VOSSLOH SCHWABE

LED Lamps

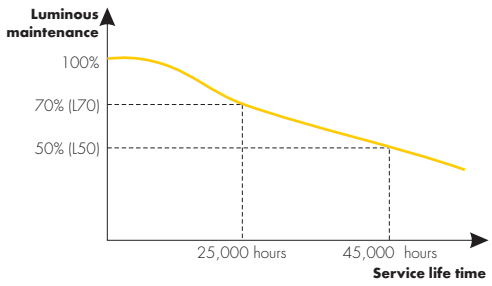
LED Light – The Easy Way to Retrofit

LED LAMPS

FUTURE LIGHTING

- **PLUG & PLAY**
- **HIGHLY EFFICIENT LIGHTING REDUCES CARBON FOOTPRINT**
- **AVAILABLE IN DIFFERENT COLOUR TEMPERATURES AND FIELD ANGLES**
- **INTEGRATED SUPERIOR THERMAL MANAGEMENT**
- **LONG SERVICE LIFE OF UP TO 45,000 HOURS (>50% OUTPUT)**
- **LOW MAINTENANCE**
- **NO UV AND IR RADIATION**

Service life expectation (lumen degradation)



LED – THE EASY WAY TO RETROFIT

LEDs contain no mercury and are low on energy consumption, as a result of which they lead the field when it comes to "green lighting". Thanks to their eco-friendly properties, they can make a valid contribution to reducing your carbon footprint and countering the greenhouse effect. Moreover, LEDs start instantaneously at full brightness and are available in many colours.

In addition to providing UV- and IR-free light, LEDs are vibration-proof and have a very long service life that further increases the overall efficiency of any lighting system. As LED lamps are now powerful enough to replace both incandescent and low-voltage halogen lamps, they are becoming increasingly popular beyond the field of decorative lighting.

What VS LED lamps can do for you?

VS has launched a range of high-efficiency, plug-and-play LED lamps with a long service life that can replace both incandescent and halogen lamps with minimum effort and without having to change existing casings. This not only saves time and money, but also immediately delivers energy-saving benefits. The new range of highly efficient VS LED lamps is suitable for both residential and commercial applications.

In addition, VS LED lamps are available with a wide range of bases to suit many luminaires. The simplicity and convenience with which existing lighting systems can now be converted to LED mean saving energy and going greener have never been easier.

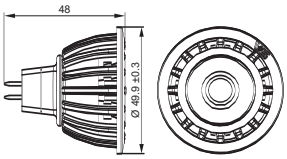
Typical applications

- Residential lighting
- Commercial lighting
- Spot lighting
- Window display lighting
- Show case lighting
- Entertainment lighting

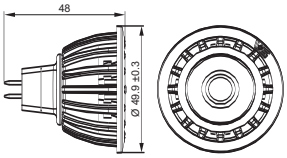
UV FREE · 0% MERCURY · RoHS · CE

Low-voltage LED Lamps

Suitable for magnetic halogen transformers, electronic halogen converters (12 V AC) and electronic LED drivers (12 V DC)



MR16, 5.5 W
Design style: COB lens
Operating temperature: 0 to 40 °C
Storage temperature: –20 to 60 °C
Input voltage: 12 V AC/DC
Non dimmable
Base: GU5.3



MR16, 7.0 W (preliminary data)
Design style: COB reflector
Operating temperature: 0 to 40 °C
Storage temperature: –20 to 60 °C
Input voltage: 12 V AC/DC
Dimmable (Magnetic with leading-edge dimmers / Electronic preferred with trailing-edge dimmers)
Base: GU5.3

