

# Rite-lite

L.E.D. Shade Matching Light



Getting the right shade the first time is never a trivial task for even the finest practitioner. Ambient light, everyday stress and even gender all combine to play a role in the success of the shade-taking process. By providing a “neutral” light environment around the restorative area, the process can be greatly simplified.

The Rite-Lite provides the means to avoid remakes – due to improper shade choice, and the savings can be measured in hundreds of dollars, not to mention the embarrassment to the doctor, as well as the inconvenience to the patient.

## Numerous factors affect the correct selection of a shade match:

- ❑ **Color Blindness** – 8% of all males are color blind
- ❑ **Emotions** – One’s mental state affects color perception
- ❑ **After Images** – occur when a viewer looks at any colored object. Example, looking at a red object for 10 minutes will cause the observer to see a green after-image for approximately 10 minutes.
- ❑ **Environment** – all color, including clothing, lipstick, and ambient light can adversely affect the shade matching process.
- ❑ **Aging** - The cornea and lens of the eye become yellowed. After age 60, blues and purples are significantly affected in many people.
- ❑ **Chronic Illness** - Diabetics are sensitive to red and green. Glaucoma decreases sensitivity to blue, green, and yellow. Liver disease decreases color vision due to lack of vitamin A.

- ❑ **Medications** – Oral contraceptives cause red-green or yellow-blue discrimination defects. Viagra is notorious for color perception distortion; it causes vision to be tinted blue (pilots are not allowed to take Viagra 12 hours prior to flight time). Other medications include: Ibuprofen, aspirin, antibiotics, amoxicillin, lidocaine, and zantac.

#### Preparation Tips for Choosing a Shade

- ❑ Create a neutral-colored environment
- ❑ Have patient remove lipstick or bright cosmetics
- ❑ Drape patient with neutral-colored cover to hide brightly colored clothing
- ❑ Dim overhead lights
- ❑ If assistant is wearing bright clothing, cover with lab jacket
- ❑ Determine the shade selection at the beginning of the appointment before eyes are fatigued from dental procedures
- ❑ Place patient in an upright, seated position facing forward
- ❑ Hold Rite-Lite 2 – 3” from mouth
- ❑ Place neutralizing tabs behind teeth, and use Vita Shade Guide for shade selection
- ❑ Shade selection should not take more than 5 – 10 seconds.
- ❑ Have your laboratory use a Rite-lite L.E.D. Shade Matching Light

#### Essential Shade Taking Facts

- ❑ Create “Natural Light” by introducing 5500 ° K Color temperature.
- ❑ Supplement visual shade taking with photos
- ❑ Send lab color information on opposing and adjacent teeth
- ❑ Enlist the opinion of one or two woman employees (woman have sharper color perception than men)

- Encourage the lab technician to use same light conditions ( Rite-lite, Shade Matching Light)
- A custom made mauve card similar in color to oral tissues can be an asset when placed behind the teeth to solve distraction and value problems. Included with each unit is a package of 25 cards.

<b>FEATURES</b>	<b>BENEFITS</b>
Portability	No cumbersome cords, Lightweight
5500 ° K	Simulates North Sky Daylight
Low Cost	Pays for itself with the price of one re-make. Ideal for laboratories as well as dentists
Easy to Use	On/Off button does not need to be held down
Neutralizing color tabs	Eliminates color distraction in oral cavity
Long lasting L.E.D. light source	30-40,000 hours of power. No changing bulbs
Small viewing area	Eliminates outside color sources from interfering with shade selection
Battery powered	Takes standard AA battery
L.E.D. light source provides full power instantly	No warm-up time

Rite-lite, L.E.D. Shade Light Includes:

P.N. 110047 Complete Unit

P.N. 640015 Pad of 25 Neutralizing color cards

### **Terminology**

- **L.E.D.** – A Light Emitting Diode is a semiconductor device that emits narrow-spectrum light when electrically charged. Advantages of using L.E.D. sources are:
  - Long life span – typically 10 years
  - Less Heat than bulbs
  - L.E.D.'s will not diminish in output, as bulbs will
  - L.E.D's are insensitive to vibration and shocks, unlike incandescent bulbs
  - L.E.D.'s will achieve full brightness in approximately .01 seconds, 10 times faster than a light bulb
  - **C.R.I.** - Color Rendering Index – A measure of light quality, specifically the shift in surface color of an object compared with an incandescent reference light source of the same temperature.

The C.R.I. Index of the Rite-lite is over 92.

### **Frequently Asked Questions**

**Q. I upgraded my overhead lights to the 55000 K range. Why would I need the Rite-Lite Shade Matching Unit?**

*A. The small round aperture of the Rite-lite decreases any outside color influences (such as reflections of an operators color shirt, etc.)*

**Q. Should laboratory technicians have the same type shade light as the doctor uses?**

*A. It is not mandatory, but is highly recommended.*

**Q. Why do I need a shade matching unit that reflects 55000K?**

*A. This is the color wavelength of light that is naturally reflected. For an object to appear its true color, the light source must contain the color wavelength of light that the object naturally reflects. White light is comprised of all colors, which is why north daylight (true white light) is the best source for true color rendering.*