

VITA Easyshade[®] LITE

Instructions for use



VITA shade determination

VITA shade communication

VITA shade reproduction

VITA shade control

Date of issue: 2023-03

VITA – perfect match.

VITA

VITA Easyshade® LITE

Purchase date:	
Serial number of the VITA Easyshade LITE Handpiece:	
Serial number of the calibration block holder: (The number must correspond to the handpiece)	
Serial number of the VITA Easyshade LITE calibration station:	
Dealer:	

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1 Introduction and explanation of symbols

1.1 Introduction

Dear Customer,

Congratulations on your purchase of the VITA Easyshade® LITE, which provides accurate shade determination for natural teeth. The instrument covers the broad spectrum of the VITA SYSTEM 3D-MASTER® shades, as well as the VITA classical A1–D4® shades. To obtain the best possible shade measurement, please read through this manual completely.

We hope you enjoy using the VITA Easyshade® LITE.

1.2 Safety note

VITA Easyshade LITE	Complies with IEC 61010-1 with regard to electrical safety, fire safety and mechanical breakdowns
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Table 1 – Safety note

Warnings

1. Use only battery types 1.5V AA LR6 for the VITA Easyshade LITE.
2. Different battery types or new and used batteries must not be used together.
3. Insert batteries correctly according to the polarity signs "+" and "-".
4. If the batteries are discharged or if the instrument is not used for a long time, the batteries must be removed.
5. Always replace all batteries at the same time, not just individual ones.
6. Never look directly into the measuring tip of the VITA Easyshade LITE while the light source is switched on.
7. Do not immerse the VITA Easyshade LITE handpiece or the calibration station in water or other liquids.
8. Follow the instructions in section 7 on proper cleaning and disinfecting the VITA Easyshade LITE.

9. Do not expose the instrument to temperatures over 60 °C or under 0 °C.
10. General dental and technical work and safety measures must be observed during use of the VITA Easyshade LITE.
11. Protect the instrument from direct sunlight.
12. Measurements must be taken within a temperature range between 16°C and 45°C.
13. Do not allow the instrument to fall, as there is a danger of breakage and electrical shock.

Important information on electromagnetic compatibility (EMC)

Portable and mobile high-frequency communication devices can impair electrical medical instruments. This product is designed for use in the indicated electromagnetic environment. The user of the product must ensure that the instrument is used exclusively in a suitable environment.

Power frequency magnetic fields must not exceed the values characteristic of a typical location in a commercial or clinical environment.





Explanation of the symbols on the instrument:		
Note	Opening the housing may cause damage to the instrument.	
Separate disposal	This instrument and all accessories labeled with this symbol are subject to Directive 2012/19/EU (WEEE) and the applicable national regulations, and may not be disposed of as unsorted municipal waste in the European Union (EU). Return the old instrument to VITA Zahnfabrik.	
CE marking	The VITA Easyshade LITE complies with the applicable regulations of the European Union (EU). The declaration of conformity can be requested from VITA (Regulatory Affairs Department) at: www.vita-zahnfabrik.com	
Protection class II	Resources of protection class II have enhanced or double insulation between the main supply circuit and output voltage or metal housing (VDE 0100 Part 410, 412.1).	

Table 2 – Explanation of the symbols on the instrument

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2 General product description

The VITA Easyshade LITE is a spectrophotometer that makes it possible to obtain a quick and precise determination of tooth shade with one click. The compact design and simple operation make it a practical tool for the precise shade determination of natural teeth using the tooth shade reference values of the VITA classical A1–D4 and VITA SYSTEM 3D-MASTER systems. Because of this, the VITA Easyshade LITE enables rapid and efficient dental treatment.

