

Operation of LED-Retrofit Lamps LED Star Reflector PAR16 GU10 with various Dimmers

Legend: green dimmability very good (under 25% light)
yellow dimmable (under 40% light)
red dimmability critical (flickering and/or noise possible, and/or only more than 40% light)
white not tested



36° / 60°



120°

T: Trailing edge phase dimmer
L: Leading edge phase dimmer
U: Universal dimmer

PAR16 35 36°	PAR16 50 36°	PAR16 80
43820751	44122568	43922570
44122581	44122569	43922571
	44020754	44122572
		44020758
		44020759
		44122573
		44122574
		44020762

Manufacturer	Dimmer-Type, Model	Mains/ Power	Load Range [W]	Dimming Method	1 Lamp	4 Lamps	1 Lamp	4 Lamps	1 Lamp	4 Lamps
ABB	STD 50-3	L	60-500	230V / 50Hz	100-0%	100-20%	100-15%	100-15%	100-12%	100-14%
Altenburger Electronic	50.30	T	15-350	230V / 50Hz		100-25%	100-40%	100-0%	100-10%	100-10%
AURORA	DSP400X	L	5-130	230V / 50Hz	95-0%	95-0%	100-0%	100-0%	100-0%	100-0%
Berker	2861	T	50-420	230V / 50Hz		100-5%	95-10%	100-5%	100-5%	100-0%
BG	DM400AP	L	60-400	230V / 50Hz		95-0%	100-20%	95-20%	100-0%	100-0%
bticino	NT4402N	L	500	230V / 50Hz		-	-	-	85-2%	99-45%
Busch-Jaeger	6526 U	T	40-420	230V / 50Hz		-	-	-	90-0%	100-0%
Busch-Jaeger	2247U	L	500	230V / 50Hz	95-0%	100-0%	95-5%	100-5%	100-0%	100-2%
Busch-Jaeger	2250U	L	600	230V / 50Hz	95-0%	100-0%	100-0%	100-0%	99-0%	100-0%
Busch-Jaeger	6513U-102	T	40-420	230V / 50Hz	98-16%	88-11%	100-0%	100-0%	100-0%	100-0%
Busch-Jaeger	6523U-102	L	2-100	230V / 50Hz	95-50%	97-5%	95-70%	95-60%	100-50%	100-50%
CENTURY CONTROL	MULTI DIMMER	L	60-600	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	99-0%	100-0%
CLICK SCOLMORE	MD9011	T	5-100	230V / 50Hz	95-0%	95-0%	100-30%	100-25%	100-0%	100-0%
CLICK SCOLMORE	MD9014	L	5-100	230V / 50Hz	95-0%	95-0%	100-0%	100-0%	-	99-0%
CLIPSAL	32ELEDM	L	1-400	230V / 50Hz		100-0%	100-0%	100-0%	100-5%	100-0%
DATA	SP0081	T	3-250	230V / 50Hz	95-0%	100-0%	95-0%	95-0%	100-0%	100-0%
DimMax	420SL	L/T	200	230V / 50Hz	100-0%	100-0%	95-0%	100-0%	100-0%	100-0%
DINUY	RE EL1 LE1	L/T	400	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	100-0%
ELKO	420GLE/I	T	40-420	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	100-0%
Eltako	EUD61NPN-UC	L/T	5-400	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	100-0%
Feller	40600 RLC	L	20-600	230V / 50Hz	100-4%	100-5%	100-25%	100-25%	99-3%	100-6%
Gira	030700	T	20-525	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	99-0%	50-0%
Gira	117600	U	50-420	230V / 50Hz	100-0%	100-5%	95-70%	-	99-5%	99-4%
Gira	System3000	T	20-210	230V / 50Hz	95-0%	100-0%	95-0%	95-0%	100-0%	100-0%
Hager	WUD87	T	400	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	100-0%
Hamilton	KP1X40	L	400	230V / 50Hz	100-20%	100-0%	100-0%	100-0%	-	100-0%
Honeywell	K1501LV	L	60-240	230V / 50Hz	100-13%	100-0%	95-10%	100-5%	100-5%	99-4%
Jung	225 NVDE	L	20-500	230V / 50Hz	100-0%	100-15%	100-0%	100-0%	100-45%	99-0%
Jung	1224 LEDUDE	T	50-420	230V / 50Hz		100-0%	100-0%	100-0%	100-0%	100-0%
Knightsbridge	VFR200M	T	200	230V / 50Hz	95-0%	100-0%	95-0%	100-0%	100-0%	100-0%
KOPP	8455	L	3-100	230V / 50Hz	95-0%	100-0%	100-0%	100-0%	100-0%	99-15%
Legrand	665114 L400	L	75	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	99-0%	99-0%
Legrand	066721	L	3-75	230V / 50Hz	100-0%	100-0%	100-0%	100-0%		
Legrand	770062	T	5-60W	230V / 50Hz	99-45%	99-45%	100-0%	100-0%	100-0%	100-0%
Legrand	CAT400L	T	10-400	230V / 50Hz		95-35%	95-30%	100-25%	100-40%	100-40%
Legrand	665114	T	3-75	230V / 50Hz			100-50%	100-50%	100-20%	100-45%
MASTER	DM-DGL	L	1000	230V / 50Hz	100-0%	100-0%	100-85%	100-90%	99-0%	100-0%
MASTER	DM-2500	L	2500	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	100-0%
Merten	MEG 5136	T	20-315	230V / 50Hz	100-0%	100-0%	65-5%	100-0%	99-0%	99-0%
Merten	MEG 5133	L	40-600	230V / 50Hz	100-2%	100-0%	95-0%	100-0%	100-0%	100-0%
Merten	MEG 5137	T	20-630	230V / 50Hz	100-0%	100-0%	95-0%	100-0%	100-0%	100-0%
Merten	MEG 5170-0300	T	10-200	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	92-3%	92-3%
Merten	MEG 5131	L	40-400	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	99-0%	99-0%
Merten	MEG 5140	L	9-100	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	100-0%
Merten	MEG 5135	L	60-1000	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	100-0%
MK	K4501	L	180	230V / 50Hz	100-0%	95-0%	100-5%	100-0%	100-0%	100-2%
NIKO	310-01900 / 01901	L/T	5-200	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	100-0%
NIKO	330-00700 / 00701	L/T	5-200	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	100-0%
OBI	W13-C62	T	20-300	230V / 50Hz	95-0%	100-0%	100-0%	100-0%	100-0%	100-0%
OBI	DM175	T	3-200	230V / 50Hz	95-0%	100-0%	100-0%	100-0%	-	99-10%
OBI	DM075	T	2-75	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	-
Osram	Hti DALI 315 DIM	DALI T	20-315	230V / 50Hz	100-0%	100-0%	95-0%	100-0%	99-0%	99-0%
PEHA	435 HAN	L	60-600	230V / 50Hz	100-30%	100-30%	100-25%	100-25%	100-15%	100-15%
Schneider	ELKO 400GLI	/	400	230V / 50Hz		100-50%	100-20%	100-20%	97-30%	97-20%
Schneider	mertenSBD200LED	L	4-400	230V / 50Hz	100-0%	95-0%	95-0%	100-0%	100-0%	100-0%
Shuttle	SDIM-T-LED-500W	T	2-500	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	100-0%
SIEMENS	5TC8 284	T	20-525	230V / 50Hz		95-30%	100-95%	100-95%	-	-
theben	DIMAX 544 plus P	T	250	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	99-0%	100-0%
theben	DIMAX 534 plus	T	400	230V / 50Hz	100-0%	100-0%	-	-	99-0%	99-0%

