

Terra LED

Product description Ceramic tiles with integrated LED lighting. Unglazed, fully vitrified floor tiles, manufactured according to the Ultragres-process, in accordance with EN 14411 Bla, with a water absorption level of < 0.05% on the surface and ≤ 0.3% on the underside. The tiles have an LED fitting. Each tile is connected to the electronic supply via a cable.

Product advantages Using LED lighting has a number of benefits:

- a low build-in height; the thickness of the tiles and lighting enables them to be easily laid next to other tiles from the Terra Maestricht collection;
- they use low-tension current (24V) which means:
 - a very low power consumption;
 - a long life (50,000 to 100,000 burning hours);
 - a low heat production;
 - that they can be laid by a tile-layer;
 - that they resist shocks and vibrations.

By combining this new lighting technology with Terra Maestricht tiles, floors and walls including lighting can be tiled together without having to install any fittings in advance. Grooving and cabling are not necessary. Also see the laying instructions. LED tiles can also be laid in wet areas as long as the installation satisfies NEN 1010.

Product specification **Dimensions, surface structures and names of ranges**

Size	Surface structure	Colour of light	Cable length/ cable thickness	Description
Tile: 446 x 446 x 10 mm; thickness of tile at fitting is +3 mm	Smooth	White RGB*	20 m / 2.6 mm	Terra LED 203LD 45 x 45 cm black Terra LED 204LD 45 x 45 cm agate grey Terra LED 206LD 45 x 45 cm mid grey Terra LED 216LD 45 x 45 cm anthracite
Tile: 596 x 596 x 12 mm; thickness of tile at fitting is +3 mm	Smooth	White RGB*	20 m / 2.6 mm	Terra LED 203LD 60 x 60 cm black Terra LED 204LD 60 x 60 cm agate grey Terra LED 206LD 60 x 60 cm mid grey Terra LED 216LD 60 x 60 cm anthracite
Electronic power supply: 55 x 47 x 26 mm; connectionbox (5 connections): 93 x 78 x 67 mm	n/a	n/a		EV10WHB0005 Primary electronic power supply 100/240V AC, secondary 24VDC/10W plus connectionbox for a maximum of 5 connections
Electronic power supply: 93 x 78 x 67 mm; connectionbox (24 connections): 93 x 78 x 67 mm	n/a	n/a		EV45WHB0024 Primary electronic power supply 100/240V AC, secondary 24VDC/45W plus connectionbox for a maximum of 24 connections

* RGB = optional

Technical data **LED tile**

Component	Specification	Standard	Explanation
Tile	Unglazed Ultrages Terra Maestricht	Product standard EN 14411 Bla	Mosa standard stricter than EN standard; for full info see the Ultrages Terra Maestricht product sheet.
LED fitting	Visible side: acrylate (PMMA) Housing: 304 stainless steel	IP 67 Class III (NEN 1010) With earth-leakage circuit breaker	6 = fully dust proof 7 = water proof for temporary immersion (at constant pressure and for limited time)
Cable of LED fitting	2-core cable with reinforced steel sheathing in PUR sleeve. There is a connector at the end of the cable.		Chemical resistance to alkaline substances; maximum use temperature 80°C; disruptive voltage 30V

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Technical data

LED tile

Component	Specification	Standard	Explanation
Art. EV10WHB0005: Electronic power supply	Primary: 100-240V AC 0.3A 47/63Hz Secondary: 24VDC 0.42A 10 Watts Euro plug	Class II (NEN 1010) CE approved TÜV according to EN 60950	Must be installed outside wet areas. Power supply suitable for a maximum of 5 connections!
Connectionbox	Owing to power supply, connect a maximum of 5 LED tiles	Class II	Advice: install outside wet areas on the DIN-rail supplied.
Art. EV45WHB0024: Electronic power supply	Primary: 100-240V AC 1.5A 50/60Hz Secondary: 24VDC 2A 45 Watts Euro plug with earth	Class I (NEN 1010) CE approved TÜV according to EN 60950 UL 508	Must be installed outside wet areas; attach with DIN-rail supplied. Power supply suitable for a maximum of 24 connections!
Connectionbox	Owing to power supply, connect a maximum of 24 LED tiles	Class III	Advice: install outside wet areas next to the power supply on the DIN-rail supplied.

