



SCHLUTER®-KERDI-BOARD-SNLT SHOWER NICHE WITH LIPROTEC LED LIGHTING



INNOVATIVE SOLUTIONS FOR CERAMIC AND STONE TILE

SHOWER NICHE WITH LIPROTEC LED LIGHTING

Schluter®-LIPROTEC illuminated profile technology is now available for Schluter®-KERDI-BOARD niches, making it easier than ever to add warm, diffused lighting to your shower. The simple 3 step system is comprised of the Schluter®-KERDI-BOARD-SNLT shower niche with integrated LIPROTEC lighting technology, the power supply, and cables specifically designed to ensure a watertight connection.

Application and Function

Niches

Schluter®-KERDI-BOARD-SNLT is a prefabricated shower niche made of KERDI-BOARD that incorporates a mounting profile with a diffused LED light strip. It features a pre-installed waterproof connection box to ensure the electrical connection is code-compliant. The KERDI-BOARD-SNLT niche can be installed in both KERDI and KERDI-BOARD wall assemblies. The shower niche features a 1/2" (12.5 mm) -thick by 2" (50 mm) -wide integrated bonding flange and is available in various sizes, with options for vertical or horizontal installation. The mounting profile is made of anodized aluminum with satin finish (AE). It is sized to fit along the top of the niche and features a cut out designed to pass the cable. The LED light strip is encased in a silicone tube that provides an evenly diffused line of warm white light measuring 3000K and nests into the mounting profile.

Each niche kit includes:

- A stainless steel connection box and cover which are inserted into the waterproofed and factory-assembled plastic connection box, ensuring a code-compliant LED system.
- A self-adhesive patch used for proper thin-set mortar adhesion and to prevent mortar from entering the connection box. The patch is not intended for waterproofing.



- A KERDI-BAND frame used to waterproof the connection between the niche and the surrounding walls.
- KERDI-BOARD-ZS/-ZT screws and washers used to fasten the niche to the wall framing.

Cables

Schluter®-LIPROTEC-CW connection cables are rated for in-wall installation - no conduit required. The cable features a pre-installed waterproof snap-in gland for a secure connection to the top of the niche, and connectors to attach the LED strip.

Drivers

Schluter®-LIPROTEC-ECX is an all-in-one LED power supply and in-wall dimmer switch. It offers smooth, even dimming with a dimming range of 5% to 100%. LIPROTEC-ECX can control multiple KERDI-BOARD-SNLT niches (up to 60 watts). Additionally, it includes three interchangeable face plates to match most decors.

Schluter®-LIPROTEC-ECD is an in-line dimmable driver that is hard wired into your electrical. It is compatible with a range of popular dimmer switches, allowing you to have matching light switches throughout your bathroom. The available dimming range is



5% to 100% and can control multiple KERDI-BOARD-SNLT niches (up to 24 watts). The LIPROTEC-ECD includes metal enclosure and must be installed in an accessible location, such as a closet or vanity. A compatible dimmer switch must be purchased separately, refer to the compatibility list on schluter.com.

Material Properties and Areas of Application

KERDI-BOARD-SNLT is made from extruded polystyrene foam, with a cement-free reinforcement layer laminated to both sides and an anchoring fleece webbing. The surface of the board has gridlines consisting of 3/8" x 3/8" (10 mm x 10 mm) squares printed on one side.

KERDI-BOARD-SNLT is waterproof and vapor-retardant and can withstand all chemical stresses that typically occur in conjunction with ceramic tile coverings. KERDI-BOARD-SNLT may be used in bonded waterproofing assemblies where required, including intermittent use steam showers.

Mounting profiles are resistant to most chemicals encountered in tiled environments. In special cases, the suitability of a proposed type of material must be verified based on the anticipated chemical, mechanical, and/or other stresses.



Exceptions and special considerations are listed below.

Anodized aluminum profiles feature an anodized layer that retains a uniform appearance during normal use. The surface is susceptible to scratching and wear and may be damaged by grout or setting material. Therefore, these materials must be removed immediately.

