. This type of pigmented pastes would ensure maximum ease of use (only one type of Paste for all applications) but to the detriment of the final result because the formulation methods for universally compatible pigmented Pastes have a negative impact on the quality of the pigmented Finishing product.

Consequently, we have opted for a system that uses two different types of pigmented Pastes: one for all water based products and a second for all solvent based products. This solution allows for the maximum level of simplicity and flexibility that is obtainable without undermining end product quality.

## WATER BASED PIGMENTED PASTES

- Ideal for exterior and interior finishes.
- Contain no lead, heavy metals or toxic/hazardous solvents.
- The following 12 colors are available (in 0.75 - 5 liter cans).



## SOLVENT BASED PIGMENTED PASTES

- Suitable for polyurethane, nitrocellulose (1), pre-catalyzed and acid finishes.
- Contain no lead, heavy metals or toxic/hazardous solvents.
- The following 13 colors are available (in five-liter cans).



(1) Blue Paste TP 4199/06 should be used for nitrocellulose systems since TP 4199/14 is incompatible with some finishes of this type.

Tint bases are products that are suitable for mixing with colorants so as to obtain a tinted Finish.

In order to create a color matching system that can produce Finishes for the entire color spectrum, each type of finish has a dedicated Tint base, i.e. a different Tint base for polyurethane, nitrocellulose, water based coatings and so on.

## CONVERTERS

### PREMIXED TINT BASES FOR SOLVENT BASED PRODUCTS

**Product type: polyurethane coatings**

CONVERTER TYPE	NAME	CODE	RECOMMENDED HARDENER
High gloss Neutral PU	COLORLUX	TL 99/NN	TH 724 (Fast Curing for polishing) TH 735 (High gloss off the gun)
High gloss White PU		TL 99/BB	
Matt Neutral PU	COLORMAT	TZ 99**/NN	TH 720 for pastel colors TH 755 for strong colors
Matt White PU		TZ 99**/BB	



**Product type: nitrocellulose coatings**

CONVERTER TYPE	NAME	CODE
Matt Neutral nitrocellulose	COLORNIT	SZ 99**/NN
Matt White nitrocellulose		SZ 99**/BB

**Product type: acid cured coatings**

CONVERTER TYPE	NAME	CODE	RECOMMENDED HARDENER
Neutral AC topcoat	COLORURE	WZ 59**/NN	WH 1084
White AC topcoat		WZ 59**/BB	

**Product type: pre-catalyzed topcoats**

CONVERTER TYPE	NAME	CODE
Neutral pre-cat topcoat	COLORPRECAT	SZ 39**/NN
White pre-cat topcoat		SZ 39**/BB



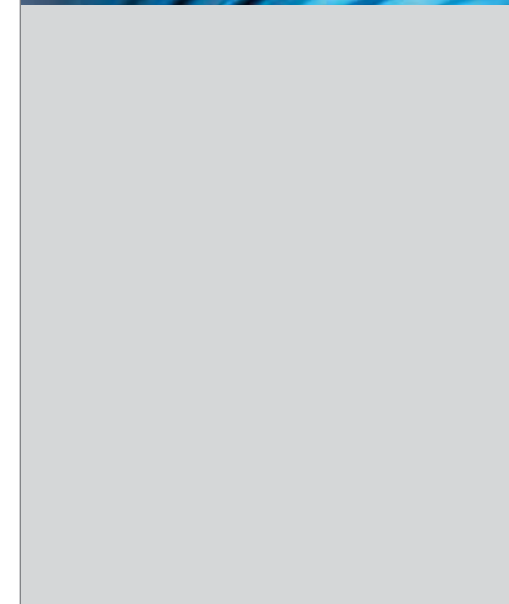
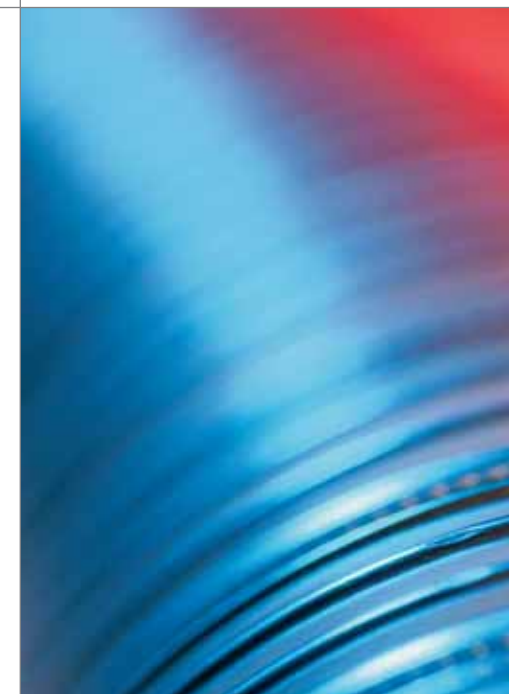
## PREMIXED CONVERTERS FOR WATER BASED PRODUCTS