PRELIMINARY

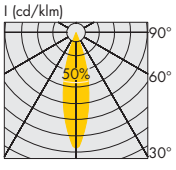
Type	Ref. No.	Colour	Colour temperature K	CRI R_a	Luminous flux lm	Light intensity cd	Beam angle (°)	Field angle (°)	Power factor	Power W	Energy efficiency
MR16, 5.5 W											
MR16-5-3000-24-III	**553212**	warm white	3000	≥ 80	350	1300	24	48	0.7	5.5	A
MR16-5-3000-36-III	**553213**	warm white	3000	≥ 80	350	700	36	72	0.7	5.5	A+
MR16, 7.0 W											
MR16-7-3000-24-III	**553214**	warm white	3000	≥ 80	410	1250	24	48	0.9	7.0	A
MR16-7-3000-36-III	**553215**	warm white	3000	≥ 80	410	680	36	72	0.9	7.0	A

Note: Further colour temperatures are available on request.

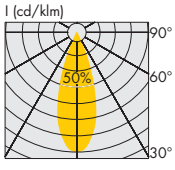
Typical luminance of MR16 at 1, 2 and 3 meters

Intensity (lux)												
Colour temperature K	**MR16, 5.5 W**						**MR16, 7.0 W**					
	24°			**36°**			**24°**			**36°**		
	1 m	2 m	3 m	1 m	2 m	3 m	1 m	2 m	3 m	1 m	2 m	3 m
Warm White 3000 K	1300	325	140	700	175	80	1250	310	140	680	170	75

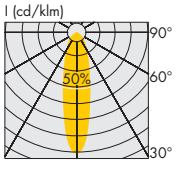
Typical light distribution curves



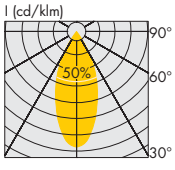
MR16, 5.5 W 24°



MR16, 5.5 W 36°

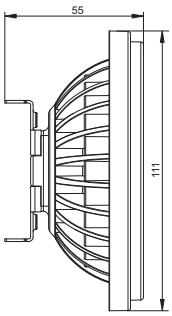


MR16, 7.0 W 24°



MR16, 7.0 W 36°

Low-voltage LED Lamps



Suitable for magnetic halogen transformers (12 V AC)
and electronic LED drivers (12 V DC)
Not suitable for electronic converters (12 V AC)

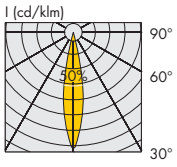
AR111, 12 W
Operating temperature: –20 to 40 °C
Storage temperature: –40 to 60 °C
Input voltage: 12 V AC/DC
Non dimmable
Base: G53

Type	**Ref. No.**	Colour	Colour temperature K	CRI R_a	Luminous flux lm	Light intensity cd	Beam angle °	Field angle °	Power W	Energy efficiency
AR111-12-2700-38-II	**566031**	warm white	2700	≥ 80	450	3000	20	38	12	A
AR111-12-3000-38-II	**566032**	warm white	3000	≥ 80	500	3350	20	38	12	A
AR111-12-4000-38-II	**566033**	neutral white	4000	≥ 75	550	3800	20	38	12	A
AR111-12-6000-38-II	**566034**	cool white	6000	≥ 70	680	4800	20	38	12	A
AR111-12-2700-60-II	**566035**	warm white	2700	≥ 80	450	900	40	60	12	A
AR111-12-3000-60-II	**566036**	warm white	3000	≥ 80	500	1000	40	60	12	A
AR111-12-4000-60-II	**566037**	neutral white	4000	≥ 75	550	1100	40	60	12	A
AR111-12-6000-60-II	**566038**	cool white	6000	≥ 70	680	1360	40	60	12	A

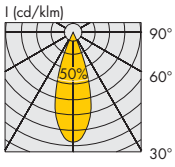
Typical luminance of AR111 at 1, 2 and 3 meters

Intensity (lux)						
Colour temperature K	**AR111, 12 W**					
	20°			**40°**		
	1 m	2 m	3 m	1 m	2 m	3 m
Warm White 2700 K	3000	750	333	900	225	100
Warm White 3000 K	3350	837	372	1000	250	111
Neutral White 4000 K	3800	950	422	1100	275	122
Cool White 6000 K	4800	1200	533	1360	340	151

