LED MODULES ReadyLine COB

BUILT-IN MODULE 38 MM – 230 V

LED MODULES ReadyLine COB

EDC_38C_xxW_xxx_230A_VS4

Typical Applications

- Residential lighting
- Replacement for CFL downlights
- Integration in reflector luminaires
- Furniture lighting

LED Modules ReadyLine COB

- **DIRECT MAINS CONNECTION**
- **DIMMABLE**
- **HIGH POWER FACTOR**
- **LONG SERVICE LIFETIME: 50,000 HOURS**
- **DEKRA APPROVED**
- **WIDE RANGE OF 50 MM OPTICS (MR16)**

LIGHTING SOLUTIONS

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LED Modules ReadyLine COB

Technical Notes

- LED built-in module for integration into luminaires
- Mains voltage: 230 V AC
- Power factor: > 0.95
- THD: < 20 %
- Dimensions (ØxH): Ø 38 x 4.7 mm
- On-Board push-in connector
- Light emitting surface (LES)
  Ø 10 mm: 4 W, 6 W, 8 W

Electrical Characteristics

at t_c = 55 °C

Type	Typ. supply voltage AC V ± 10%	Operation frequency Hz	Typ. power consumption at 230 V W	Power factor	Total harmonic distortion (THD) %	Flicker percent %	Flicker index
EDC_38C_4W_xxx_230A_VS4	220–240	50–60	4	0.95	< 20	100	0.33
EDC_38C_6W_xxx_230A_VS4	220–240	50–60	6	0.95	< 20	100	0.33
EDC_38C_8W_xxx_230A_VS4	220–240	50–60	8	0.95	< 20	100	0.33

Maximum Ratings

Exceeding the maximum ratings can lead to reduction of service life or destruction of the modules.

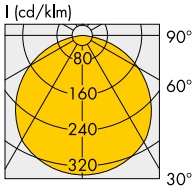
Type	Power consumption W	Operation voltage range AC (V)		Operation temperature range at t_c point		Ambient temperature range		Storage temperature range	
		min.	max.	°C min.	°C max.	°C min.	°C max.	°C min.	°C max.
EDC_38C_xW_xxx_230A_VS4	4, 6	198	264	–30	+65	–30	+55	–30	+85
EDC_38C_8W_xxx_230A_VS4	8	198	264	–30	+65	–30	+50	–30	+85

Operating Life

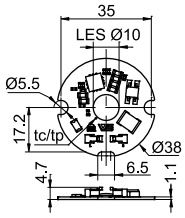
L70/B50

Temperature at t_c1	Service life time
55 °C	50,000 h
65 °C	40,000 h

Typical Light Distribution Curve



Mechanical Dimensions



4 W, 6 W, 8 W

Production Code

EDC_XX X_XXW_X XX_XXX X_VSX

Type	Dimension	Power	Colour	Voltage type	Version
	38	4W	8	27	120	A	1
	57	6W	9	30	230	D	2
	S	8W		35			3
	C	10W		40			4
		15W		50			5
		20W					6
		30W					
		40W					

Mains voltage

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Optical Characteristics at t_c = 55 °C, at 230 V AC

