

# HOLDERS EASY

## FOR LUGA SHOP MODULES



## HOLDERS **EASY** FOR LUGA SHOP MODULES

### For simple and secure fixation with multiple optical

With separate holders a simple and secure fixation of LED modules is possible. The reflectors and lenses can easily be fixed by clicking-in or bayonet fixing.

Dependent on the used thermal conductive material and the power classes the expected service life times can differ from the values on the data sheet LUGA.

### For LUGA Shop Modules

- Easy 13.5  
DMS102\*\*\*W & DMS124\*\*\*W (Gen. 7)
- Easy 19:  
DMS125\*\*\*W / DMS126\*\*\*W / DMS128\*\*\*W (Gen. 7)
- Easy 28:  
DMS120\*\*\*W / DMS12C\*\*\*W / DMS18B\*\*\*W (Gen. 7)

### LUGA Shop PCB Holders

#### ■ REFLECTORS AND LENSES

- One platform for multiple optics configurations

#### ■ EXCHANGEABLE LED MODULES

- Using the holder makes it possible for trained staff to easily exchange LED modules, provided ESD protection measures are observed

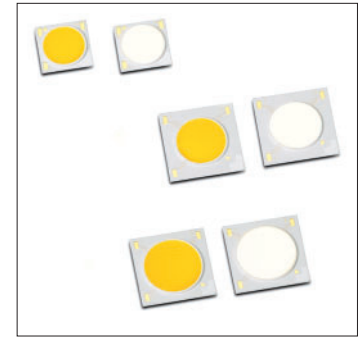


## PCB Holders – Easy 13.5/12.5/1215

### For LUGA Shop modules

Holder with click-in fixation for MR16 lenses (series Evolve) and reflectors (series PLUS)  
 Dimensions (dia. x height): Ø 38.6 x 5.8 mm  
 Material: PBT, white  
 Fixing holes for screws M3, distance: 27 mm

TIM (thermal interface material) is needed  
 Leads have to be welded acc. to assembly instructions  
 Cord grip on the back of the holder is suitable for overall diameters of the leads: 1.3–1.5 mm  
 Packaging unit: 250 pcs.



### PCB holder – Easy 13.5

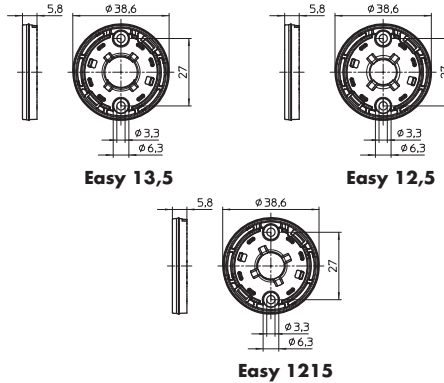
For PCB: 13.5x13.5 mm – LES < 10 mm  
**Ref. No.: 603675**

### PCB holder – Easy 12.5

For PCB: 12.5x12.5 mm – LES < 8.4 mm  
**Ref. No.: 603676**

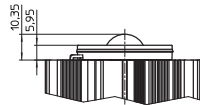
### PCB holder – Easy 1215

For PCB: 12x15 mm – LES < 8.4 mm  
**Ref. No.: 603780**



### Mixing chamber

LES protection cover for mixing different colour temperatures for use with "Halo" LED engines  
 Material: PC  
 Fixation: click-in  
**Ref. No.: 604024**



