

TWO-PIECE LED PCB HOLDERS

FOR COMPACT COB MODULES



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For simple and secure fixation and electrical connection of COB modules (e.g. LUGA Shop & Comfort COB)

The electrical connections of compact COB modules are usually created using solder pads, but Vossloh-Schwabe's push-in terminal holder provides a simpler, yet equally safe method.

In addition, the holder makes it easier to mount the LED module. The base holder plate has to be positioned in the luminaire and will be fixed with two M3 screws in the luminaire or on a heat sink. The LED PCB has then to be positioned in the base holder. Make sure that the plus and minus poles are correctly positioned. Finally the cover with pre-assembled contacts will be clipped onto the base holder.

Depending on the used thermal heat conducting material and the power consumption, the expected lifetime of the LED modules may differ from the specifications in the LED module data sheets.

Two-piece LED holders for COB modules

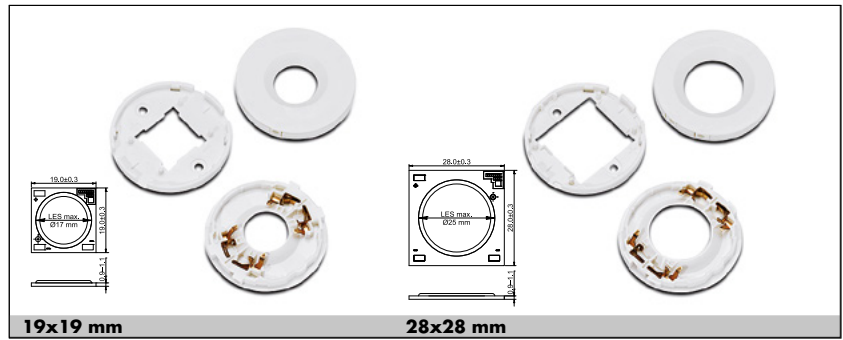
- **QUICK AND EASY MOUNTING OF LED MODULES**
- **PUSH-IN TERMINALS FOR RELIABLE AND SIMPLE ELECTRICAL CONNECTIONS**
- **HIGH-QUALITY, HEAT-RESISTANT PLASTICS**
- **UP TO 4 PUSH-IN TERMINALS FOR TWO-SIDE WIRING OPTIONS AND TUNEABLE WHITE APPLICATIONS**



Two-piece LED PCB holders

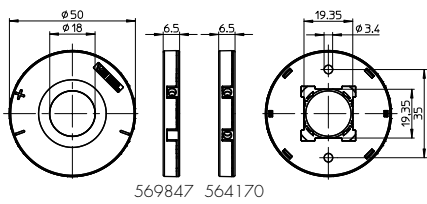
Technical notes

- Consisting of base holder and cover
- For mounting compact LED COB modules with a max. PCB height of 0.9–1.1 mm
- With 2 or 4 push-in terminals for two-side wiring options
- Material: PBT, white
- Fixing holes for flat-headed M3 screws
- Snap-on or adhesive mounting for LED modules
- Constant contact pressure of the LED module thanks to flexible elements

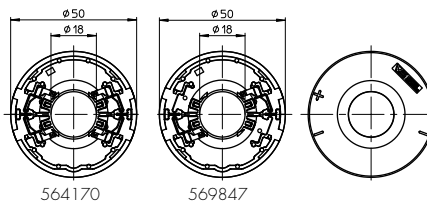


Type	Ref. No.	Description	Dimensions ØxH mm	Fixing hole distance mm	Push-in terminals pcs.	Max. LES Ø mm	Max. permitted voltage DC V (U _{max.})	Max. permitted current A (I _{max.})	Weight g	Packaging unit pcs.
For LED module 19x19 mm										
89738	564174	Base holder	50x5,2	35	2	17	250	3	4.6	210
	569847	Cover	50x6,5	—					5	
89731	564174	Base holder	50x5,2	35	4	17	250	3	4.6	210
	564170	Cover	50x6,5	—					5	
For LED module 28x28 mm										
89737	564173	Base holder	50x5,2	35	2	24	330	3	3.6	210
	569846	Cover	50x6,5	—					5.7	
89730	564173	Base holder	50x5,2	35	4	24	330	3	3.6	210
	564169	Cover	50x6,5	—					5.7	

