

OSRAM LED PERFORMANCE PAR 16 50





Highlights

—Easy replacement of halogen lamps due to compact full glass design and single optic

—TruWave Technology is defined as LEDVANCE unique technology which can offer more natural and comfortable light.

—Premium light quality thanks to high color rendering index and narrow binning

—Dimming towards your ideal ambience

-Very high color rendering : Ra 90

-Long lifetime, up to 25,000hrs

Application Areas:

- Hospitality
- Restaurant
- Residential
- Art galleries and museum
- Homes

Advancing Light

LEDVANCE is one of the World's leaders in general lighting for lighting professionals as well as end users, offering



A broad variety of LED luminaires



Advanced LED lamps



Traditional light sources

LEDVANCE is licensee of product trademark OSRAM for lamps products in general lighting.



Intelligent, networked Smart Home & Smart Building solutions



LED PERFORMANCE PAR 16 50









We bring nature light!

Life need natural light

- It makes us feel warm, safe, relaxed, content, happy & energized. Natural Light gives us life.
- Life needs Natural Light after the sun goes down.
- Life needs Natural Light to combat feelings of sadness during dark winter months.
- Life needs Natural Light to help nighttime workers do their best.

Benefits of natural light product

- LEDVANCE SPOT lamp mimics the natural light spectrum and wavelength intensity to support an improved sleep/wake cycle.
- With its balanced blue light spectrum, it is beneficial for boosting attention, reaction times and mood
- Truwave technology is defined as LEDVANCE unique technology which can offer more natural & comfortable light

Application Note

- Suitable for indoor application.
- Switch off the light during installation
- Input voltage: 220-240V
- Frequency: 50-60HZ
- Storage temperature & humidity conditions (-20°C up to +80°C, at max. 95% relative humidity)
- Operating temperature & humidity conditions (-20°C up to +30°C, at max. 95% relative humidity)

Disposal Information

- Lamps with WEEE sign can be returned at specific collection points.
- · LED lamps have to be disposed as special waste.







LED PERFORMANCE PAR 16 50



Product Overview¹

Product Name	Model Name	Wattage	Input Voltage	ССТ	Lm
PAR16 50 P 5.5W 927 24° GU10	AC32224	5.5W	220V-240V	2700K	380lm
PAR16 50 P 5.5W 927 36° GU10	AC32225	5.5W	220V-240V	2700K	380lm
PAR16 50 P 5.5W 930 36° GU10	AC32221	5.5W	220V-240V	3000K	380lm
PAR16 50 P 5.5W 940 36° GU10	AC32222	5.5W	220V-240V	4000K	400lm
PAR16 50 P 5.5W 965 36° GU10	AC32223	5.5W	220V-240V	6500K	400lm
PAR16 50 P 5.5W 930 60° GU10	AC32226	5.5W	220V-240V	3000K	380lm
PAR16 50 P 5.5W 930 60° GU10	AC32227	5.5W	220V-240V	3000K	380lm
PAR16 50 P 5.5W 965 60° GU10	AC32228	5.5W	220V-240V	6500K	400lm
PAR16 50 P 5.5W 965 60° GU10	AC32229	5.5W	220V-240V	6500K	400lm

Benefits

- •Easy replacement of halogen lamps due to compact full glass design and single optic
- •Premium light quality thanks to high color rendering index and narrow binning
- •Free of multiple shadows for an excellent accent lighting
- •Dimming towards your ideal ambience
- •Up to 89% Energy Saving, spend little and save a lot
- •Install and forget: assured by Germany quality standard

Key Features

- •Full glass design, elegant appearance
- •Very high color rendering: Ra 90
- •Color consistency: ≤5 Standard Deviation Color Matching
- •Uniform and clean beam thanks to the innovative single optics
- •Perfect Fit, 1:1 halogen outline ensures easy installation
- Excellent dimmer compatibility
- •220-240V AC input voltage
- •UV and NIR radiation free
- Mercury free
- •25,000 hours lifetime²

For lamps with a weight significantly higher than that of the lamps for which they are a replacement, attention should be drawn to the fact that the increased weight may reduce the mechanical stability of certain luminaires and lampholders and may impair contact making and lamp retention.

¹ Typical values. All the technical parameters apply to the entire lamp. In view of the complex manufacturing process for light emitting diodes, the typical values given above for the technical LED parameters are merely statistical values that do not necessarily correspond to the actual technical parameters of an individual product; individual products may vary from the typical values.