3 Scope of delivery and replacement parts

3.1 Scope of delivery

Product	Piece count	VITA article number
VITA Easyshade LITE handpiece	1	DEASYLHP
VITA Easyshade LITE calibration station	1	DEASYLLS
VITA Easyshade LITE instructions for use	1	10781
VITA Easyshade LITE brief instructions	1	10782
Battery for VITA Easyshade LITE	2	D73000
Sales and shipping packaging	1	DEASYLVP
Safety information	1	10526M

Table 3 – Scope of delivery

Check the delivery for completeness and any transport damage.

i Note: In the unlikely case that the contents of the package are incomplete or damaged, please contact the VITA Zahnfabrik service hotline immediately.
Phone: +49 7761 562-222

3.2 Replacement parts and accessories for users

The following replacement parts and accessories can be obtained from VITA Zahnfabrik:

Product	Piece count	VITA article number
Sales and shipping packaging	1	DEASYLVP
Instructions for use	1	10781
Battery for Easyshade LITE, 1 piece	1	D73000

Table 4 – Replacement parts and accessories

4 First use

⚠ Important: Check to make sure that the handpiece and the calibration block in the calibration station have the same serial number. If this is not the case, please contact VITA Zahnfabrik immediately.

4.1 Overview of the instrument



Figure 1 – Overview of the instrument

1	Measurement key
2	Measuring tip
3	Display
4	Calibration block
5	Top cover
6	Handpiece
7	Calibration station

Table 5 – Overview of the instrument

4.2 Inserting or changing batteries

Insert the supplied batteries into the VITA Easyshade LITE to put the instrument into operation for the first time. When the instrument has been put into operation, you can read the charge status of the battery at the bottom left of the display. Take care that the instrument has been switched off before inserting or changing the batteries. To insert or change batteries, proceed as follows:

1. Remove the top cover by simply pulling it off the handpiece.
2. Pull gently on the battery removal strip to remove the right battery from the battery compartment.
3. Remove the left battery by hand.
4. Now place the battery removal strip into the battery compartment before inserting two new batteries (1.5V). When doing so, pay attention to the polarity shown on the battery compartment when inserting the batteries.
5. Position the removal strip in the middle under the batteries and replace the top cover onto the housing.

VITA Easyshade® LITE – First use



Figure 2 – Changing batteries: Pull top cover off



Figure 3 – Changing batteries: Remove battery on right



Figure 4 – Changing batteries: Remove battery on left



Figure 5 – Changing batteries: Insert new battery



Figure 6 – Changing batteries: Replace top cover

4.3 Switching on

Press and hold the measurement button on the top of the instrument for two seconds. A start screen appears with information about the shade systems and the serial number of the instrument.



Figure 7 – Start screen

4.4 Overview of the display

When the measurement button is pressed again or calibration is performed as described in Section 4.6, the display changes from the start screen to showing the last measured values. Measured values in VITA SYSTEM 3D-MASTER and VITA classical A1–D4 are given in the top two lines. The explanation of the measured values can be found in section 5. Under the measured values on the left, you can see the charge status of the batteries. Change the batteries as described in section 4.2 when the indicator appears red. If a VITA Easyshade LITE symbol appears at the bottom right, you must calibrate the instrument as described in section 4.6.



Figure 8 – Overview of display

4.5 Disinfecting the measuring tip

The measuring tip of the VITA Easyshade LITE must be disinfected before each shade determination. The disinfecting wipes are not included in the scope of delivery. We recommend commercial disinfectant wipes that are especially suitable for medical equipment and sensitive surfaces. These can be purchased from most dental dealers.



Figure 9 – Disinfecting

4.6 Calibration (automatic white balance)

After switching on, place the VITA Easyshade LITE in the calibration station with the tip flush on the calibration block. The VITA Easyshade LITE recognizes the calibration block and now performs the white balance automatically. The conclusion of the white balance is reported by two short signal tones. Following a successful white balance, the last measured value appears and the instrument is ready to use. If there is only a single signal tone, the white balance could not be correctly performed. In this case, an error message appears on the display. Repeat the white balance.



Figure 10 – Calibrating

Note: Do not place the calibration station in the vicinity of a strong light source (e.g., sunlight, treatment lamp), as this may lead to a defective white balance.

i Note: The VITA Easyshade LITE is calibrated to the supplied calibration block at delivery and may only be used with this calibration block. If you have more than one VITA Easyshade LITE, you should ensure that the calibration stations are not mixed up, to ensure the accuracy of the measurements. To do this, compare the serial number (start screen) of the handpiece with the serial number of the calibration block holder. Due to changed environmental conditions or after repeated use, it may be necessary to carry out a white balance again for further measurements. Please do this as described in section 4.6.