Typ. output W	Type	Ref. No.	Colour	Correlated colour temperature* K	Luminous flux (lm) and typ. efficieny (lm/W)** min. lm	typ. lm	typ. lm/W	Typ. beam angle °	Typ. CRI R_a	Energy efficiency
4	EDC_38C_4W827_230A_VS4	**564026**	warm white	2700	320	360	90	120	80	A+
	EDC_38C_4W830_230A_VS4	**564027**	warm white	3000	340	380	95	120	80	A+
	EDC_38C_4W835_230A_VS4	**564028**	warm white	3500	344	384	96	120	80	A+
	EDC_38C_4W840_230A_VS4	**564029**	neutral white	4000	352	392	98	120	80	A++
	EDC_38C_4W850_230A_VS4	**564030**	cool white	5000	360	400	100	120	80	A++
	EDC_38C_4W927_230A_VS4	**564031**	warm white	2700	280	320	80	120	90	A+
	EDC_38C_4W930_230A_VS4	**564033**	warm white	3000	300	340	85	120	90	A+
	EDC_38C_4W935_230A_VS4	**564034**	warm white	3500	304	344	86	120	90	A+
	EDC_38C_4W940_230A_VS4	**564035**	neutral white	4000	312	352	88	120	90	A+
	EDC_38C_4W950_230A_VS4	**564036**	cool white	5000	320	360	90	120	90	A+
6	EDC_38C_6W827_230A_VS4	**564037**	warm white	2700	450	510	85	120	80	A+
	EDC_38C_6W830_230A_VS4	**564038**	warm white	3000	480	540	90	120	80	A+
	EDC_38C_6W835_230A_VS4	**564039**	warm white	3500	486	546	91	120	80	A+
	EDC_38C_6W840_230A_VS4	**564040**	neutral white	4000	498	558	93	120	80	A+
	EDC_38C_6W850_230A_VS4	**564041**	cool white	5000	510	570	95	120	80	A+
	EDC_38C_6W927_230A_VS4	**564042**	warm white	2700	390	450	75	120	90	A+
	EDC_38C_6W930_230A_VS4	**564043**	warm white	3000	420	480	80	120	90	A+
	EDC_38C_6W935_230A_VS4	**564044**	warm white	3500	426	486	81	120	90	A+
	EDC_38C_6W940_230A_VS4	**564045**	neutral white	4000	438	498	83	120	90	A+
	EDC_38C_6W950_230A_VS4	**564046**	cold white	5000	450	510	85	120	90	A+
8	EDC_38C_8W827_230A_VS4	**564047**	warm white	2700	600	680	85	120	80	A+
	EDC_38C_8W830_230A_VS4	**564048**	warm white	3000	640	720	90	120	80	A+
	EDC_38C_8W835_230A_VS4	**564049**	warm white	3500	648	728	91	120	80	A+
	EDC_38C_8W840_230A_VS4	**564050**	neutral white	4000	664	744	93	120	80	A+
	EDC_38C_8W850_230A_VS4	**564051**	cold white	5000	680	760	95	120	80	A+
	EDC_38C_8W927_230A_VS4	**564052**	warm white	2700	520	600	75	120	90	A+
	EDC_38C_8W930_230A_VS4	**564053**	warm white	3000	560	640	80	120	90	A+
	EDC_38C_8W935_230A_VS4	**564054**	warm white	3500	568	648	81	120	90	A+
	EDC_38C_8W940_230A_VS4	**564055**	neutral white	4000	584	664	83	120	90	A+
	EDC_38C_8W950_230A_VS4	**564056**	cold white	5000	600	680	85	120	90	A+

* Colour tolerance: 3 MacAdam | ** Production tolerance of luminous flux and efficiency: ± 10% | CRI ± 3

Minimum order quantity: 200 pcs.

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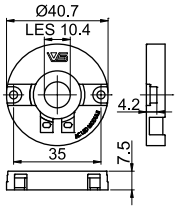
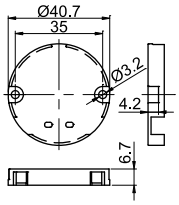
Accessories for LED Modules ReadyLine COB

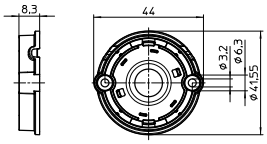
Holder
Dimensions (ØxH): 40.7x7.5 mm
Material: plastic, white
Packaging unit: 100 pcs.
Ref. No.: 563993



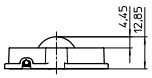
Cover
Dimensions (ØxH): 40.7x6.7 mm
Material: PC, transparent
Packaging unit: 50 pcs.
Ref. No.: 563994



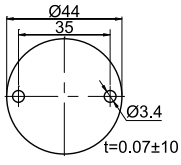
Holder for reflectors PLUS and lenses Evolve 50
Dimensions (ØxH): 41.55x8.3 mm
Material: PBT, white
Packaging unit: 200 pcs.
Ref. No.: 568632