### Product type: water based coatings for exterior spray applications

CONVERTER TYPE	NAME	CODE
Matt Neutral water based Topcoat	HYDROEST	AZ 76**/NN
Matt White water based Topcoat		AZ 63**/13

### Product type: water based coatings for interiors

CONVERTER TYPE	NAME	CODE
Matt Neutral water based Topcoat	HYDROINT	AT 99**/NN
Matt White water based Topcoat		AT 99**/BB





The proportions of Converter to Paste are predefined and differ for the various types of coatings (and thus for each Converter) depending on the hiding power of the pastes and on the specific application method. For example, interiors water based pigmented topcoats require a higher proportion of paste than a water based thixotropic pigmented topcoat for exteriors. The latter are applied in larger quantities and thus require proportionally less paste to obtain the same color saturation on the coated surface.

The proportions of Converter to Paste have been formulated with practical and cost considerations in mind. In as much as the Pastes are the most costly component of the system, it would be counterproductive to add more than the amount needed to obtain a satisfactory finish.

### THE FOLLOWING TABLE SHOWS THE PROPORTIONS OF CONVERTERS TO PASTES:

CONVERTER	Converter volume (in cc's, based on a total volume of 100 cc's)	Volume of paste to be added (in cc's)	Total volume of coating obtained (in cc's)
TL 99/NN	80	20	100
TL 99/BB	100	0.1-4	MAX 104
TZ 99**/NN	80	20	100
TZ 99**/BB	100	0.1-4	MAX 104
SZ 99**/NN	85	15	100
SZ 99**/BB	100	0.1-4	MAX 104
WZ 59**/NN	85	15	100
WZ 59**/BB	100	0.1-4	MAX 104
SZ 39**/NN	85	15	100
SZ 39**/BB	100	0.1-4	MAX 104
AZ 76**/NN	94	6	100
AZ 63**/13	100	0.1-4	MAX 104
AT 99**/NN	92	8	100
AT 99**/BB	100	0.1-4	MAX 104



# FORMULA DATABASE

The WOOD COLOR PLUS tinting and color matching system, which consists of a series of converters, pigmented pastes and dispensers, allows you to match rapidly and accurately any sample card color for all types of wood coatings. In order to make the system optimally easy to use, the system also contains a database of predefined formulas that can be called up and reproduced instantaneously.

These colors come from the two most widely used color charts in the wood industry.

## WOOD COLOR PLUS RAL HR



The RAL colors will eventually be formulated for all types of converters in the Wood Color system. This project will probably take quite some time to complete since several thousand colors are involved.

We are proceeding according to a scale of priorities and will initially supply a basic range of formulas that cover the most popular colors. Predefined formulas for water based coatings for exteriors and interiors and matt polyurethane coatings are currently available.

PRODUCT TYPES	COLOR CARDS
Matt polyurethanes	WOOD COLOR PLUS - RAL HR
Water based for Interiors	WOOD COLOR PLUS - RAL HR NCS (approximate reading)
Water based for Exteriors	WOOD COLOR PLUS - RAL HR NCS (approximate reading)



The database of predefined formulas will be updated continuously for all system users as new formulas become available, which means that the range of formulas will expand over time.

However, you can in any case match any color desired using the equipment and products described above, i.e. the spectrophotometer, converters and pigmented pastes.

The predefined formulas are associated with “help files” that provide information such as the following:

- 1 If the amount of finish being mixed is smaller than the minimum recommended amount, accurate and consistent matching of the color cannot be ensured. In fact, there are a few colors in the system that require only a minute amount of colorant. In as much as the minimum dispensed colorant quantity is 0.077 cc, adding that amount (or less) would not produce a readily matchable color.  
What happens in practice with a few colors is that mixing them in small amounts (e.g. one liter) involves adding an amount of pigmented paste that is nearly the same as the minimum dispensable quantity. Thus, when the user calls up one of these colors, the system also generates a message recommending that more than one liter of this color should be mixed.
- 2 Colors with low hiding power include an instruction to the user indicating that two coats should be applied.