LIPROTEC-ECX fits in a standard electrical box and eliminates compatibility issues between drivers and dimmer switches. It is a better option for more simplified installations.

LIPROTEC-ECD dimmable driver will, ideally, be hidden from view. **It must be installed in an accessible location** such as a closet, cabinet, or vanity. Do not install closer than 2" (50 mm) to cabinet walls. Do not install in a compartment smaller than: L17-1/2" x W8-1/2" x H4-1/4" (L44.5 cm x W21.5 cm x H11.5 cm). Orientation is not critical. Suitable for use in dry/damp locations.

LIPROTEC LED strips are designed for easy cleaning.

Note: Avoid contact with insulation and areas exposed to temperature fluctuations as these conditions will affect the lifespan of the driver.

The length of the LIPROTEC-CW cable is dependent upon where the power supply/driver and niche are located. The install location of the power supply/driver must first be established. Once the location is selected, it is necessary to determine how the cables are to be run from the power supply/driver to the niche. That will define the length of CW cable required for the installation. The cable can be shortened when necessary. The Schluter LIPROTEC-CW cable can be extended if you do not have enough length to reach the LED drivers. The connection must be enclosed and accessible. Our recommendation is to verify and consult with your local electrician, according to the electrical and building codes effective in your region, as to the appropriate wire and methods.

12.1 Schluter®-KERDI-BOARD

Property	Method	Value
Water vapor permeance	ASTM E96 ¹	0.36 perms - 1/2" (12.5 mm)
Thermal resistance (R-value)	ASTM C518	R 9.1 – 2" (50 mm) R 2.2 – 1/2" (12.5 mm) R 0.9 – 3/16" (5 mm)
Service temperature range		-58°F to 158°F (-50°C to 70°C)
Flame spread/smoke developed	ASTM E84 CAN/ULC S102.2	Pass ² Pass ³
Thermal barrier evaluation	NFPA 286	Pass ^{2,4}

¹ Using the desiccant method at 100°F (38°C) and 90% RH

² Per International Building Code Requirements, contact Schluter®-Systems for more information

³ Specific building categories, contact Schluter®-Systems for more information

⁴ Porcelain tile used as thermal barrier over 1/2" (12.5 mm) -thick KERDI-BOARD on wood framing

Installation

For complete installation guidelines and warranty criteria, please contact Schluter-Systems (USA: 800-472-4588; Canada: 800-667-8746) to receive a copy of the Schluter®-KERDI-BOARD-SNLT Installation Instructions and Planning Guide. To download PDF versions of these documents or to view the installation video online, please visit schluter.com.

This product must be installed by a qualified person in accordance with the KERDI-BOARD-SNLT installation instructions and with the Canadian Electrical Code Part I (Canada) or the National Electrical Code (U.S.) as applicable. All electric connections must be made by a qualified person, according to the electrical and building codes effective in your region.

Testing and Certifications

Cable

- UL13 (US) - Power-limited Circuit Cable, CL2, 80C, 300V
- CSA-C22.2 No. 214 (Canada) - Communications Cable, CM, FT4, 75C, 300V

Drivers

- UL8750 (US), CSA-C22.2 No. 250.13 (Canada) - Light-emitting-diode drivers (LIPROTEC-ECD Driver)
- UL2108 (US), CSA-C22.2 No. 250.2 (Canada) - Low-voltage Lighting Systems, Power Units, Luminaires and Fittings (LIPROTEC-ECD and LIPROTEC-ECX Drivers)

LED Kit

- UL2108 (US), CSA-C22.2 No. 250.2 (Canada) - Low-voltage Lighting Systems, Power Units, Luminaires and Fittings
- Suitable for Wet Locations - IP 67 Rating

Maintenance

LIPROTEC LEDs and components require no special maintenance or care and are resistant to mold and fungi. Clean profiles periodically using pH neutral cleaning agents. All cleaning agents must be free of hydrochloric acid, hydrofluoric acid, and chlorides. Oxidation films on aluminum may be removed with a conventional polishing agent, but the film will form again. In the case of anodized aluminum, do not use abrasive cleaning agents.