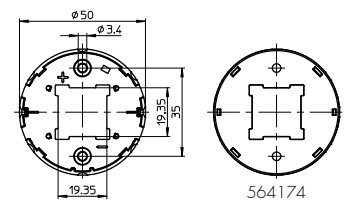
Complete holder 19x19 mm



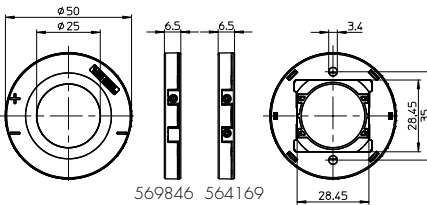
Covers



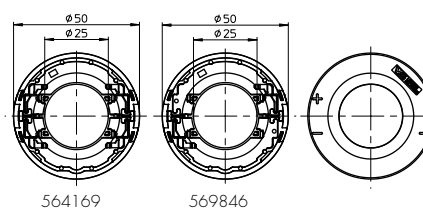
Base holder



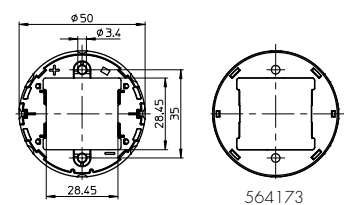
Complete holder 28x28 mm



Covers



Base holder



Two-piece Holders for Compact COB Modules

Suitable VS LED modules

LED holder type	89738	89731	89737	89730
Push-in terminals	2	4	2	4
PCB dimensions	19x19 mm	19x19 mm	28x28 mm	28x28 mm

VS LED modules

LUGA Shop Gen. 6	—	DMS125***H, DMS126***H, DMS128***H	—	DMS120***H, DMS12C***H, DMS18B***H
LUGA Shop Gen. 7		DMS125***W, DMS126***W, DMS128***W		DMS120***W, DMS12C***W, DMS18B***W
Comfort COB	VCA125-xxx, VCA127-xxx		VCA1210-xxx, VCA1212-xxx	

Accessories for PCB holders

Diffuse cap

Diffuse LES protection cover for mixing different colour temperatures for use with Tuneable White modules

Optical efficiency: 95 %

Material: silicone, translucent

Temperature resistance: up to 150 °C

Fixation: base insertion and clamp in

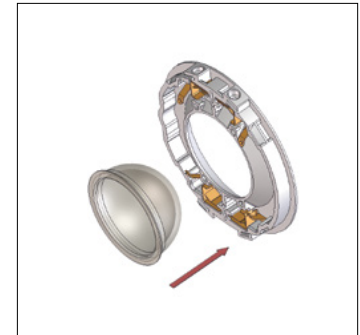
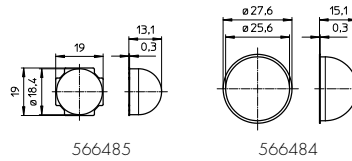
covers types 89730/89731

Weight: 1.2/1.9 g

Packaging unit: 210 pcs.

Ref. No.: 566485 for COB PCBs 19x19 mm

Ref. No.: 566484 for COB PCBs 28x28 mm



Thermal pads

Phase-change thermal pads (PC TIM)

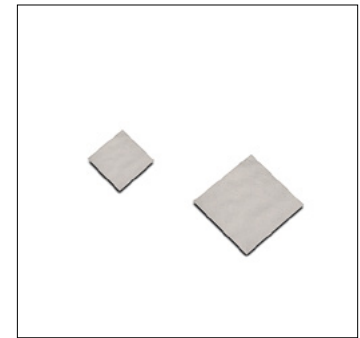
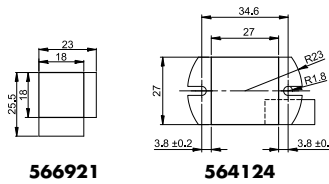
Material: phase change, wax-based

Softening temperature: 45 bis 55 °C

The material is solid at room temperature for easy assembly. In its liquid phase, the material is capable of evening out irregularities in the interface much more effectively than conventional filler materials.

For optimum heat dissipation

Packaging unit: 1 pcs.