NOTE: you can use the system without using the predefined formulas.

With the aid of the spectrophotometer, you can match any color whose proportions of converter and pigmented paste have been memorized in the system. If your spectrophotometer is not connected to the dispenser, you can save color formulas by entering their values in the computer that controls the dispenser.



# EQUIPMENT NEEDED FOR THE SYSTEM

**COLORANT DISPENSER CPS COLOR (COROB):** the model used depends on your daily volumes of colors to be produced and the pack sizes you use.

**COROB X-RITE SPECTROPHOTOMETER:** the spectrophotometer is indispensable for matching color charts (without this tool only the aforementioned database formulas can be used). The X-RITE units can be connected to the dispenser.

If you already have a spectrophotometer, you can also formulate new colors and then save them on the dispenser PC by manually inputting the relevant amounts of converters and pigmented pastes.

## PC

The minimum technical requirements for the PC are as follows:

1200 Mhz Pentium IV CPU

256 MB RAM

AGP 4 X video card

2 serial ports\*

1 parallel port

1 USB port

24x CD-ROM drive

SVGA monitor

20 Gbyte hard drive

Windows XP/2000

**COROB WORLD:** this program allows for dispensation and formulation for users who wish to match custom/bespoke colors using the dispenser.

**MIXER:** this device is used for rapid mixing (a CABO mixer is recommended).

**PRINTER:** optional.

CPS COLOR (COROB) also offers optional software (e.g. price, inventory and warehouse management; label program).

\*If your PC doesn't have 2 serial ports, Sayerlack provides its own customers with a specific USB serial adaptor for the COROB dispensers and the X-RITE spectrophotometers.



# DISPENSERS

## D200 16

This is a compact, versatile unit capable of handling small and medium cans and the occasional larger pail. Despite its small size, it's designed to deliver all the traditional Corob accuracy, repeatability and speed.

D200 is ideal for:

- Small and medium size hardware stores
- Small and medium size home stores
- Small paint stores

PC not included

Canister capacity: 16 x 2.5 liter cans  
Suitable for water based pastes only

### Features and options

**Dispensing system:**  
Volumetric, sequentia dispensing system. Bellows pump.

**Minimum dispensed quantity:**  
1/384 fl oz (0.077 cc) +/- 1%.

### Circuits

Up to 16 circuits.  
Canister capacity: 2.5 for universal, water based and solvent based colorants.  
Automatic programmable colorants agitation.

### Canister transport

Manually adjustable shelf.  
Lift-up automatic humidifier cap.

### Dimensions and weight

Width: 900 mm  
Depth: 790 mm (up to 16 circuits).  
Height: 1300 mm  
Weight: 95 kg.

### Power supply:

100-240 volt, 50/60 Hz.



D 200 16

## D300



D 300

The COROB D300 dispenser has new piston pump technology with a simultaneous dispensing system. It is compact and inexpensive to purchase and maintain, so is an ideal solution for Do-It-Yourself stores or similar environments where low to medium paint volumes are tinted. In COROB D300 varying colorant consumption presents no problem because you can select different colorant canister sizes. The COROB D300's volumetric, simultaneous dispensing system is suitable for universal, solvent and water based colorants. The stirring of colorants is automatic and programmable.

**Suitable for both water based and solvent based pastes.**

### COROB D300 (16C FRAME) / COROB D300 (24C FRAME) / COROB D300 SR (16C FRAME) / COROB D300 SR (16C FRAME)

Dispensing technology:	Piston pump
Dispensing flow:	Simultaneous
Canister sizes (l):	4 / 6
Circuit flow rate (l/min):	0.2 - 0.5
Minimum dispensed quantity:	1/384 fl oz (0.077 cc)
Minimum/maximum can height (mm):	0 - 65 (with Punch) / 450
Minimum/maximum can diameter (mm):	50 / 340
Power supply (V):	Single phase / 110 / 240 ± 10%