Figure 11 – Measuring tooth shade

4.7 Correct measuring of the tooth shade

You can use the instrument to measure the base shade in the central tooth region. Follow the procedure described here as closely as possible to perform precise measurements with the VITA Easyshade LITE. Have your patient sit in the treatment chair and rest his or her head on a headrest for stabilization in order to achieve an accurate measurement. In the first step, consider the shade gradient of the tooth to be measured in order to correctly locate the center of the dentin. Then you must place the measuring tip in the area of the enamel surface with the underlying dentin (central to cervical area). Finally, you should take care that the measuring tip lies as flat as possible on the tooth surface.



Figure 12 –
Measuring in the central part of the dentin

While holding the measuring tip against the central dentin part of the tooth, press the measurement button. Hold the measuring tip against the tooth until two short consecutive signal tones mark the end of the measurement process. The VITA Easyshade LITE displays the measurement results.



Figure 13 – Example of error code 01

i Note: You can press the measurement button before placing the measuring tip on the tooth. The VITA Easyshade LITE does not trigger the measurement until the instrument is placed on the tooth.

If you lift the measuring tip off the tooth before the instrument produces a signal tone, you will receive an error message.

i Note: Before a measurement procedure, it is recommended that you completely remove specks from the tooth surface. It may be necessary to wipe the tooth off with gauze to prevent any sliding. The measuring tip must be positioned completely on the natural tooth. Take care that you are only working with natural tooth substance. Filling and restoration materials will influence the measurement results.

5 Display of the measured values

After the measurement, as described in section 4.7, the VITA Easyshade LITE shows you two values.



Figure 14 – Measurement screen

Top line: Shows you the measured tooth shade in VITA SYSTEM 3D-MASTER.

Bottom line: Shows you the measured tooth shade in VITA classical A1–D4.

Note: The VITA Easyshade LITE describes shade values of the natural tooth. Deviations may occur with other materials, such as ceramic reconstructions.

5.1 Display of shade differences

Using a traffic light principle, the VITA Easyshade LITE shows how precisely the measured tooth shade matches the next VITA SYSTEM 3D-MASTER or VITA classical A1–D4 shade. The degree of the match is symbolized by a green, yellow or red background.

5.1.1 Green background

The measured tooth shade does not vary or varies only slightly from the displayed VITA SYSTEM 3D-MASTER or VITA classical A1–D4 shade.



Figure 15 – Green background



Figure 16 –
Yellow background in top line

5.1.2 Yellow background in top line

The value indicated on the left is the best match. It has a noticeable, but acceptable difference from the indicated VITA SYSTEM 3D-MASTER. The value indicated on the right is the second best match. By mixing the veneering materials of both shades, a perfect match can be achieved. A 1:1 mixing ratio is sufficient to achieve an esthetically appealing solution (see section 5.2).



Figure 17 –
Yellow background in bottom line

5.1.3 Yellow background in bottom line

The value indicated on the left is the best match. It has a noticeable, but acceptable difference from the specified VITA classical A1–D4 shade. The value indicated on the right is the second best match. In contrast to the shade information in the VITA SYSTEM 3D-MASTER, this information does not indicate a mixing ratio.



Figure 18 – Measured tooth is darker
and more reddish

5.1.4 Red background in bottom line

If you get a red background in the bottom line, then the measured tooth shade has a clearly recognizable difference to the displayed value. You can tell from the color of the triangle whether the measured tooth is lighter/darker or more reddish/yellowish than the displayed result.

VITA Easyshade® LITE – Display of the measured values



Figure 19 – Measured tooth is lighter and more yellowish

The left triangle gives you the deviation of the lightness. If the triangle is black, then the measured tooth is darker than the shade value given. If the triangle is white, the measured tooth is lighter than the shade value shown.