### List of suitable COB modules

Holder type	VS COB module	COB modules of other manufacturers	
Easy 12.5	–	Bridgelux V6 Gen. 6 Bridgelux V8 Gen. 7	
Easy 13.5	Panasonic DMS 102/124 Gen. 6/7	Bridgelux V10 Gen. 7	
	EasyLine COB ERC 13009H1	Citizen CLU028 Gen. 5/6	
	Dim2Warm WU-M-618-920/930	Citizen CLU701	
	Comfort COB VCA102	Osram Soleriq S9	
	Comfort COB VCA123		Samsung LC003D Gen. 2
			Samsung LC006D Gen. 2
			Samsung LC009D Gen. 2
			Samsung LC013D Gen. 2
			Seoul SAWS0661A (SunLike)
			Seoul SAWS1063A (SunLike)
			Seoul SAW00661A
			Seoul SAW01062A
			Seoul SAW01063A
Easy 1215	–	Bridgelux BXRV-DR-xxxxx-1000-G-13 DimToWarm Bridgelux BXRV-DR-xxxxx-1000-A-13 DimToWarm Bridgelux BXRV-DR-xxxxx-1000-B-13 DimToWarm	

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

## Exchangeable Reflectors and Lenses

### Technical notes

Reflectors made of aluminium with click-in fixation,  
 surface: anodised

Lenses made of PC with click-in fixation

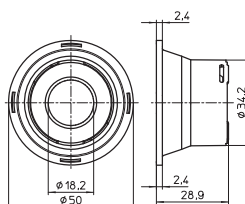
Weight of reflectors: 10 g

Weight of lenses: 15 g

Packaging unit: 30 pcs.

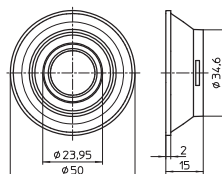
### Reflector PLUS

Beam characteristic	Beam angle (°)	Ref. No.		Efficiency (%) clear/frost
		clear cover	frost cover	
narrow	16	<b>603685</b>	<b>603686</b>	87 / 86
medium	25	<b>603687</b>	<b>603688</b>	86 / 85
wide	40	<b>604919</b>	<b>604920</b>	85 / 84



### Lenses Evolve

Beam characteristic	Beam angle (°)	Ref. No.	Efficiency %
narrow	14	<b>603672</b>	87
medium	25	<b>603673</b>	86
wide	34	<b>603674</b>	89



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## PCB Holder – Easy 19

### For LUGA Shop modules

Holder with bayonett fixation for reflectors EVO

Dimensions (dia. x height):  $\varnothing 58 \times 6.5$  mm

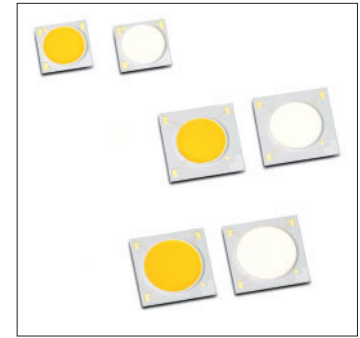
Material: PBT, white

Fixing holes for screws M3, distance: 35 mm  
 or for screws M4, distance: 47.2 mm

TIM (thermal interface material) is needed  
 Leads have to be welded acc. to assembly  
 instructions

Cord grip on the back of the holder is suitable  
 for overall diameters of the leads: 1.7–2 mm

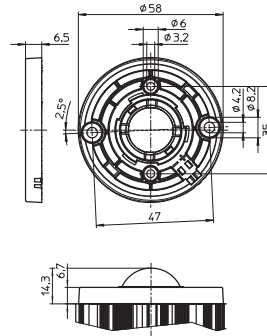
Packaging unit: 250 pcs.