### COROB D300 / D300 SR (16C FRAME)

Canister configurations:	Up to 16 - Up to 24
Colorant base compatibility:	Decorative: Water and Universal (D300 sr: also Solvent)
Length/depth/height (mm):	740 / 940 / 1360
Footprint (m2)/machine weight (kg):	0.7 / 140

### COROB D300 / D300 SR (24C FRAME)

Canister configurations:	Up to 24
Colorant base compatibility:	Decorative: Water and Universal (D300 sr: also Solvent)
Length/depth/height (mm):	1020 / 940 / 1360
Footprint (m2)/machine weight (kg):	0.96 / 180

CPS COLOR  
any colour you see

BYERLACK  
PROFESSIONAL PAINT SOLUTIONS

## TATOCOLOR

The COROB Tatocolor offers a powerful automatic dispenser that can handle small and mediumsized cans and the occasional larger one. It is a compact unit with powerful ergonomic features and advanced electronics for easier maintenance and diagnostic ensuring the user all the benefits of CPS COLOR Equipment's reputation for accuracy, repeatability and speed. Available as 16-circuit model, with an optional high head unit for lid punching. Ideal for those locations selling small or medium paint quantities, such as medium-large hardware stores, department stores and small paint stores.

**Suitable for both water based and solvent based pastes.**



TATOCOLOR

### SPECIFICATIONS

Volumetric, simultaneous. - Suitable for universal, water and solvent based colorants. - Minimum dispensing quantity: 1/384 fl.oz (0.077cc), +/-1% according to colorant quality, lab. version:1/768 fl.oz (0.039cc), +/-1% according to colorant quality. - Multi-position manual shelf. - Sliding cap and/or sliding autocap. - Central dispensing section. - Rightside canister section. - Leftside canister section. - Automatic programmable stirring and recirculation of colorants.

### CONFIGURATIONS

High and low head. - ABS and sheetmetal panel versions. - Up to 16 circuits. - Three-litre canister capacity internal and external dispensing heads available with or without roll-conveyors can service. - Pump type: internal gear. - Power supply: 230 V,50-60Hz +/-10%. - Optional: 115 Volt, 50/60Hz +/-10%. - Other power supplies available upon requests.

### PHYSICAL SPECIFICATIONS

Width: 960 mm (950 mm for sheetmetal version). - Depth: 640 mm (600 mm for sheetmetal version). - Height: 1.350 mm (1.540 mm high head), 1.310 mm (sheetmetal version), 1.470 mm (sheetmetal version with high head). - Weight: 220 kg (288 kg sheetmetal version).

CPS COLOR  
any colour you see

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## MINIMODULA 24

Designed to deliver all the traditional Corob accuracy, repeatability and speed, this automatic color matching system combines outstanding performance with a graceful and ergonomic design.

The unit is designed for large-volume retailers who mainly handle small and medium sized canisters.

The rapid automatic turntable ensures that larger canisters can also be handled quickly and easily.

Configurable for up to 24 canisters, the Minimodula is ideal for:

- Home stores
- Medium size paint stores.

PC not included

### Canister capacity

6 x 3 liters / 12 x 4 liters / 6 x 6 liters



### Features and options

#### Dispensing system:

Volumetric, simultaneous dispensing system.  
Gear pump.

#### Minimum dispensed amount:

1/384 fl oz (0.077 cc) +/- 1%.

#### Circuits

Up to 24 circuits.  
Configurable canister capacities:  
3, 4 and 6 liters for universal,  
water based and solvent based  
colorants.

Automatic programmable colorants agitation and recirculation.

#### Canister transport

Rapid automatic turntable with can recognition.  
Lift-up automatic humidifier cap.

#### Dimensions and weight

Depends on configurations.

#### Power supply:

100-240 volt, 50/60 Hz.



## MINIMODULA 32

Designed to deliver all the traditional Corob accuracy, repeatability and speed, this automatic color matching system combines outstanding performance with a graceful and ergonomic design.

The unit is designed for large-volume retailers who mainly handle small and medium sized canisters.

The rapid automatic turntable ensures that larger canisters can also be handled quickly and easily.

Configurable for up to 32 canisters, the Minimodula is ideal for:

- Home stores
- Medium size paint stores.

PC not included

### Canister capacity

8 x 3 liters / 16 x 4 liters / 8 x 6 liters



### Features and options

#### Dispensing system:

Volumetric, simultaneous dispensing system.  
Gear pump.