The triangle to the right shows you the deviation of the hue. If the triangle is red, then the measured tooth is more reddish than the shade value shown. If the triangle is yellow, then the measured tooth is more yellowish than the shade value shown.

5.2 VITA SYSTEM 3D-MASTER® interpolated shades

The 29 VITA SYSTEM 3D-MASTER shades can be found in bold print in the tables below. The tables also show the 52 interpolated shades that can be obtained with an equal mixture of the respective VITA SYSTEM 3D-MASTER materials.

M-shades										
0M1	0.5M1	1M1	1.5M1	2M1	2.5M1	3M1	3.5M1	4M1	4.5M1	5M1
0M1.5	0.5M1.5	1M1.5	1.5M1.5	2M1.5	2.5M1.5	3M1.5	3.5M1.5	4M1.5	4.5M1.5	5M1.5
0M2	0.5M2	1M2	1.5M2	2M2	2.5M2	3M2	3.5M2	4M2	4.5M2	5M2
0M2.5	0.5M2.5		1.5M2.5	2M2.5	2.5M2.5	3M2.5	3.5M2.5	4M2.5	4.5M2.5	5M2.5
0M3				2M3	2.5M3	3M3	3.5M3	4M3	4.5M3	5M3

L-shades				
2L1.5	2.5L1.5	3L1.5	3.5L1.5	4L1.5
2L2	2.5L2	3L2	3.5L2	4L2
2L2.5	2.5L2.5	3L2.5	3.5L2.5	4L2.5

R-shades				
2R1.5	2.5R1.5	3R1.5	3.5R1.5	4R1.5
2R2	2.5R2	3R2	3.5R2	4R2
2R2.5	2.5R2.5	3R2.5	3.5R2.5	4R2.5

Table 6 – VITA SYSTEM 3D-MASTER®

6 Switching the device off

The VITA Easyshade LITE switches off automatically after two minutes of inactivity. If you wish to switch the device off manually, hold down the measuring button on the top of the device until the screen switches off. To switch the device on again, press the measuring button again. The white balance has to be performed again as described in Section 4.6.

7 Cleaning and disinfecting the housing





The surface of the VITA Easyshade LITE can be disinfected. We recommend commercial disinfectant wipes. These can be obtained from most dental dealers. Please follow the respective manufacturer's instructions for use.

If products containing iodine or phenylphenol or isopropyl alcohol are used to clean or disinfect the VITA Easyshade LITE, permanent discoloration and/or cracks may occur, which are not covered by the warranty. Disinfectants containing phenol, compounds with phenylphenol groups or methyl ethyl ketone will damage the surface of the instrument.

i Note: General dental and technical working and safety measures must be observed while using the VITA Easyshade LITE.

8 Appendix

8.1 Error message

Error No.	Symbol	Meaning
01	 Code 01	No measurement object was recognized. Please repeat the measurement procedure.
02	 Code 02	The shade is outside of the measurement range.
03	 Code 03	Please perform a white balance.
06	 Code 06	The battery is low.









Error No.	Symbol	Meaning
08	 Code 08	Instrument temperature too low during measurement (< 16°C). Permissible operating temperature: min. 16°C, max. 45°C.
08	 Code 08	Instrument temperature too high during measurement (> 45°C). Permissible operating temperature: min. 16°C, max. 45°C.
09	 Code 09	Measurement is uncertain.
10	 Code 10	Measurement is blurred. The measurement result is invalid.
11	 Code 11	Calibration uncertain. Please repeat calibration.
100	 Code 100	Hardware is defective
143	 Code 143	Sensor is defective
145	 Code 145	Controller is defective

Table 7 – Overview of error codes

8.2 Troubleshooting

Error	Procedure
VITA Easyshade LITE cannot be switched on.	Please replace the batteries.
No white balance of the VITA Easyshade LITE is possible, or it repeatedly requests to perform another white balance.	Ensure that the measuring tip is resting properly on the calibration block and is not lifted up before the signal tone, which indicates the end of the white balance. Place the measuring tip again as requested.
After switching on, no measurement is possible with VITA Easyshade LITE.	With the VITA Easyshade LITE, a white balance must first be performed after the instrument is switched on. Only after this, is a measurement possible.
A measurement is performed and VITA Easyshade LITE displays "--" instead of a VITA classical A1–D4 shade or a VITA SYSTEM 3D-MASTER shade.	The shade lies outside of the range of known tooth shades, or the measuring tip was not correctly positioned, was moved or removed during the measurement. Conduct another measurement and position the measuring tip correctly.

