

## Nh310 High Quality Colorimeter

**3nh**  
Focus on Color

- National Patent Technology, camera locating and illumination locating
- Automatic calibration at startup
- Extended aperture (optional), available for measuring concave surface
- Configure rechargeable high-capacity lithium-ion battery



### NH Series High Quality Colorimeter

#### Color So Rich in Beauty

With 8mm and 4mm two measurement apertures, NH310 colorimeter is the most popular portable colorimeter used in fabrics, paper, plastic parts, building materials. Double locating (Camera locating and Illumination locating) helps measure kinds of different shape samples, such as small size, or curve.



Shenzhen ThreeNH Technology Co., Ltd.

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# Nh310 High Quality Colorimeter

## 1. Leading Humanity Design and Convenient Operation

- Auto White and Black Calibration at Startup
- Structure Design in line with Ergonomics
- Easy-to-use Operation Interface

## 2. Stable Measurement Performance

- The average fluctuation of  $\Delta E$  is less than 0.06, actually more in 0.03-0.06
- Portable structure design which is more conducive to keeping the instrument stable when using

## 3. Flexible and Accurate Locating

- Camera locating can solve the problem of locating a small area. The minimum width of locating is 4mm.
- Illumination locating is a fast, simple and convenient locating function which is the original function by 3nh.

## 4. More Measurement Modes

- Three measuring apertures for more circumstances.
- Five color spaces for more color schemes selection.
- Three light sources for more circumstances.

## 5. PC Software—Realize More Function Expansion

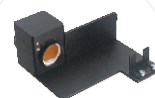
- 3nh has the intellectual property of PC software. The corresponding software serial number and password protection are configured in 3nh colorimeter. Be able to perform color difference analysis, color difference cumulative analysis, chromaticity index, color sample database management, simulating object color, etc.

## 6. Advanced Power Management Design

- 3nh is the first enterprise using high capacity Li-ion battery in colorimeter.
- 3nh Li-ion battery can be repeatedly charged which will save cost. Meanwhile, it can measure more than 3000 times on one charge to ensure the stability of long time measurement.

$\Delta E$  total color difference

$\Delta L$  large means whitish,  $\Delta L$  small means blackish  
 $\Delta a$  large means reddish,  $\Delta a$  small means greenish  
 $\Delta b$  large means yellowish,  $\Delta b$  small means blued



Universal test component  
Liquid paste granule



Powder test box  
Powder granule

## Applicable Industries



## Technical Specifications

**Illuminating/Viewing Geometry:** 8/d

**Measuring Aperture:**  $\Phi 8\text{mm}/\Phi 4\text{mm}$

**Detector:** Silicon photoelectric diode

**Color Space:** CIEL\*a\*b\*C\*h\* CIEL\*a\*b\* CIEXYZCIERGB CIEL\*u\*v\* CIEL\*C\*h\* Yellowness&Whiteness Color Fastness

**Color Difference Formula:**  $\Delta E^*ab \Delta L^*a^*b^* \Delta E^*C^*h^* \Delta E^*CI E94 \Delta E_{\text{Hunter}}$

**Light Source:** D65, D50, A

**Light Source Device:** LED blue light excitation

**Errors Between Each Equipment:**  $\leq 0.40 \Delta E^*ab$

**Storage:** 100 pcs standards 20000 pcs samples

**Repeatability:** Standard deviation within  $\Delta E^*ab 0.06$

Average of 30 measurements of standard white plate

**Weight:** 500g

**Dimension:** 205×70×100mm

**Power source:** Rechargeable lithium-ion battery 3.7V@3200mAh

**Lamp Life:** 5 years, more than 1.6 million measurements

**Charging Time:** 2 hours (first time 8 hours--100% electricity)

**Measuring Times Before Recharging:** more than 3000 times

**Operating Temperature / Humidity Range:** -10~40°C, relative humidity 0~85% with no condensation

**Data Interface:** USB

**Extended Aperture (optional):**  $\Phi 8\text{mm}$  extended aperture, available for measuring concave surface

**Printer (optional):** Miniature thermal printer

**3nh**<sup>®</sup>  
Focus on Color

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