BPI® UV & Blue Light Analyzer

For use only by qualified personnel in a laboratory environment.

Specifications

The BPI®UV & Blue Light Analyzer (BPI #119518. 220v: BPI# 219522) is an invaluable aid for quality control of lenses regarding blue/violet light transmission.

The BPI®UV & Blue Light Analyzer features a microprocessor controller that at a push of a button calibrates the meter for a 100 percent transmission. No matter what happens to the intensity of the LED lights, auto calibration is guaranteed because of the meter's new circuitry that contains an automatic gain controller stage that accommodates itself to any possible variations in the AC line voltage.

Variations in density and hardness of CR-39™ lenses typically affect their ability to accept dye. Two lenses that have been in the same dye tank the same amount of time may not come out with equal blue/violet light protection. IT IS THE LENS PROCESSOR'S RESPONSIBILITY TO VERIFY THIS PROTECTION, and the BPI®UV & Blue Light Analyzer offers a quantitative means of verifying this.

The meter's digital display indicates transmission values at 400nm, 430nm, 470nm, 505nm, and also gives the approximate Tv value for the lens.

As a quick and accurate way to check the blue/violet transmission characteristics of a lens, the BPI®UV & Blue Light Analyzer includes a second display function consisting of five different colored light emitting diodes (LED's). This function makes the instrument a valuable tool for the waiting room or just for instant verification of blue/violet light protection.

The meter is for indoor use only at altitudes below 2000 meters. Ambient temperatures must be between 5° C and 40° C. Maximum relative humidity is 80% for temperatures up to 31° C, decreasing linearly to 50% relative humidity at 40° C. Mains supply voltage fluctuations not to exceed ± 10% of the nominal voltage. Transient over-voltages must not exceed those of category II. This meter is designed for pollution degree 2.

HEIGHT	WIDTH	LENGTH	VOLTAGE	WEIGHT	FUSE	AMPERAGE
5 in.	6.25 in.	6.75 in.	115 or 220 v.	6 lbs	1 amp/250v.	1 amp
12.7 cm	15.87 cm	17.14 cm		2.72 kg	Fast Blow	

LENS CLEARANCE	TEST RANGE	THE SET-UP KIT INCLUDES THE FOLLOWING PRODUCTS:
0.75 in.	400 nm to 550 nm (Visible)	• Demonstration lens • Power pack • Instruction manual
19.05 mm		

Unpacking

When unpacking your instrument, please check to ensure that no concealed damage occurred in transit. If such is noted, save the shipping carton and immediately notify the shipping company's damage control inspector in your area so a claim may be processed. Failure to do this may void any future claim and replacement. Also, call BPI Customer Service so arrangements for a replacement may be made.

Setting Up

To set up your BPI®UV & Blue Light Analyzer just connect the power pack to the unit and plug into a standard electrical outlet convenient to your work area but away from the immediate vicinity of the lens coloring operation since excessive heat and humidity may adversely affect your instrument. Your BPI®UV & Blue Light Analyzer arrived with a lens treated with BPI Total Day™ taped on the back panel. This lens is included for demonstration purposes as well as for testing your unit. This lens should have a Wertheim Protection Factor™ reading of about "40".

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Operation

The BPI®UV & Blue Light Analyzer has an ON/OFF switch (located in the back of the unit), and two push buttons labeled RESET and READ.

STEP 1: Turn the unit on (ON/OFF switch is located on the back of the unit).

STEP 2: Make sure that no lens is in the optical path of the LED light sources.

STEP 3: Push the read button and the meter verifies light output from each LED.

STEP 4: Momentarily push the Read button again. A reading of about 100 will appear on the LCD display for each of the LED wavelengths. The unit is now calibrated.

STEP 5: Place the lens to be tested on the rubber mat and slide it under the sensor housing and into the optical path of the LED's. Push the READ button. The transmission readings will appear on the LCD display and some of the five LED's may be on. If the lens is too dark the top LED will light and readings will be inaccurate. The display will show the LED readings until the READ or CAL buttons are pressed or until the maximum calibration period elapses. IMPORTANT: Remove lens from optical path before re-calibrating.

Lenses with moderate to high power may cause errors due to light path diversion. This can be minimized by making sure that the optical center of the lens is directly over the light source opening in the black rubber pad.

Should the unit ever fail to function properly, press "Reset". If the unit continues to malfunction, turn the unit off, wait a few seconds, then turn the unit back on.

LED Display

The LED Display on the BPI®UV & Blue Light Analyzer has been calibrated as follows:

The caution indicating LEDs indicate if the lens transmission is higher than that which would be provided by a linear drop in transmission with wavelength from its peak photopic value down to zero in the UVA.

Air (no lens) lights all caution LEDs and has a Wertheim Protection Factor™ (WPF) of "0" because no blue/violet light is blocked. A lens with high luminous transmission but minimal high energy blue/violet transmission such as BPI Total Day has a Wertheim Protection Factor™ of about "40".

An opaque lens blocks all visible light including violet and blue, but has a WPF of "0" because it is not useful for seeing!

The Wertheim Protection Factor™ is a figure of merit based on the product of a lens' photopic transmission with its blocking ability for high-energy (blue/violet) wavelengths.

Warning!

ALWAYS UNPLUG THE UNIT WHEN SERVICING.

If this equipment is used in a manner other than that specified by Brain Power Incorporated, the protection provided by the equipment may be impaired.

To clean the meter, wipe with a damp cloth.

Replacement Parts

1 AMP/250v. Fast Blow Fuse… BPI#59905

Questions? Ordering...

If you have any questions about the use of your gradient system or any other BPI product, or would like to order supplies, please give us a toll-free call using the number for your area.

BPI# 119518 (115v)
BPI# 219522 (220v)