### PCB holder – Easy 19

For PCB: 19x19 mm – LES < 14 mm

Ref. No.: 566288



### LES protection cover

Material: PC, transparent

Fixation: click-in

Ref. No.: 604044

### List of suitable COB modules

VS COB module	COB modules of other manufacturers	
Panasonic DMS 124 Gen. 5	Bridgelux V13 Gen. 7	Osram Soleriq S13
Panasonic DMS 125 Gen. 5/6/7	Citizen CLU038 Gen. 5/6	Osram Soleriq S15
Panasonic DMS 126 Gen. 5/6/7	Citizen CLU710 VIVID High Intensity Type	Samsung LC020C Gen. 2
Panasonic DMS 128 Gen. 5/6/7	Citizen CLU711 VIVID High intensity COB, Natural Type	Samsung LC030C Gen. 2
EasyLine COB ERC 20015H1	Citizen CLU711 VIVID High intensity Type, Version 2	Samsung LC040C Gen. 2
EasyLine COB ERC 20025H1	Citizen CLU721 VIVID High intensity Type, Version 2	Samsung LC016D Gen. 3
Comfort COB VCA 125	Citizen CLU720 VIVID High Intensity Type	Samsung LC019D Gen. 3
Comfort COB VCA 127	Citizen CLU721 VIVID High Intensity COB, Natural Type	Samsung LC026D Gen. 3
	Everlight EAHF1919Wxx	Samsung LC033D Gen. 3
	Lextar PB16H01.0 version 4	Seoul SAW814K2AB
	Lextar PB16U02.0 version 4	Seoul SAW914K2AB
	Lextar PB19H01.0 version 4	Seoul SAW51564A SunLike
	Lextar PB19U02.0 version 4	Seoul SAW51566A SunLike
	Lextar PB26H01.0 version 4	Tridonic SLE-G6-LES 15
	Lextar PB26U02.0 version 4	Tridonic SLE-G6-LES 17
	Luminus CIM-14 Gen. 3	
	Luminus CIM-14 Gen. 3 AC30	
	Luminus CXM-14 Gen. 3 AC30	
	Luminus CXM-14 Gen. 2 AC00	
	Luminus CHM-14 Gen. 2 AC10	

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## PCB Holder – Easy 2024

### For LUGA Shop modules

Holder with bayonett fixation for reflectors EVO

Dimensions (dia. x height):  $\varnothing 58 \times 6.55$  mm

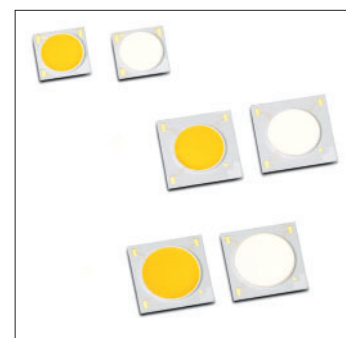
Material: PBT, white

Fixing holes for screws M3, distance: 35 mm

TIM (thermal interface material) is needed  
 Leads have to be welded acc. to assembly instructions

Cord grip on the back of the holder is suitable for overall diameters of the leads: 1.7-2 mm

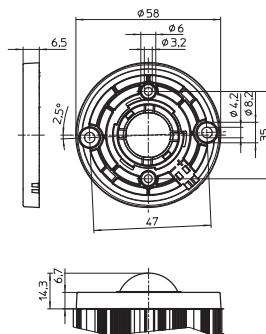
Packaging unit: 250 pcs.



### PCB holder – Easy 2024

For PCB: 20x24 mm – LES < 17.2 mm

Ref. No. on request



### LES protection cover

Material: PC, transparent

Fixation: click-in

Ref. No.: 604044

### List of suitable COB modules

VS COB module	COB modules of other manufacturers
–	Bridgelux BXRV-DR-xxxx-2000-A-13 DimToWarm
–	Bridgelux BXRV-DR-xxxx-3000-A-13 DimToWarm

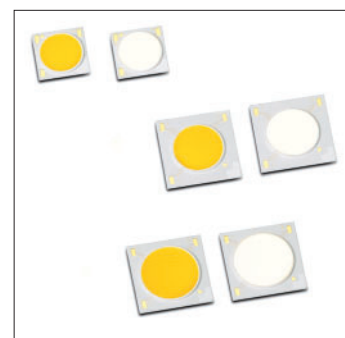
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## PCB Holder – Easy 28

### For LUGA Shop modules

Holder with bayonett fixation for reflectors EVO  
 Dimensions (dia. x height):  $\varnothing 58 \times 6.55$  mm  
 Material: PBT, white  
 Fixing holes for screws M3, distance: 35 mm

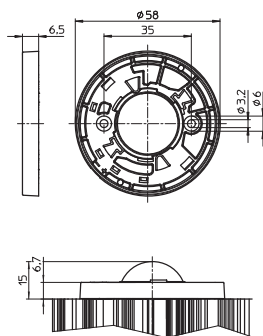
TIM (thermal interface material) is needed  
 Leads have to be welded acc. to assembly instructions  
 Cord grip on the back of the holder is suitable for overall diameters of the leads: 1.7-2 mm  
 Packaging unit: 250 pcs.