Typical light distribution curves



AR111, 12 W 20°



AR111, 12 W 40°

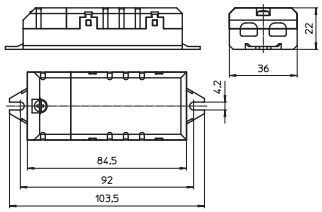
Electronic Converter and Dimmers for LED Lamps 12 V

Vossloh-Schwabe's LEDLine EDXe 112/12 V converter is a control component with a voltage output of DC 12 V and an output of up to 12 W to operate LED applications.
The converter is electronically protected against overload, overheating and short-circuiting.

EN 61347-1; EN 61347-2-13 (Safety)
EN 61000-3-2 (Mains Harmonics)
EN 55015 (Non radio disturbance)
EN 61547 (EMC Immunity Requirements)
EN 62384 (Performance)

Service life time: 50,000 hrs
permanent operation when maximum temperature t_c max. at t_c point will not be exceeded;
failure rate: < 0.2% per 1000 hrs

LEDLine EDXe 112
Mains voltage: 220/240 V
Mains frequency: 50 – 60 Hz
Protection against "no load" operation
Protection class II
SELV-equivalent
Degree of protection: IP20
Power factor: 0.57
Shape: 103.5x36x22 mm, Weight: 60 g
Output: 0.1 – 12 W
Voltage output: 12 V ±0.6 V
Output current: 0.1 – 1 A
Ambient temperature t_a: –20 to 50 °C
Casing temperature t_c: 75 °C
Connections:
prim.: 2 x screw terminals 2.5 mm^2
sec.: 2 x screw terminals 2.5 mm^2
Ref. No.: 186204



Electronic phase-cutting trailing-edge dimmer
Dimensions: 84.3x84.3x46.2 mm
Material: PC, white
Push-button switch and rotary dimming
Ambient temperature t_a: –20 to 40 °C
Not suitable for electromagnetic ballasts and incandescent lamps
Max. load depends on the type of light source
Weight: 85 g, unit: 25 pcs.

Ref. No.: 554591 capacity/dimming range: 5–250 W, max. load: 250 W (165 W for LED lamps)

Ref. No.: 554592 capacity/dimming range: 5–500 W, max. load: 500 W (300 W for LED lamps)

Important Notices for LED Lamps

Low-voltage LED lamps
- Do not connect more than one unit to one transformer
- Do not use in ambient temperatures of more than 40 °C
- Unsuitable for installation in enclosed or airtight luminaires
- For indoor use only
- Unsuitable for use outdoors or in high-moisture environments

Caution
- Always disconnect equipment from the mains before replacing lamps.

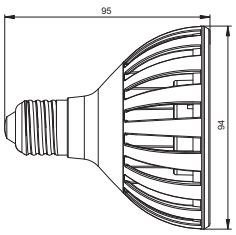
Mains voltage LED lamps
- Unsuitable for operation with an additional driver
- Integrated high-frequency driver
- Do not use in ambient temperatures of more than 40 °C
- Unsuitable for installation in enclosed or airtight luminaires
- For indoor use only
- Unsuitable for use outdoors or in high-moisture environments
- Dimmable with phase-cutting dimmers (E27 PAR and GU10 7 W lamps only); minimum dimmer load has to be respected.
  The compatibility of the lamp to the dimmer has to be confirmed prior to installation to avoid flickering and/or noises. Trailing-edge dimmers are preferred.

PLEASE CONTACT US FOR FURTHER COLOUR TEMPERATURES, LIGHT COLOURS OR BEAM ANGLES THAT ARE NOT LISTED IN THIS BROCHURE.