² L70B50 is the average operating life of the LED Lamp during which the luminous flux is greater than or equal to 70% of the initial luminous flux, for 50% of the population. The lifetime is estimated at room temperature (25° C), free air burning, base up burning position and at rated voltage.



LED PERFORMANCE PAR 16 50

Ordering Guide

Product	Wattage CCT		Lm	Candela	Diameter	Length	Weight	Beam	EAN10	EAN40	Ship.
roduct	wallage	001	LIII	Carideia	Diameter	Length	weight	Angle	LANTO	(ship unit)	unit
LPPAR165024 5.5W/927230V GU1010X1AR7OSRAM	5.5W	2700K	380lm	1200cd	51mm	52mm	41g	24°	4058075587359	4058075587366	10
LPPAR165036 5.5W/927230V GU1010X1AR7OSRAM	5.5W	2700K	380lm	750cd	51mm	52mm	41g	36°	4058075587373	4058075587380	10
LPPAR165036 5.5W/930230V GU1010X1AR7OSRAM	5.5W	3000K	380lm	350cd	51mm	52mm	41g	36°	4058075587137	4058075587144	10
LPPAR165036 5.5W/940230V GU1010X1AR7OSRAM	5.5W	4000K	400lm	350cd	51mm	52mm	41g	36°	4058075587199	4058075587205	10
LPPAR165036 5.5W/965230V GU1010X1AR7OSRAM	5.5W	6500K	400lm	350cd	51mm	52mm	41g	36°	4058075587335	4058075587342	10
LPPR1650605.5W/930230VG U1010X1AR7AUOSRAM	5.5W	3000K	380lm	350cd	51mm	52mm	41g	60°	4058075587397	4058075587403	10
LPPR1650605.5W/930230VG U108X3AR7AUOSRAM	5.5W	3000K	380lm	350cd	51mm	52mm	41g	60°	4058075587434	4058075587441	24
LPPR1650605.5W/965230VG U1010X1AR7AUOSRAM	5.5W	6500K	400lm	350cd	51mm	52mm	41g	60°	4058075587458	4058075587465	10
LPPR1650605.5W/965230VG U108X3AR7AUOSRAM	5.5W	6500K	400lm	350cd	51mm	52mm	41g	60°	4058075587472	4058075587489	24

Common Characteristics³

Туре	Average	Switching cycles	Casing material	Starting time	Warm up time for	Power factor
	lifetime ⁴	(30s on, 30s off)			95% light	
LED PERFORMANCE PAR16 50	25,000 hrs	100,000	Glass	<0.5 s	<0.5 s	0.7
Туре	Nominal current	Tc temperature max.5	CRI	Mercury max.	Standard deviation of color matching	Ambient temperature range
LED PERFORMANCE PAR16 50	33 mA	≤85°C @ Ta 40°C	90	0.0 mg	<5 SDCM	–20+40 °C

³ Typical values. All the technical parameters apply to the entire lamp. In view of the complex manufacturing process for light emitting diodes, the typical values given above for the technical LED parameters are merely statistical values that do not necessarily correspond to the actual technical parameters of an individual product; individual products may vary from the typical values.

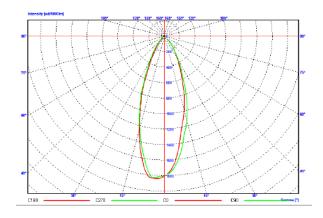
⁴ L70B50 is the average operating life of the LED Lamp during which the luminous flux is greater than or equal to 70% of the initial luminous flux, for 50% of the population. The lifetime is estimated at room temperature (25° C), free air burning, base up burning position and at rated voltage.

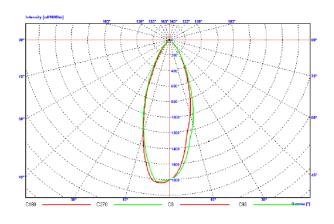
⁵ The Tc is defined as the highest permissible temperature which may occur on the outer surface of the LED lamp (in the indicated position) under normal operating conditions and at the rated voltage/current/power or the maximum of the rated voltage/current/power range (DIN EN 62031: 2009-01)



