

ONE-PIECE LED PCB HOLDERS

FOR COMPACT COB MODULES



ONE-PIECE LED PCB HOLDERS

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 since the PCB is simply clipped or stuck to the back of the holder. Care needs to be taken only with regard to ensuring the correct positioning of the plus and minus poles. Lastly, the holder along with the inserted PCB is then fixed in place using two screws.

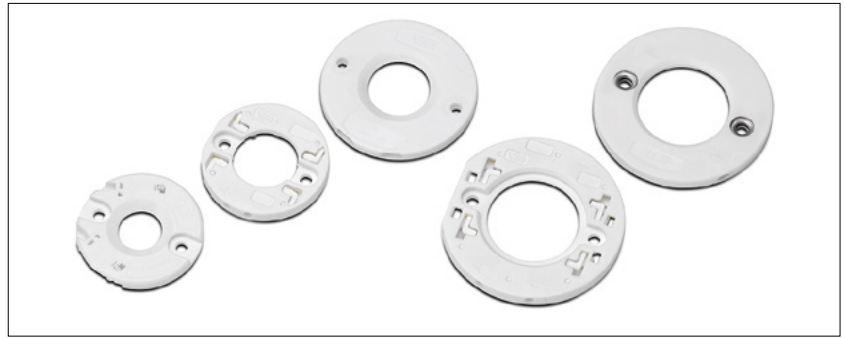
One-piece LED holders for COB modules

- **QUICK AND EASY MOUNTING OF LED MODULES**
- **PUSH-IN TERMINALS FOR RELIABLE AND SIMPLE ELECTRICAL CONNECTIONS**
- **HIGH-QUALITY, HEAT-RESISTANT PLASTICS**
- **UP TO 3 PUSH-IN TERMINALS FOR TWO-SIDE WIRING OPTIONS**

One-piece LED PCB holders

Technical notes

- For mounting compact LED COB modules with a max. PCB height of 0.9–1.1 mm
- With 2 or 3 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

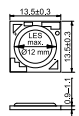
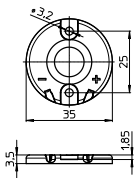


Type	Ref. No.	Dimensions ØxH mm	Fixing hole distance mm	Push-in terminals pcs.	Max. LES-Ø mm	Max. permitted voltage DC V (U _{max.})	Max. permitted current A (I _{max.})	Weight g	Packaging unit pcs.
For LED module 13.5x13.5 mm									
89740	569592	35x3.6	25	2	12	60	3	2.5	
For LED module 19x19 mm									
89721	559165	35x4.2	25	3	17	150	3	3.1	250
89728	569845	35x4.2	25	2	17	150	3	2.9	250
89742	564121	44x3.4	35	2	17	60	5	4.7	
For LED module 28x28 mm									
89720	559164	50x4.2	35	3	25	150	3	5.8	250
89727	569844	50x4.2	35	2	25	150	3	5.6	250
89743	564122	50x3.6	35	2	25	350	3	5.7	

13.5x13.5 mm



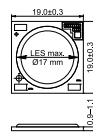
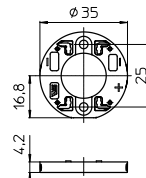
89740



19x19 mm



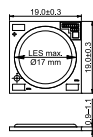
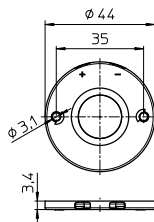
89721, 89728



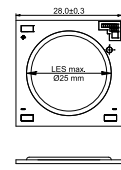
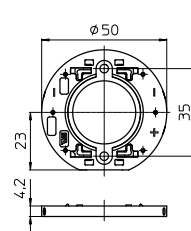
28x28 mm



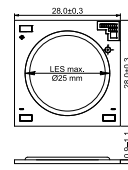
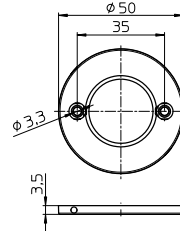
89742



89720, 89727



89743



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

One-piece Holders for Compact COB Modules

Suitable VS LED modules

LED holder type	89740	89721	89742	89728
Push-in terminals	2	3	2	2
PCB dimensions	13.5x13.5 mm	19x19 mm		

VS LED modules

LUGA Shop Gen. 6	DMS124***H	DMS125***H, DMS126***H, DMS128***H		—
LUGA Shop Gen. 7	DMS102***W, DMS124***W	DMS125***W, DMS126***W, DMS128***W		—
Comfort COB	VCA102-xxx, VCA123-xxx	VCA125-xxx, VCA127-xxx	VCA125-xxx, VCA127-xxx	VCA125-xxx, VCA127-xxx
Dim2Warm COB	WU-M-618-920/930	—	—	—
COB Horticulture	—	DMS128***W1		—

LED holder type	89720	89743	89727
Push-in terminals	3	2	2
PCB dimensions	28x28 mm		

VS LED modules

LUGA Shop Gen. 6	DMS120***H, DMS12C***H, DMS18B***H		—
LUGA Shop Gen. 7	DMS120***W, DMS12C***W, DMS18B***W		—
Comfort COB	VCA1210-xxx, VCA1212-xxx	VCA1210-xxx, VCA1212-xxx	VCA1210-xxx, VCA1212-xxx
Dim2Warm COB	—	—	—
COB Horticulture	DMS12C***W1, DMS18B***W1		—

Accessories for PCB holders

Ring reflector for LED holder types 89720/89727

For one-piece LED PCB holders

For alter the holder height

Diameter: Ø 42 mm (incl. clip: 43 mm)

Height incl. holder: 7 mm

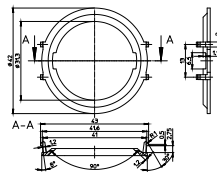
Material: PC, white

Beam angle: 90°

Packaging unit: 250 pcs.