Laying and installation instructions

Component	Method	Remark
General	Mosa LED tiles are of the same size and thickness. This makes it possible to place them next to other Mosa tiles without milling out. Laying tiles of this size sets high demands on the supporting surface and the quality of laying. In collaboration with manufacturers of tile adhesives and grouting materials, we advise the following working method and products. Tile-layers must familiarise themselves completely with the product properties, laying guidelines and safety rules of the manufacturers concerned by reading the product and safety sheets.	Mosa accepts no liability for the consequences of damage resulting from the incorrect laying method and/or use of products that does not adhere to the instructions of the manufacturer(s) concerned.
Supporting surface	The supporting surface must be resistant to deformation, able to bear the load, resistant to compression and tensile strain, free from dirt, residues and cracks, absolutely even and constantly dry.	Level if necessary.
Before gluing	Ask the customer/architect for a drawing showing the position of the LED tiles on the floor or wall. Use a pencil to mark on the floor or wall where the cable from each tile will enter the adhesive bed, finally running in the direction of the connectionbox. Decide on the direction of work. P.S. after laying, mark the position of the cables in the adhesive bed on the drawing and return the drawing to the customer.	There should be no thicker areas under the tiles. This means that: - the cables should cross each other in the adhesive layer; - there should be no cables directly under the stainless steel fitting. This prevents damage to the cables by drilling and other work. Please also pay attention that the cables are not trapped, because otherwise there is a risk of cable breakage.
Test LED light	Test the operation of the light in the LED tiles. - Remove the plastic shoe of a coupling connector in the connectionbox. This makes it easy to connect and disconnect the connector from the cables for the test. - Temporarily connect the connectionbox to the power supply in accordance with the connection diagram. - Connect the power supply to the mains power supply in accordance with the connection diagram. - Insert the plug in an available wall socket. - The red indicator light in the connectionbox should now be on. Connect the cable connector from each LED tile to the two exposed connection points of the coupling connector in the correct position (see procedure under step 1). - The LED lighting in the tile should now be on. - Repeat this procedure for every LED tile. - When the test is complete, replace the plastic shoe on the coupling connector in the correct position.	Important: Mosa's guarantee on the operation of the tiles is valid only if this test is done for all LED tiles in advance.