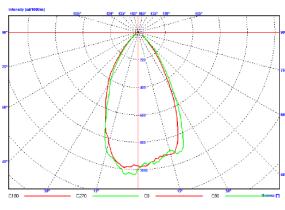
LED PERFORMANCE PAR16 50

Light Distribution





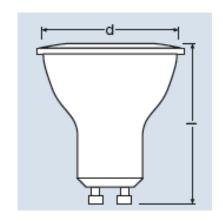
PAR16 50 P 5.5W 24° GU10



PAR16 50 P 5.5W 60° GU10

PAR16 50 P 5.5W 36° GU10

Lamp Dimension



	PAR16
D (mm)	51
I (mm)	52



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Application information

- Hospitality
- Restaurant
- Residential
- · Art galleries and museum
- Homes

Lamp conformity

- CISPR 15: 2013 + A1: 2015 (Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment)
- IEC 60038 (IEC standard voltages)
- IEC 60061 (Lamp caps and holders)
- IEC 60357 (Tungsten halogen lamps (non vehicle) Performance specifications)
- IEC 60432 (Incandescent lamps Safety specifications)
- IEC 60630 (Maximum lamp outlines for incandescent lamps)
- IEC 62560 (Self-ballasted LED-lamps for general lighting services by voltage > 50 V -Safety specifications Safety requirements)
- IEC 60969 (Self-ballasted lamps for general lighting services Performance requirements)
- IEC 61341 (Method of measurement of centre beam intensity and beam angle(s) of reflector lamps)
- IEC 61547 (Equipment for general lighting purposes EMC immunity requirements)
- IEC 62612 (Self-ballasted LED-lamps for general lighting services > 50 V Performance requirements)
- Commission Regulation No 244/2009 (1194/2012) implementing Directive 2005/32/EC (2009/125/EC) of the European Parliament and of the Council with regard to ecodesign requirements for non-directional household lamps (directional household lamps)



LED PERFORMANCE PAR 16 50 927/ 930/ 940/ 965

Compatibility performance with dimmer ⁶ (Single lamp & Four Lamps)

Legend	APM o	dimmer					
L/Leading edge dim	U/Univ	U/Universal Dimmer					
		PERFORMANCE PAR16 50 24° 36° 60°					
	3024	30 00					
		1000					
	11/2/2						
		Undesired dimmability					
		Not tested				EAN / Ba	asic Code
							59 / AC32224
							73 / AC32224
						405807558713	
							99 / AC32222
							35 / AC32223
							97/AC32226
							34 / AC32227 58 / AC32228
							72 / AC32229
		Dimmer				Number	Dimming
						of Lamps	
Brand		Model	Voltage range	Power	Type	Oi Lailips	range
Clipsal		E30 (32V500M) L500VA	230V/50Hz	500W	L	100-0%	100-0%
TCL-Legrand	d	V8051-M	230V/50Hz	40-630W	L	100-0%	100-0%
Panasonic		WEG57813	230V/50Hz	40-300W	L	100-0%	100-0%
LUMEX		LOADSMART LT1D450LS	230V/50Hz	500VA	T	100-10%	
Schneider-Clip	osal	KB31RD400	230V / 50Hz	400W	L	100-0%	100-0%
Clipsal		32E450UDM	230V/50Hz	450W	Т	100-10%	10-0%
HPM		CAT400T HPM	230V/50Hz	400W	T		61-0%
Anam / Legra	nd	ASW3000H	230V/50Hz	1000W	T		86-0%
Trader		Dimpala	230V/50Hz	400W	U	10-0%	38-0%
Clipsal		32ELEDM	230V/50Hz	400W	T	100-0%	100-0%
Siemens		5UH8622-3NC01	230V/50Hz	25-400W	L	100-10%	100-0%
Schneider-Elec	ctric	C460	230V/50Hz	400W	L	100-0%	100-0%
Schneider-Elec	ctric	U201DST600	230V/50Hz	40-600VA	L	64-12%	75-0%
Clipsal		32E450LM	230V/50Hz	450W	L	100-0%	100-0%
Honyar		KT250	230V/50Hz	15-250W	L	100-0%	100-0%
Schneider-Elec	ctric	40600 RL	230V/50Hz	40-600W	L	100-0%	100-0%
Step		E033	230V/50Hz	45-300W	L		
Bticino		SAM5350	230V/50Hz	40-300W	L	100-0%	100-0%
Lutron		GXI-3104-T-CE-WH	230V/50Hz	2300W	Т	100-0%	100-0%
HPM		CAT400L	230V/50Hz	400W	L		28-0%
Panasonic		WMS549	230V/50Hz	40-400W	L	100-0%	94-0%



LED PERFORMANCE PAR 16 50 927/ 930/ 940/ 965

Compatibility performance with dimmer ⁶ (Single lamp & Four Lamps)