Type: 89720

Ref. No.: 560347



Installation Instructions for the ring reflector

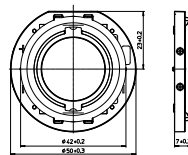
Step 1

As usual, the holder is attached to a heat sink using two screws.

Step 2

The ring reflector is then inserted in the PCB holder's two designated openings.

Holder with mounted ring reflector



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Thermal pads

Phase-change thermal pads (PC TIM)

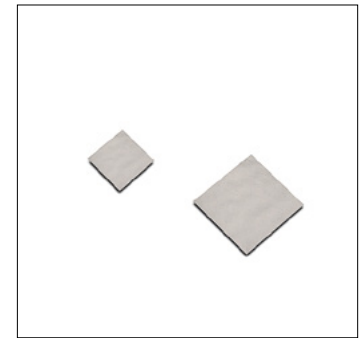
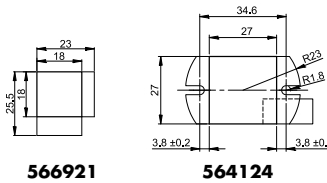
Material: phase change, wax-based

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

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Installation instructions for one-piece PCB holders

For holder type 89740		
For PCB 13.5x13.5 mm	<p>Step 1 To make positioning of the COB PCB within the holder easier, the holder features two adhesive surfaces. Remove carrier films from adhesive surfaces and press the COB PCB into place.</p>	
	<p>Step 2 Turn around the holder with the PCB in place and fasten it to a heat sink using two flat-headed M3 screws with a torque of 0.4–0.6 Nm.</p>	
	<p>Step 3 Electrical connection is effected by inserting the stripped leads into the push-in terminals on the side. Conductor cross-section: 0.5 mm², solid or stranded wires with tin-plated wire ends Stripped length: 11–12 mm Outer insulation diameter: max. 2.3 mm</p>	
For holder types 89721 and 89728		
For PCB 19x19 mm	<p>Step 1 Insert the COB PCB into the reverse of the holder. The PCB is held loosely by four clamping elements.</p>	
	<p>Step 2 Turn around the holder with the inserted PCB and fasten it to a heat sink using two flat-headed M3 screws with a torque of 0.3–0.5 Nm.</p>	
	<p>Step 3 Electrical connection is effected by inserting the stripped leads into the push-in terminals on the side. Conductor cross-section: 0.5 mm², solid or stranded wires with tin-plated wire ends Stripped length: 5–6 mm Outer insulation diameter: max. 2.3 mm</p>	
For holder type 89742		
For PCB 19x19 mm	<p>Step 1 Insert the COB PCB into the reverse of the holder. To make positioning of the COB PCB within the holder easier, the holder features a lateral, flexible positioning ridge. The PCB is held by pressure.</p>	
	<p>Step 2 Turn around the holder with the inserted PCB and fasten it to a heat sink using two flat-headed M3 screws with a torque of 0.3–0.5 Nm.</p>	
	<p>Step 3 Electrical connection is effected by inserting the stripped leads into the push-in terminals on the side. Conductor cross-section: 0.34–0.75 mm², solid or stranded wires with tin-plated wire ends Stripped length: 10–12 mm Outer insulation diameter: max. 2.3 mm</p>	

■ CAUTION

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

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Installation instructions for one-piece PCB holders

For holder types 89720 and 89727	
<p>Step 1 Insert the COB PCB into the reverse of the holder. To make positioning within the holder easier, this version also features lateral guiding notches. The PCB is held loosely by four clamping elements.</p>	<p>Clamping elements Guiding notches</p>
<p>Step 2 Turn around the holder with the inserted PCB and fasten it to a heat sink with two flat-headed M3 screws with a torque of 0.3–0.5 Nm.</p>	
<p>Step 3 Electrical connection is effected by inserting the stripped leads into the push-in terminals on the side. Conductor cross-section: 0.5 mm², solid or stranded wires with tin-plated wire ends Stripped length: 5–6 mm Outer insulation diameter: max. 2.3 mm</p>	<p>optional</p> <p>89720 89727</p>
For holder type 89743	
<p>Step 1 Press the COB PCB into the reverse of the holder. The PCB is held in place by four flexible positioning ridges.</p>	<p>Positioning ridges</p>
<p>Step 2 Turn around the holder with the inserted PCB and fasten it to a heat sink with two flat-headed M3 screws with a torque of 0.4–0.6 Nm.</p>	
<p>Step 3 Electrical connection is effected by inserting the stripped leads into the push-in terminals on the side. Conductor cross-section: 0.5–0.75 mm², solid or stranded wires with tin-plated wire ends Stripped length: 7–8 mm Outer insulation diameter: max. 2.3 mm</p>	

For PCB 28x28 mm

■ 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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