### PCB holder – Easy 28

For PCB: 28x28 mm – LES < 22 mm

Ref. No.: 604806



### LES protection cover

Material: PC, transparent  
 Fixation: click-in

Ref. No.: 604045

### List of suitable COB modules

VS COB module	COB modules of other manufacturers
Panasonic DMS 120 Gen. 5/6/7	Bridgelux V22 Gen. 6/7
Panasonic DMS 12C Gen. 5/6/7	Citizen CLU048 Gen. 5/6
Panasonic DMS 18C Gen. 5	Citizen CLU731 VIVID High intensity Type, Version 2
Panasonic DMS 18B Gen. 6/7	Lextar PB38H01.0 version 4
Comfort COB VCA 1210	Lextar PB38U02.0 version 4
Comfort COB VCA 1212	Luminus CLM-22 Gen. 3
	Luminus CXM-22 Gen. 3

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## Exchangeable Reflectors

### Technical notes

Reflectors made of aluminium with bayonet fixation

Surface: anodised

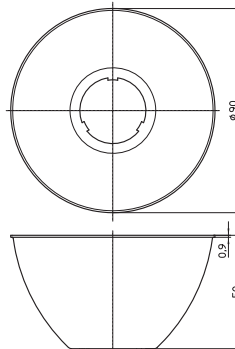
Weight: 27/17 g (D90/D75)

Packaging unit: 18 pcs.

### Reflectors D90 - H = 50

Dimensions (dia. x height): Ø 90 x 50 mm

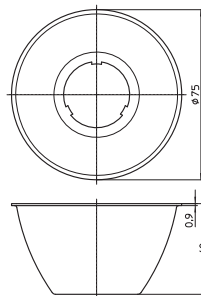
Ref. No.	Beam characteristic	Beam angle °	Efficiency %
557359	narrow	15	90
557360	medium	25	89
557361	wide	36	91
563446	extra wide	50	89



### Reflectors D75 - H = 40

Dimensions (dia. x height): Ø 75 x 40 mm

Ref. No.	Beam characteristic	Beam angle °	Efficiency %
557152	narrow	15	90
557153	medium	24	89
557154	wide	32	91
562157	extra wide	60	89



## Thermal Pads

### Phase-change thermal pads (PC TIM)

Material: phase change material, wax-based

Softening temperature: 45 to 55 °C

Solid material at room temperature for easy assembly

The liquid phase of the material can fill interface

irregularities with much higher efficiency than

traditional gap fillers.

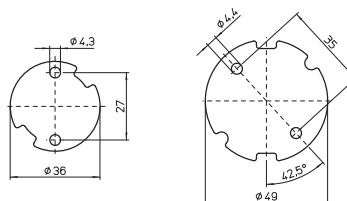
For optimum heat dissipation

### For EASY 13.5 / 12.5 / 1215

Ref. No.: 603536

### For EASY 19, EASY 2024 and EASY 28

Ref. No.: 603449



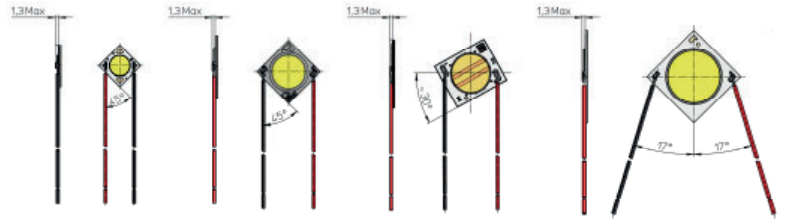
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## Installation Instructions for PCB Holders – EASY

### Step 1

Weld the cable on the LED module as shown on the right pictures.