LES protection
Material: PC, opaque
Fixation: click-in
Packaging unit: 1000 pcs.
Ref. No.: 604024



Thermal Pad
Dimensions (ØxH): 44x0.07 mm
Thermal conductivity λ: 2 W/mK
Packaging unit: 100 pcs.
Ref. No.: 563995



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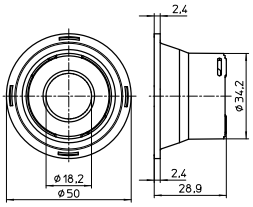
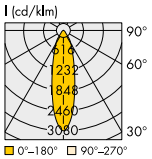
Reflectors PLUS for ReadyLine COB

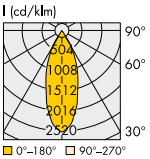
Technical notes
For click-in fixation on holders 568632/568634
Diameter: 50 mm
Material: PC
Packaging units: 30 Pcs.



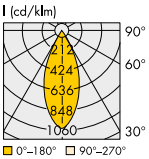
Ref. No.	For LED modules	Beam angle (°)	Cover	Optical efficiency (%)	Weight g
603686	ReadyLine COB 38 mm	20	Frost	86	10
603688	ReadyLine COB 38 mm	26	Frost	85	10
604920	ReadyLine COB 38 mm	40	Frost	84	10



20°



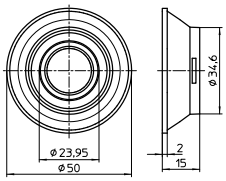
26°



40°

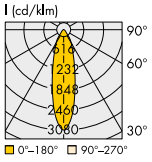
Lenses Evolve 50 for ReadyLine COB

Technical notes
For click-in fixation on holders 568632/568634
Diameter: 50 mm
Material: PC
Packaging units: 30 Pcs.

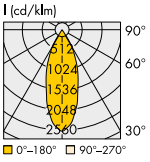


Ref. No.	For LED modules	Beam angle (°)	Cover	Optical efficiency (%)	Weight g
603673	ReadyLine COB 38 mm	20	–	87	15
603674	ReadyLine COB 38 mm	28	–	86	15
604879	ReadyLine COB 38 mm	48	–	89	15

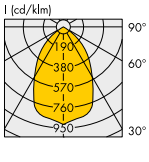
* In addition with mixing chamber



20°



28°



48°

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LED Modules ReadyLine COB

Assembly and Safety Information

The LED modules are designed for direct mains operation (230 V AC). Installation must be carried out under observation country specific relevant safety regulations and standards.

- The LED module is a built-in lighting module to assemble into luminaires.
- Suitable for luminaires of protection class I, grounding is mandatory to comply with safety standards.
- In case of applications in luminaires of protection class II the safety regulations acc. to luminaire safety standards must be observed.
- Operation of the LED module is not allowed when it is not built-in into a luminaire. Depending on application, luminaire application specific safety standards have to be observed (e.g. EN 60598 for Europe). Depending on the use of the luminaire in different countries (export), the country specific safety standards have to be regarded (e.g. EN 60598 for Europe).
  - Regard to sufficient isolation acc. country specific standards.
  - Live parts must not be touched. Luminaire must be closed acc. country specific standards. Danger of life!!!
- Clearance and creepage distances of the module are designed for class I luminaires (basic insulation). For built-in of the module the required standards have to be observed (e.g. EN 60598).
- Do not exceed values given in this specification.
- Do not exceed max t_c temperature of 85 °C.
- The module must be fixed onto a thermally conductive surface. Heat sink must cover the entire backside surface of the module.
- When installing/screwing the module into a luminaire, please ensure that cables are not squeezed between luminaire/heat-sink and LED module.
- Please ensure standard ESD (electrostatic discharge) protection measures are employed when handling and installing LED modules. Electrostatic discharge can damage LEDs.
- The LED modules are connected via two on board push-in connectors for flexible or solid conductors.
  Conductor section: AWG22-AWG18
  - Flexible: 0.45 mm²– 0.96 mm²
  - Solid: 0.324 mm² – 0.82 mm²