Type	Ref. No.	Size mm	Thickness mm	Material	Softening temperature °C	Thermal conductivity R_{th} W/mK
Thermal pad 18x18 mm	566921	18x18	0.25	Phase Change TIM	45 to 55	3
Thermal pad 27x27 mm	564124	27x27	0.25	Phase Change TIM	45 to 55	3

As a result of the growing efficiency of LED modules and ever decreasing heat generation in LED modules, in rare circumstances the design of the cooling systems/heat sinks can lead to the recommended "softening temperature" of 55 °C not being attained. The specified phase-change material is not suitable for such systems since the temperature needed for phase reversal is not reached.

Thermal interface

The temperature of the COB module depends on the luminaire design (size of heat sink) and the thermal resistance between the COB module and the heat sink. The temperature at the t_p/t_c point must be measured for the entire luminaire setup in acc. with EN 60598. Exceeding the maximum rated t_c point temperature (see datasheet) of the LED module can result in the destruction of the LED module. The expected service life of LED modules depends on the operating current and t_p temperature during operation (see corresponding data table in datasheet).

It is recommended to use only thermal interface materials (TIM) that are soft enough to contact the whole surface with a pressure $< 0.4 \text{ N/cm}^2$ (phase-changing materials or thermal grease). Avoid graphite tape and other rigid materials. Permitted TIM thickness: 0–0.2 mm (provided the TIM size equals the size of the PCB).


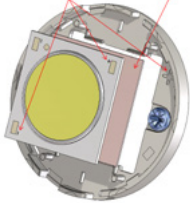
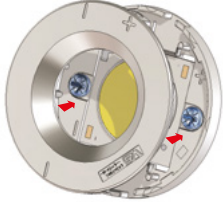

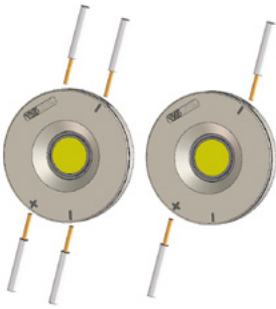
Suitable/tested* interface materials:

- Thermal paste: e.g. KERAFOL "Keratherm KP12" (a thin and even layer of thermal paste needs to be applied between the LED module and the heat sink).

* Thermal luminaire management depends on the luminaire design, the luminaire production process and the respective thermal interface material that is used. VS does not assume any liability for thermal luminaire management or for the long-term behaviour of any thermal interface materials that are used. Please observe the datasheets or installation manuals of the respective thermal interface materials.

The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

Installation instructions for two-piece PCB holders

For PCBs 19x19 mm and 28x28 mm	Placing base holder	
	<p>Step 1 Position fixing plate in the luminaire.</p>	
	<p>Step 2 The base holder has to be attached to the luminaire or heat sink using two screws (M3). Min. torque: 0.3 Nm Max. torque: 0.5 Nm</p>	
	Insertion of COB PCB	
	<p>Step 3 Position COB PCB in the fixing plate. If required, a self-adhesive thermal foil can be used.</p> <p>CAUTION: When inserting the PCB, it is critical to ensure correct positioning of the plus and minus poles!</p>	<p>Correct polarity must be ensured! TIM (Thermal Interface Material)</p> 
Placing cover		
<p>Step 4 Clip the cover with the preassembled contacts onto the fixing plate.</p> <p>Correct mounting (polarity) is ensured by an anti-rotation element on the inside of the holder.</p>		
Electrical connection		
<p>Step 5 The electrical connection is made by pushing the stripped leads into the lateral openings.</p> <p>The holder has 2 or 4 permanent push-in connectors, for solid or stranded wires with finned wire ends.</p> <p>Conductor cross-section: 0.5–0.75 mm² Stripped length: 7±0.5 mm</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>28x28 mm</p>  <p>4 push-in connectors</p> </div> <div style="text-align: center;"> <p>19x19 mm</p>  <p>2 push-in connectors</p> </div> </div>	

CAUTION

When inserting or fixing the PCB, please ensure that plus and minus poles are correctly positioned!

Product guarantee

- 2 years
- The conditions for the Product Guarantee of the Vossloh-Schwabe Group shall apply as published on our homepage (www.vossloh-schwabe.com). We will be happy to send you these conditions upon request.

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