**CAUTION:** Take care to keep the welding thickness height no more than 1.3 mm.



EASY 13.5 / 12.5 / 1215

EASY 19

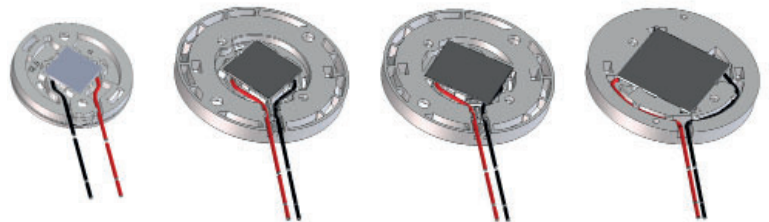
EASY 2024

EASY 28

### Step 2

Place the LED module with welded cable into the holder taking care that the cables have been well inserted into the relevant slots. The cable slots have two little teeth that block the cable that have an insulation diameter of 1.3 mm min. and 1.5 mm max. Cable with lower insulation diameter can be used but they will not be blocked from the teeth.

**CAUTION:** Take care that the LED module will keep in the right position before you fix the holder on the heat sink surface.



EASY 13.5 / 12.5 / 1215

EASY 19

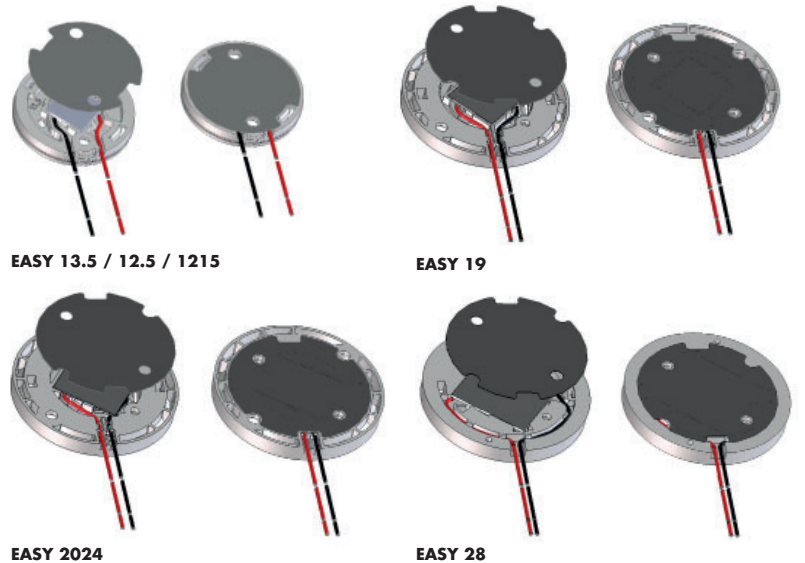
EASY 2024

EASY 28

### Step 3

Place a self-adhesive thermal tape on the rear surface of the LED holder.

**CAUTION:** Take care that the LED module will keep in the right position before you fix the holder on the heat sink surface.



EASY 13.5 / 12.5 / 1215

EASY 19

EASY 2024

EASY 28

### Step 4

Fix the LED holder on the heat sink using for  
EASY 13.5 / 12.5 / 1215: M3 screws

Min. torque: 0.3 Nm  
Max. torque: 0.5 Nm

EASY 19 / 2024 / 28:

M3 screws  
Min. torque: 0.3 Nm  
Max. torque: 0.5 Nm  
or M4 screws  
Min. torque: 0.7 Nm  
Max. torque: 1.2 Nm



EASY 13.5 / 12.5 / 1215

EASY 19

EASY 2024

EASY 28

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## Installation Instructions for PCB Holder – EASY

### Thermal Interface

The temperature of the COB module depends on the luminaire design (size of heat sink), and the thermal resistance between LED ceramic board and heat sink. Temperature on  $t_p/t_c$  point has to be measured in complete luminaire setup acc. to EN 60598. Exceeding the maximum rated  $t_c$ -point temperature (see datasheet) of the LED module can lead to the destruction of the LED module. The expected lifetime of LED modules depends on the driving current and  $t_p$ -temperature during operation (see corresponding data table in datasheet).