#### Minimum dispensed amount:

1/384 fl oz (0.077 cc) +/- 1%.

#### Circuits

Up to 32 circuits.  
Configurable canister capacities:  
3, 4 and 6 liters for universal,  
water based and solvent based  
colorants.

Automatic programmable colorants agitation and recirculation.

#### Canister transport

Rapid automatic turntable with can recognition.  
Lift-up automatic humidifier cap.

#### Dimensions and weight

Depends on configurations.

#### Power supply:

100-240 volt, 50/60 Hz.



## MODULA 26 and 32

This flexible and modular automatic dispenser meets the most demanding requirements in terms of performance and productivity. It consists of up to 32 circuits of which a maximum of 16 can be placed externally (Modula TDF). It can handle up to 32 internal canisters of various sizes. External or internal dispensing modalities are available (respectively, for Modula TE and Modula TI). The Modula 32 dispenser can be outfitted with a high-flow pump (Modula HF). Explosion proof models are available. The Modula 32 is a highly flexible solution for:

- Large home and paint stores
- Large paint stores
- Large distribution centers
- Paint depots

PC not included

**Canister capacity for model 26 circuits:**  
14 x 6 liters / 8 x 9 liters / 3 x 15 liters / 1 x 20 liters

**Canister capacity for model 32 circuits:**  
14 x 6 liters / 14 x 9 liters / 3 x 15 liters / 1 x 20 liters



### Features and options

**Dispensing system:**  
Volumetric, simultaneous dispensing system.  
Gear pump

**Minimum dispensed amount:**  
1/384 fl oz (0.077 cc) +/- 1%

**Circuits**  
Up to 32 circuits.  
Canister configurations:  
20, 15, 9 and 6 liters for universal, water based and solvent based colorants.  
Automatic programmable colorants agitation and recirculation.

**Canister transport**  
Rapid automatic turntable with can recognition and roller conveyor.  
Lift-up automatic humidifier cap.

**Dimensions and weight**  
Depends on configurations.

**Power supply:**  
100-240 volt, 50/60 Hz.



## SPECTROPHOTOMETERS

### X-RITE

#### RM 61

The RM 61 is a portable model without a display. Developed to meet the retail stores' needs, it's user-friendly and very handy thanks to an ON/OFF switch and a built-in white tile inside the spectrophotometer.

#### SP 52

SP 52 is a portable model and can be operated by use of one hand only. The very large display shows all measured colors' graphical and digital data.

#### SP 62

SP 62 is a portable model and has the same functions as the SP 52 model with the added feature of viewing DE on display. It comes with a case.



### Features

Measurement Geometry: D8° DRS spectral engine.  
Area of Measurement: illuminated dia. 12 mm, measured 8 mm.  
Light Source: Tungsten Lamp  
Light (by RCI) A, C, D50, D65, D75, F2, F7, F11 & F12.  
Standard Observer (by RCI): 2° & 10°.  
Standard Features: Calibration, Search up to 15,000 colors, 3 levels of search and tolerance.  
Receiver: Intense Blue Silicon Light Emitting Diode  
Spectral Range: 400 - 700 nm.  
Spectral Interval: 10 nm. - 10 nm. output measured  
Measurement Range: 0 - 200% of the reflection factor.  
Measurement Time: Approx. 2".  
Inter-Instrument Agreement: 0.30ΔE lowered on an average of 12 BCRS series II (specular component included).  
Short-term Repeatability: 0.1ΔE ab max. on white ceramic.

Lamp Life: Approx. 500,000 measurements.  
Power: Removable battery pack (Ni MetalHydrite) with a nominal power of 7.2 @ 1250 mAh.  
AC Adapter Requirements: 90-130VAC, 50- 60 Hz, 15W max.  
Charge Time: Approx. 4 hours - 100% capacity.  
Measurements for Charge: 1000 typical measurements per 8 hours.  
Data Interface: RS232 bi-directional - 300-57,600 baud rate.  
Operating Temperature: from 10 to 40°C  
85% max relative humidity (not condensed).  
Storage Temperature: from -20 to 50°C.  
Dimensions: H 10.9 cm, W 8.4 cm, L 19.6 cm.  
Net Weight: 1.1 Kg.  
Accessories Included: Calibration Standard, Instruction Manual, AC Power Supply Unit.



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