Note: The LIPROTEC LED strip can be easily replaced.



LIPROTEC-CW Cable	
Specification	Value
Type	(UL) CL2 (Class 2 low voltage cable)
Rating	Rated for in-wall installation – no conduit required
Voltage Rating	300V
Temperature Rating	c(UL) 75°C / CSA 80°C
CSA Fire Rating	FT4
Listings	UL, cUL, CSA (UL E530823)
Conductors	(2) 20 AWG (Red and Black)
Outer Jacket	WHITE PVC JACKETING, UL13, Ø4.3mm
Wire Outlet	5/8" SNAP-IN Gland, IP65, Torqued to 35 IN-LBS (4 N-m)
End Connector	WATERPROOF MIZU-P25, RECEPTACLE HOUSING, 2 CIRCUIT, BLACK
Driver End	Striped and tinned

LIPROTEC-ECD Dimmable LED Driver	
Specification	Value
Input Voltage	100-130 VAC
Input Frequency (Hz)	50~60Hz
DC Output Voltage	24 VDC $\pm 3\%$
DC Output Current	1A
Max Load Watts	24W
Efficiency at 120V with Rated Load	$\geq 81\%$
Power Factor at 120V with Rated Load	> 0.58
Start Up Time Without Dimmer	Cold start $\leq 500\text{ms}$
PK - PK Output Current Ripple	$\leq 100\text{mA}$
Max Operating Temp	80°C
Dimmer Compatibility*	Triac/ELV
Dimming %	$\leq 5\%$
Minimum Load	0
Approved Environmental Locations	Indoor / dry location
Approved Relative Humidity	10~95%RH (Non-condensing)
Audible Noise Level (Without Dimmer)	$\leq 24\text{ dBA}$ at 1 m (3.28 ft)
Inrush Current Limit at 120V	$< 20\text{A}$
Surge Protection	Yes
Over Current Protection Present	$< 1.25\text{A}$
Short Circuit Protection Present	Hiccup mode, Auto Recovery
Over Voltage Protection Present	Yes
Thermal Protection Present	Hiccup mode, Auto Recovery
Warranty With Case Temp $< 80^\circ\text{C}$	5-year
FCC Compliant	Yes. Complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules
ROHS Compliant	Yes
UL Recognized Driver	Yes (UL E530824)
Listed Power Supply Combination	Yes. cULus Listed (US & Canada) per UL2108 Low Voltage Lighting System UL E530823

*A compatible dimmer switch must be purchased separately, refer to the compatibility list on schluter.com.



LIPROTEC-ECX LED Driver and Dimmer	
Specification	Value
Input Voltage	108 ~ 132 VAC
Input Frequency (Hz)	47 ~ 63Hz
DC Output Voltage	24 VDC $\pm$ 3%
Output Voltage Adjustment	+1 VDC
DC Output Current	2.5A
Max Load Watts	60W
Efficiency at 120V with Rated Load	$\geq$ 91%
Power Factor at 120V with Rated Load	$>$.9
Start Up Time	The main supply output voltages remain within the regulation limit of $\pm$ 3%.
Totoal Harmonic Distortion (THD)	$\leq$ 20% at 120VAC 60Hz max load. Tested to comply in accordance with IEC 61000-3-2.
Output Ripple Current	$\leq$ 20% of the rated output current @ 120 VAC max load.
Maximum Operating Temperature	0°C to 40°C
Stand-by Power	$\leq$ 0.5W
Leakage Current	$<$ 500 μ A @ 120 VAC
Dimming %	$\leq$ 5%
Minimum Load	0
Approved Environmental Locations	Indoor / dry location
Approved Relative Humidity	8~90% RH (Non-condensing)
Audible Noise Level (Without Dimmer)	$\leq$ 22 dBA at 1 ft (30 cm)
Inrush Current Limit at 120V	Meets NEMA-410 requirement at any nominal input full sine wave voltage and maximum load at 25°C.
Surge/Transient	Tested to meet transients defined in IEC 6100-4-4, level 3 & IEC 6100-4-5, level 3.
Short Circuit Protection Present	Hiccup mode, Auto Recovery
Over Voltage Protection Present	Yes
Thermal Protection Present	Hiccup mode, Auto Recovery
Warranty	5-year
FCC Compliant	Yes, complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules
ROHS Compliant	Yes
UL Recognized Driver	Yes (UL E530824)
Listed Power Supply Combination	Yes, cULus Listed (US & Canada) per UL2108 Low Voltage Lighting System UL E530823
Compliance	Conforms to NEC Code 725.136 (See Mechanical Diagram): Class 1 and Class 2 circuit in same enclosure must be separated by a barrier (partition) unless Class 2 circuit conductors are install in accordance with 725.41 Class 1 Circuits.