It is recommended to use only thermal interface materials (TIM) soft enough to contact the whole surface with a pressure  $< 1 \text{ N/cm}^2$  (phase changing materials or thermal grease). Avoid graphite tape and other rigid materials. Allowed thickness of TIM: 0–0.2 mm (if TIM size = PCB size).

Suitable/tested\* interface materials:

- Thermal phase change material:  
Ref. No.: 603536 PC pad for COBs,  $\varnothing 38.5 \text{ mm}$   
Ref. No.: 603449 PC pad for COBs,  $\varnothing 58/70 \text{ mm}$

\*Thermal management of luminaire depends on the luminaire design, the luminaire production process and the thermal interface material used. VS does not assume any liability for luminaire thermal management and for the long-term behaviour of used thermal interface materials. Please consider the data sheets or installation manuals of the used interface materials.

### General safety and installation guidelines

Installation must be carried out under observation of the relevant regulations and standards. The LED modules are designed for operation within a casing or luminaire. Installation must be carried out in a voltage-free state (i.e. disconnection from the mains). The following advice must be observed; non-observance can result in the destruction of the LED assembly modules, fire and/or other hazards.

- ESD (electrostatic discharge) protection measures must be observed when handling and installing the LED modules. See VS's application notes on ESD protection.
- LED assembly modules must not be subjected to any undue mechanical stress, e. g.:
  - do not treat as bulk cargo
  - avoid shear and compressive forces during handling and installation
  - do not damage circuit paths
  - do not touch the yellow phosphorus layer
- The module must be fixed onto a thermally conductive surface.

- Safe operation only possible by the use of external constant current sources ( $I_{\text{max}}$ , see table "Electrical Characteristics").
- Operation only with power supply units that feature the following protection:
  - Short-circuit protection
  - Overload protection
  - Overheating protection
  - SELV (Safety Extra Low Voltage);  $U_{\text{max.}} \leq 60 \text{ V}$
  - $I_{\text{max}}$ . (see table "Maximum Ratings") must not be exceeded.
- When operating devices will be selected care has been taken to ensure that the maximum values (see table "Maximum Ratings") will not be exceeded.
- Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- Safety regulations acc. to EN 60598 (or further standards) has to be observed if the maximum output voltage exceed the permitted touchable value.
- A parallel connection of the modules is not allowed.
- To ensure problem-free operation, the specified maximum temperature at the  $t_c$  point (see "Operating Life") must be observed (and measured in accordance with EN 60598-1). To satisfy this point, it may be necessary to put measures in place to ensure any heat is dissipated from the PCB to the environment.
- In the event of outdoor applications or applications in damp locations, care must be taken to protect LED assembly modules against humidity, splashes and jets of water. Any corrosion damage resulting from humidity or contact with condensation will not be recognised as a defect or manufacturing fault. LED assembly modules are not specially protected against foreign bodies or dust. Depending on the type of application, further protection must be ensured to prevent dust and foreign bodies from entering.
- Operating LED modules in the presence of certain chemical substances or in chemically enriched (aggressive) environments can impair module functionality or even cause total module failure. Detailed information can be found in our "Chemical Incompatibility" PDF on our website [www.vossloh-schwabe.com/en/home/products/led-lighting-technology/notes-on-led-technology.html](http://www.vossloh-schwabe.com/en/home/products/led-lighting-technology/notes-on-led-technology.html)

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