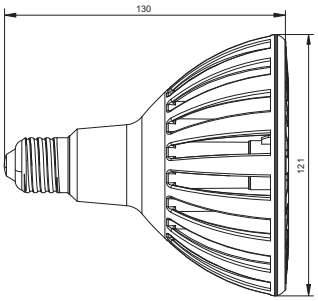
Mains Voltage LED Lamps

With integrated driver

LED lamps made by Vossloh-Schwabe will fit most standard E27 and GU10 bases. These low-power, high-brightness and highly eco-friendly lamps are sure to improve the overall efficiency of your lighting system.



PAR30, 12 W
Operating temperature: –20 to 40 °C
Storage temperature: –40 to 60 °C
Input voltage: 220–240 V AC
Phase-cut dimmable (trailing-edge dimmers are preferred)
Base: E27



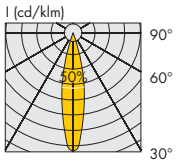
PAR38, 17 W
Operating temperature: –20 to 40 °C
Storage temperature: –40 to 60 °C
Input voltage: 220–240 V AC
Phase-cut dimmable (trailing-edge dimmers are preferred)
Base: E27

Type	**Ref. No.**	Colour	Colour temperature K	CRI R_a	Luminous flux lm	Light intensity cd	Beam angle °	Field angle °	Power W	Energy efficiency
PAR30, 12 W										
PAR30-12-2700-38-II	**549107**	warm white	2700	≥ 80	420	3320	20	38	12	A
PAR30-12-3000-38-II	**549108**	warm white	3000	≥ 80	460	3670	20	38	12	A
PAR30-12-4000-38-II	**549109**	neutral white	4000	≥ 75	570	4530	20	38	12	A
PAR30-12-6000-38-II	**549110**	cool white	6000	≥ 70	680	5400	20	38	12	A
PAR30-12-2700-60-II	**549111**	warm white	2700	≥ 80	420	980	40	60	12	A
PAR30-12-3000-60-II	**549112**	warm white	3000	≥ 80	460	1200	40	60	12	A
PAR30-12-4000-60-II	**549113**	neutral white	4000	≥ 75	570	1325	40	60	12	A
PAR30-12-6000-60-II	**549114**	cool white	6000	≥ 70	680	1580	40	60	12	A
PAR38, 17 W										
PAR38-17-2700-38-II	**549131**	warm white	2700	≥ 80	560	4425	20	38	17	A
PAR38-17-3000-38-II	**549133**	warm white	3000	≥ 80	630	5000	20	38	17	A
PAR38-17-4000-38-II	**549134**	neutral white	4000	≥ 75	720	5700	20	38	17	A
PAR38-17-6000-38-II	**549136**	cool white	6000	≥ 70	790	6300	20	38	17	A
PAR38-17-2700-60-II	**549138**	warm white	2700	≥ 80	560	1350	40	60	17	A
PAR38-17-3000-60-II	**549140**	warm white	3000	≥ 80	630	1500	40	60	17	A
PAR38-17-4000-60-II	**549141**	neutral white	4000	≥ 75	720	1770	40	60	17	A
PAR38-17-6000-60-II	**549142**	cool white	6000	≥ 70	790	1900	40	60	17	A

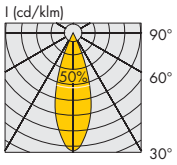
Typical luminance of PAR30, PAR38 at 1, 2 and 3 meters

Intensity (lux)												
Colour temperature K	**PAR30, 12 W**						**PAR38, 17 W**					
	20°			**40°**			**20°**			**40°**		
	1 m	2 m	3 m	1 m	2 m	3 m	1 m	2 m	3 m	1 m	2 m	3 m
Warm White 2700 K	3320	830	368	980	245	108	4425	1106	491	1350	337	150
Warm White 3000 K	3670	918	408	1200	300	133	5000	1250	566	1500	375	167
Neutral White 4000 K	4530	1133	503	1325	331	147	5700	1425	633	1770	443	197
Cool White 6000 K	5400	1350	600	1580	395	176	6300	1575	700	1900	475	211