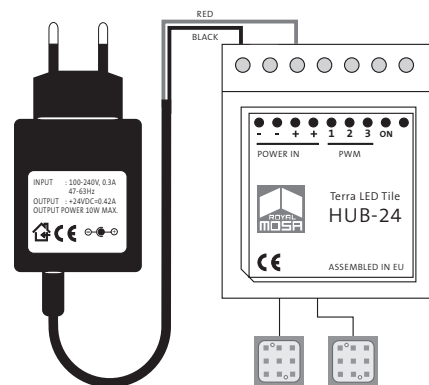
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Component	Method	Remark
Gluing	Make an adhesive bed using an adhesive comb with 15 mm half-moon teeth. Use the adhesive comb as close to a 90° angle to the surface as possible (minimally 70°) to achieve the deepest corrugation in the adhesive.	Powder tile adhesives Eurocol 708, Eurocol 706 WD, Eurocol Water Tight Adhesive 705, Omnicol Stabicol PL85 Project, Schönox TT-Midiflex Grey, Laticrete 317 with addition 333, Laticrete Platinum Multipurpose.
	Extract the cable of the LED light to no more than 1x the width of the tile. Press down the tile and then press the cable needed into the adhesive bed.	This prevents excess cable from unnecessarily and unintentionally entering the adhesive bed.
Grouting	After the tiling has dried, you can start with grouting. Because the tiles have ground edges, a joint-width of 2 to 4 mm is recommended. Beware: a risk with narrow joints is the creation of hollow spaces in the grout which can lead to holes over time. The LED lighting in the tile is covered with protective foil on the visible side. Remove this only after the floor or wall has been thoroughly cleaned, possibly with cement residue remover diluted with water.	Do not position cables parallel in the joints. The joints do not then have sufficient volume and the grouting may break and no longer be sealed. Grouting products: Eurocol 698, Omnicol Temo, Schönox SU, Laticrete 1600 series.
Installation of power supply and connection-box set	Assemble the rail supplied in a dry area. Then click onto DIN-rail. A wall socket must be installed for the mains power supply that can be activated with a light switch.	We recommend that you install the switched wall socket before starting on the tiling work.
Connecting cables for LED tiles	The ends of every cable are equipped with a connector. Push the connector into a coupling connector in the connectionbox in the correct way. Then click the lid onto the box.	Warning: the maximum number of connections is determined by the electronic power supply. In the case of 10W, connect a maximum of 5 LED tiles even though more coupling connectors are available. If this number is exceeded, the lighting will not work!
Connecting the mains power supply	In the case of a 10W supply: insert the black cable with the red shrink sleeve (+) and the other black (-) cable into the connection points in the connectionbox and screw tight. In the case of a 45W supply: insert the separately supplied red (+) and black (-) power cables into the connection points in the connectionbox and screw tight. Attach other cabling to power supply.	See enclosed diagrams. Warning: always use the connectionbox in combination with the power supply supplied. Connecting the tiles directly to 100V AC-240V AC will cause irreparable damage to the LEDs! Protection: the LEDs are protected against unintentional reversal of the polarity of the low-tension current (24VDC).
<p>To find a suitable product and laying guidelines, tile-layers must obtain information from the adhesive manufacturer concerned.</p> <p>The supporting surface must be sufficiently even, and in case of 45 x 45 and 60 x 60 cm completely even, resistant to deformation, resistant to compression and tensile strain, constantly dry and free from dirt, residues and cracks.</p> <p>For gluing, the adhesive contact surface must be at least 90%.</p> <p>Tiles can be cut to size using a tile cutter with Widia-blade or using a water-cooled diamond saw. Expansion joints should be installed in accordance with the instructions of the constructor and/or specification.</p>		

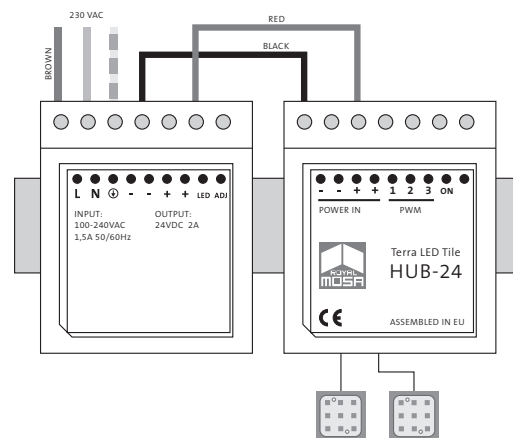
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Relevant Technical product sheets	Ultragres Terra Maestricht Ultragres Terra XXL
Maintenance	Initial cleaning and periodical and daily cleaning will not harm the LED tiles. For various cleaning methods, consult Mosa documentation or www.mosa.nl .
Guarantee	See the guarantee conditions enclosed in the power supply and the connectionbox packaging.
Sampling	showroomservice@mosa.nl Tel: +31 (0)43 368 93 23
General inquiries	International Service Desk: servicedesk@mosa.nl Tel: +31 (0)43 368 92 29; Fax: +31 (0)43 368 93 56

Connection diagram
article no.
EV10WHB0005



Connection diagram
article no.
EV45WHB0024



Download [here](#) the Fixing and installation instructions for LED tiles.

The text for this Technical product sheet replaces all preceding versions and has been composed with the utmost care and in cooperation with the leading mortar and adhesive producers. All recommendations are based on current state-of-the-art knowledge. This Technical product sheet contains information about Mosa products, properties and applications, and therefore may not to be used as a guarantee for the stated recommendations. Mosa will not be held responsible should this information be used as a guarantee. For warranties and liability we refer to our General Terms and Conditions of Sale. No rights can be derived from the contents of this Technical product sheet. Errors and price alterations excepted. For the most actual version see www.mosa.nl.



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