Legend APM	dimmer					
L/Leading edge dimmer	U/Universal Dimmer					
		NCE PAR16 36° 60°				
	Not tested				EAN / Basic Code	
					40580755873; 40580755873; 405807558713 405807558719 40580755873; 40580755874; 40580755874;	73 / AC32225 67 / AC32221 69 / AC32222 35 / AC32223 69 / AC32226 634 / AC32227 658 / AC32228
	Dimmer				Number	Dimming
Brand	Model	Voltage range	Power	Туре	of Lamps	range
SAL	SDA450	230V / 50Hz	450W	T	100-0%	100-0%
Siemens	5UH8122-3NC01	230V / 50Hz	25-400W	L	100-0%	100-0%
Schneider-Clipsal	E8431EPD4	230V/50Hz	25-350W	Т	100-0%	100-0%
MK branded	K1541 WHI	230V / 50Hz	75-500W	L		94-5%
Veto	VT-500	230V / 50Hz	60-500W	L	100-0%	100-0%
DIGINET(GERARD)	MMDM/PB	230V / 50Hz	400W	ush Butto		100-0%
Legrand	617030	230V/50Hz	600W	L I	100-0%	100-0%
Panasonic	WEG 57912	230V / 50Hz	40-200W	T	100-0%	100-0%
SR SANJOON	SRD-1000	230V / 50Hz	1000W	L	100-0%	100-0%
JIN HEUNG ELECTRIC	•	230V / 50Hz	1000W 4*2200W	L	100-0%	100-0%
Dynalite OSRAM	DMC810GL	230V / 50Hz 230V / 50Hz	4*2200W 35-105W	L Hti	95-0%	95-0%
OSKAIVI	Hti DALI 315/230-240 DIM	25UV / 5UHZ	22-T02M	пи	93-0%	95-0%



LED PERFORMANCE PAR 16 50 927/ 930/ 940/ 965

Compatibility performance with dimmer ⁶ (Single lamp & Four Lamps)

Legend A	PM dimmer								
L/Leading edge dimm	Leading edge dimmer T/Trailing edge dimmer								
	Legend								
	Very good dimmability with indicated number of lamps								
	(dimming range greater than 75%)								
	Limited dimmability with indicated number of lamps (dimming								
	range smaler than 75%)								
	Undesired dimmability				W.				
	Not tested				EAN / Basic Code				
					40580755873 40580755873 405807558713 405807558713 40580755873 40580755874 40580755874 40580755874	73 / AC32225 17 / AC32221 19 / AC32222 35 / AC32223 19 / AC32226 34 / AC32227 58 / AC32228			
	Dimme	r			Number	Dimming			
Brand	M o del	Voltage range	Power	Туре	of Lamps	range			
Shuttle	SDIM-T-LED 500W	230V/50Hz	500W	Т	100-0%	100-0%			
Shuttle	SDIMR-T-LED 500W	230V/50Hz	500W	Т	100-0%	100-0%			
Shuttle	SDIM-T-LED 125W	230V / 50Hz	125W	Т	100-0%	100-0%			
Shuttle	SDIM-T-LED 250W	230V/50Hz	250W	Т	100-0%	100-0%			
Shuttle	SDIMR-T-LED 250W	230V / 50Hz	250W	Т	100-0%	100-0%			
Shuttle	MINI-LED-ROTARY 225W	230V / 50Hz	225W	T	100-0%	100-0%			
Schneider	E8331RD250_WG_G11	230V / 50Hz	50-250W		71-0%	100-0%			
Shuttle	SDIM-T-LED 800W	230V/50Hz	800W	T	100-0%	100-0%			
Shuttle	SDIMR-T-LED 800W	230V / 50Hz	800W	Т	100-0%	100-0%			

⁶ Typical values.

The compatibility test is based upon testing conducted by the manufacturer in a lab simulated environment, and the results can vary in certain field applications due to a number of factors. The test results were achieved by using the above mentioned LED-lamp types. The transformer with any of undesired compatibility shown in above report is not recommended. LEDVANCE does not take over any responsibility, warranty or liability that this results can also be achieved by using the devices under other conditions or when using successor models of the tested devices or different models of the same manufacturer, or when using other LED lamp types.

LED lamps contain several electronic components. Under unfavorable conditions these can lead to acoustic noise. In case of resonance even low noise can cause audible effect. Possible factors influencing this are the installation, the design of the lamp holder and the luminaries (acoustic resonance effect) as well as the dimmer or the transformer (harmonics or electronic resonance).

Lamp will work but LEDVANCE can not guarantee electromagnetic compatibility will be according norms

Subject to change without notice.

Always make sure to use the most recent release.