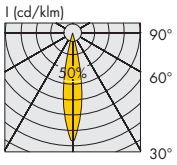
Typical light distribution curves of PAR30, PAR38 lamps



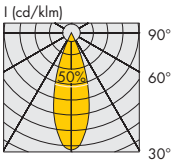
PAR30, 12 W 20°



PAR30, 12 W 40°



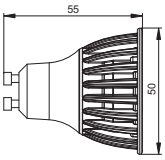
PAR38, 17 W 20°



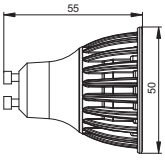
PAR38, 17 W 40°

Mains Voltage LED Lamps

With integrated driver



GU10, 5.5 W
Design style: COB lens
Operating temperature: -20 to 40 °C
Storage temperature: -40 to 60 °C
Input voltage: 220–240 V AC
Non dimmable
Base: GU10



GU10, 7,0 W
Design style: COB reflector
Operating temperature: -20 to 40 °C
Storage temperature: -40 to 60 °C
Input voltage: 220–240 V AC
Phase-cut dimmable (trailing-edge dimmers are preferred)
Base: GU10

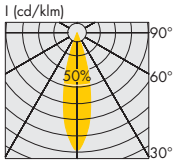
Type	**Ref. No.**	Colour	Colour temperature K	CRI R_a	Luminous flux lm	Light intensity cd	Beam angle °	Field angle °	Power factor	Power W	Energy efficiency
GU10, 5.5 W											
GU10-5-3000-24-III	**553218**	warm white	3000	≥ 80	350	1300	24	48	0.5	5.5	A+
GU10-5-3000-36-III	**553219**	warm white	3000	≥ 80	350	700	36	72	0.5	5.5	A+
GU10, 7,0 W											
GU10-7-3000-24-III	**553220**	warm white	3000	≥ 80	450	1000	24	48	0.9	7,0	A+
GU10-7-3000-36-III	**553221**	warm white	3000	≥ 80	450	800	36	72	0.9	7,0	A+

Further colour temperatures are available on request.

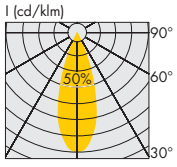
Typical luminance of GU10 at 1, 2 and 3 meters

Intensity (lux)												
Colour temperature K	**GU10, 5.5 W**						**GU10, 7,0 W**					
	24°			**36°**			**24°**			**36°**		
	1 m	2 m	3 m	1 m	2 m	3 m	1 m	2 m	3 m	1 m	2 m	3 m
Warm White 3000 K	1300	325	140	700	175	80	1000	250	120	800	200	90

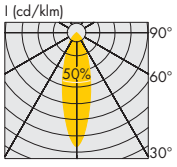
Typical light distribution curves



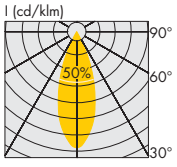
GU10, 5.5 W 24°



GU10, 5.5 W 36°



GU10, 7,0 W 24°



GU10, 7,0 W 36°

Whenever an electric light goes on around the world, Vossloh-Schwabe is likely to have made a key contribution to ensuring that everything works at the flick of a switch.

Headquartered in Germany, Vossloh-Schwabe has been a member of the global Panasonic group since 2002 and counts as a technology leader within the lighting sector. Top-quality, high-performance products form the basis of the company's success.

Whether cost-effective standard components or tailor-made product developments are needed, Vossloh-Schwabe can satisfy even the most diverse market and customer requirements. Vossloh-Schwabe's extensive product portfolio covers all lighting components: LED systems with matching control gear units, OLEDs and state-of-the-art control systems (LiCS) as well as electronic and magnetic ballasts and lampholders.

A member of the Panasonic group Panasonic

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