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Legend:	green	dimmability very good (under 25% light)
	yellow	dimmable (under 40% light)
	red	dimmability critical (flickering and/or noise possible, and/or only more than 40% light)
	white	not tested



36° / 60°



120°

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U: Universal dimmer

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Manufacturer	Dimmer-Type, Model	Mains/ Power	Load Range [W]	Dimming Method	1 Lamp	4 Lamps	1 Lamp	4 Lamps	1 Lamp	4 Lamps
VADSBO	LD 220	T	1-200	230V / 50Hz	100-70%	100-60%	100-50%	95-50%	99-40%	99-40%
VARILIGHT	HQ3W	L	400	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	100-0%	100-0%
Varilight V-Pro	JQP401W	T	120	230V / 50Hz	95-0%	95-0%	95-0%	100-0%	100-0%	100-0%
Vimar	20135	L/T	3 - 100	230V / 50Hz	100-16%	100-20%	100-15%	100-15%	100-12%	100-15%
ZANO	WH401	L	400	230V / 50Hz	100-0%	95-0%	100-0%	100-0%	100-0%	100-0%
ZANO	WH251	L	250	230V / 50Hz		100-40%	95-30%	100-0%	99-20%	99-15%
ZANO	Z GRID 500	L	500	230V / 50Hz	100-0%	100-0%	100-0%	100-0%	99-0%	99-0%

Typical values. Test performed with regarded lamps named. The test results reflect the measurement of the individual devices that were used in tests. Radium 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. The test results were achieved by using the above mentioned LED-lamp types.

Radium does not take over any responsibility, warranty or liability that these results can also be achieved by using the devices under other conditions or when using other LED-lamp types.

Due to the big number of electronic components and many other influence factors noise can emerge in unfavourable condiditons, which may be well audible in the case of resonance.

Generally speaking, employment of trailing edge dimmers is recommended. They require the neutral wire for installation.

Changes, errors and omissions excepted.