LIPROTEC LED Specifications			
LED length	11-13/16" (300 mm)	19-13/16" (503 mm)	27-13/16" (706 mm)
Brightness	118 lumens	230 lumens	303 lumens
Energy used	1.7 watts	3.0 watts	4.0 watts
Voltage	24 VDC	24 VDC	24 VDC
Color temperature	3000K	3000K	3000K
IP rating	IP 67	IP 67	IP 67
CRI	90+	90+	90+
Diffusion	Fully Diffused	Fully Diffused	Fully Diffused
Dimmable	Yes	Yes	Yes
Certification	cULus Listed - UL E530823	cULus Listed - UL E530823	cULus Listed - UL E530823
Tube material	Silicone (Bacteria resistant per ISO 22196)	Silicone (Bacteria resistant per ISO 22196)	Silicone (Bacteria resistant per ISO 22196)



Product Item Numbers



Schluter®-KERDI-BOARD-SNLT - VERTICAL Niche with white LED

Item No.	Height	Width	Depth
KB 12 SNLT 1 WWF	305 mm - 12"	305 mm - 12"	89 mm - 3-1/2"
KB 12 SNLT 2 WWF	508 mm - 20"	305 mm - 12"	89 mm - 3-1/2"
KB 12 SNLT 3 WWF	711 mm - 28"	305 mm - 12"	89 mm - 3-1/2"



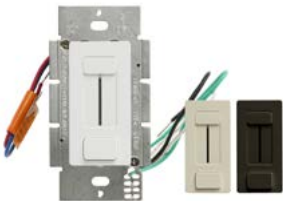
Schluter®-KERDI-BOARD-SNLT - HORIZONTAL Niche with white LED

Item No.	Height	Width	Depth
KB 12 SNLT 4 WWF	305 mm - 12"	508 mm - 20"	89 mm - 3-1/2"
KB 12 SNLT 5 WWF	305 mm - 12"	711 mm - 28"	89 mm - 3-1/2"



Schluter®-LIPROTEC-CW Cable for LIPROTEC white LED system

Item No.	Length	Gauge	Conductors
LT CW / 4M	4 m - 13' 1-1/2"	20AWG	2
LT CW / 8M	8 m - 26' 3"	20AWG	2
LT CW / 15M	15 m - 49' 2-1/2"	20AWG	2



Schluter®-LIPROTEC-ECX LED driver and dimmer

Item No.	Input	Output	Power
LT ECX 1W	120V AC	24V DC	60W



Schluter®-LIPROTEC-ECD Dimmable LED driver

Item No.	Input	Output	Power
LT ECD 1W	120V AC	24V DC	24W

WARRANTIES

Schluter-Systems products and systems are covered under our warranty program, as applicable. For details and to access Schluter Systems' warranty documents:

Visit www.schluter.com/warranties

Or scan here



To obtain hard copies, please contact Customer Service at: 800-472-4588 (USA) or 800-667-8746 (Canada).