Table 8 – Overview of troubleshooting

8.3 Technical data

Length / Width / Height:	20.5 cm / 8.5 cm / 10.5 cm
Weight:	Approx. 385 g
Batteries:	2 pieces, AA batteries (1.5 V) LR6
Classifications:	<p>EN 60601-1:2010 UL 60601-2:2012 (3rd Ed.) CAN/CSA-C22.2 NO. 61010-12</p> <p>CE</p> <p>The product meets the applicable requirements of the following EU directives: – 2014/30/EU – EMC Directive – 2011/65/EU – RoHS</p> <p>The instrument is not suitable for use with a flammable narcotic agent with air or nitric oxide.</p>
Temperature range for use:	16°C to 45°C
Indication range:	Approved for indoor use only.

Table 9 – Technical data

8.4 Glossary

Spectrophotometer

An instrument for measuring color, which measures the spectral distribution of light and converts it into color value (tristimulus value) or an internationally recognized numerical value.

VITA SYSTEM 3D-MASTER® shades

Refers to the 29 shade sample teeth, including three bleached shade samples of the lightness group 0 and the 52 interpolated shades of the VITA SYSTEM 3D-MASTER.

VITA classical A1–D4® shades

Refers to the 16 original VITA classical A1–D4 shades of the VITA classical A1–D4 shade guide.

Interpolated shades

Mixing two or more shades of ceramic materials of the VITA SYSTEM 3D-MASTER® in order to obtain an intermediate shade. For example, 2M2 is mixed with 2M3 to obtain the shade 2M2.5.

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8.7 Patents and trademarks

All trademarks mentioned in this document are the property of the respective company.

8.8 Warranty

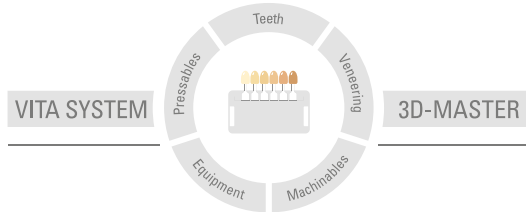
The warranty claims of the first buyer of the VITA Easyshade LITE arise from the General Terms and Conditions of VITA Zahnfabrik and the regulations of the law.

The General Terms and Conditions of VITA Zahnfabrik can be viewed at www.vita-zahnfabrik.com.

Technical support or service for the VITA Easyshade LITE can be obtained from VITA Zahnfabrik at telephone number +49 (0) 7761 562-222.

If service is required, you will receive a return of goods number with additional instructions. We recommend that you keep the original packaging in case of service/warranty fulfillment, including accessories.

With the unique VITA SYSTEM 3D-MASTER®, all natural tooth shades are systematically determined and perfectly reproduced.



Please note: Our products must be used in accordance with the instructions for use. We accept no liability for any damage resulting from incorrect handling or usage. The user is furthermore obliged to check the product before use with regard to its suitability for the intended area of applications. We cannot accept any liability if the product is used in conjunction with materials and equipment from other manufacturers that are not compatible or not authorized for use with our product and this results in damage. The VITA Modulbox is not necessarily a component of the product. Date of issue of this information: 2023-03

After the publication of this information for use any previous versions become obsolete. The current version can be found at www.vita-zahnfabrik.com

VITA Easyshade® LITE is CE marked within the meaning of EU Directives 2014/30/EU and 2011/65/EU.

VITA Easyshade® LITE · VITA classical A1–D4® · VITA SYSTEM 3D-MASTER® · VITABLOCS®

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