  Strip length: 6 mm ±0.5 mm
  The AWG22 flexible cable has to be tinned
  The AWG20 and AWG18 wires have to be twisted.
  The contacts can be released with a flat-headed screwdriver with a width of 3 mm. It has to be ensured, that the used cables do not decrease clearance and creepage distance of the modules. The cable must be put in completely (as far as isolation will go) into terminal. Used cables must fulfil luminaire safety standards (EN 60598). Other country specific standards have to be regarded.
- Parallel connection is mandatory for safe electrical operation. Serial connection of LED modules is not allowed.
- Due to the used electronic parts on the module not all available phase-cutting dimmers are compatible. Dimmable with phase-cutting leading- and trailing-edge dimmer. Minimum dimmer load has to be observed. The compatibility of the dimmer and the modules has to be confirmed prior to installation to avoid flickering.
- The modules must be fixed with M4 screws. Fixation only with flat or cylinder head screws (M4) (no countersank screws). Max. torque for PCB: 0.6 Nm (M4), max. torque with holder: 0.3 Nm (M4).
- To ensure problem-free operation, the specified maximum temperature at the t_c point (see "Operating Life") must be observed (measured in accordance with EN 60598-1). To satisfy this point, it is necessary to put measures in place to ensure any heat is dissipated from the LED module 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. Relevant country and application specific standards have to be regarded.
- Installation by qualified electrician only
- Do not add or change wires while circuit is active
- Do not make modifications on module
- Do not use adhesives to attach that outgas organic vapour
- Do not use togehter with material containing sulfur
- Do not operate module with AC generators
- Do not operate modules by DC
- LED modules must not be subjected to any undue mechanical stress, e. g.: LED module
  - handle modules carefully
  - avoid shear and compressive forces onto the modules during handling and installation
  - avoid vibrations of more than 2 kHz, 40 G
- If module is used in rooms with fast moving parts as the light modulation might cause stroboscopic effects.
- This LED module might interfere with displays and cameras due to modulation.
- The photobiological safety of the LED modules is classified into risk groups in accordance with EN 62471: 2008 and IEC TR 62778: risk group 1

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Applied Standards

- EN 62031
  LED modules for general lighting – Safety specifications
- EN 62471
  Photobiological safety of lamps and lamp systems
- EN 55015
  Radio disturbance emissions
- EN 61000-3-2
  Limits for harmonic emissions
- EN 61547
  Immunity requirements

Product Guarantee

- 5 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.

Tested dimmers for LED Modules ReadyLine COB

ReadyLine COB modules are dimmable with common phase-cut dimmers.
Minimum dimmer load has to be observed.
The compatibility of the dimmer and the modules has to be approved prior to installation.

- Vossloh-Schwabe DimONE 186607
- Vossloh-Schwabe DimONE Bluetooth® 186608
- Vossloh-Schwabe Dimmer 250 W 554591
- Vossloh-Schwabe Dimmer 500 W 554592
- Jung 225TDE Insta 51040
- Gira 030700 = Insta
- Berker 2874
- Berker 286710 Insta 5190
- Busch Jäger 6513 U-102
- Busch Jäger 6519U
- Sygonix 33595A
- Merten MEG5136-0000
- LeGrand ADW-ETL4-420VA
- Hager WUD82 + WYA920
- Merten 577899 + 570419
- Gira 2262 Anschn.
- Jung 225 NVDE Anschn.
- Berker 85421200 leading edge Anf. 2013 / equiv. Hager Anf. 2013 both Touch
- Sygonix 33596V leading edge
- Sygonix 33594C leading edge
- Sygonix 33594R leading edge
- Merten MEG5170-0300 + 343519
- Eltako EUD61NPN univ.
- Eltako EUD61M-UC univ.
- Eltako EUD61NP univ.
- Hager EVN002 univ.
- Hager EVN004 univ.
- Berker 16701 univ.
- Jung UD1255REG univ.
- Busch Jäger 6583 univ.
- Eltako EUD12D univ. / Eltako EUD12F univ. / Eltako EUD12Z univ.
- Eltako EUD12Z univ.

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