

LED Drivers with different phase-cut dimmers

CAUTION!

The maximum number of LED Drivers per dimmer is defined by the power of the LED Driver and the dimmer:

- _ The total power of all connected LED Drivers must not exceed 50 % of the power of the dimmer.

Example:

- _ Power of dimmer: 600 W -> 50 % power: 300 W
- _ Power of LED Driver: 15 W
- _ Maximum number of LED Drivers: $300 \text{ W} : 15 \text{ W} = < 20$ devices

LED Drivers with different phase-cut dimmers

LCA 21W 300mA flexC PH-C SR ADV (87500603) – Values for dimmers at full load

Product name	Article number	Dimmer type ¹	LED drivers per dimmer	Noise rating ²	Flicker rating ³	Min. dimming level	Other issues ⁴
BerKer	283010	leading	1-3	2	1	7.2 %	
Busch	2247U	leading	1-19	3	1	9.1 %	
Busch Jaeger	6523U	leading	1-3	2	1	0.1 %	
Busch-Jaeger UP, R, 60-600 W	2250 U	leading	1-20	tbd.	1	9 %	
CLIPSAL	32E450LM	leading	1-5	3	1	4.4 %	
CLIPSAL	32E450UDM	universal	1-17	1	1	2.9 %	
CLIPSAL	32E450TM	trailing	1-17	1	1	2.1 %	
E-LITE 500W	U116	trailing	1-16	tbd.	1	4 %	
EHMANN LICHTREGLER T46S	LICHTREGLER T46S	trailing	1-10	tbd.	1	7 %	Not usable
ELKO	315GLE	trailing	1-3	1	1	0.4 %	
ELKO	316GLED	trailing	1-12	1	1	14.3 %	
ELKO 315 GLE-2Pole	315GLE-2Pole	trailing	1-10	tbd.	1	3 %	
Feller 40200.LED.F.61	40200.LED.F.61	universal	1-6	tbd.	1	6 %	
Finder	15.91.8	leading	1	2	1	2.3 %	
GIRA	30200	leading	1-3	3	1	5.4 %	
GIRA	117600/I01	trailing	1-16	1	1	6.0 %	
GIRA 1182 00/I01	1182 00/I01	leading	1-12	tbd.	1	5 %	

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GIRA 1184 00/I01	1184 00/I01	leading	1-13	tbd.	1	15 %	
GIRA 2262 00/I01	2262 00/I01	leading	1-3	tbd.	1	13 %	
Hager	EVN011	universal	1-11	1	1	15 %	
Hager	EVN012	universal	1-11	1	1	15 %	
JUNG 225 TDE	225 TDE	trailing	1-17	tbd.	1	6 %	
JUNG 225NVDE	225NVDE	leading	1-3	tbd.	1	0 %	
JUNG 254 UDIE 1	254 UDIE 1	universal	1-20	tbd.	1	9 %	
JUNG 266 GDE	266 GDE	leading	1-17	tbd.	1	11 %	
Legrand	78405	leading	-	3	5	N/A	Not useful
Legrand	78401	trailing	2-15	2	2	0.0 %	
Legrand CAT403L	CAT403L	leading	1-13	tbd.	4	6 %	Not usable
Legrand HPM CAT400T	HPM CAT400T	trailing	1-13	tbd.	1	2 %	
Niko	325	universal	1-12	3	1	0.1 %	
SAL SDA450	SDA450	trailing	1-15	tbd.	1	4 %	
SAL SDD350	SDD350	trailing	1-11	tbd.	1	0 %	
Schneider	40300 RC	trailing	1-11	1	1	4.7 %	
Schneider	40600.RL	leading	1-23	3	1	6.6 %	
Siemens 5TCB 257	5TCB 257	leading	1-16	tbd.	1	1 %	

LED Drivers with different phase-cut dimmers

Explanation:

1. Dimmer types: leading-edge, trailing-edge, universal
2. Noise evaluation: 1 (very little noise) -> 4 (strong noise).
Noise evaluations were carried out for full load, but not for every minimum load. Values for minimum load are less critical. For reference refer to full load.
tbd. = to be defined, no rating results available yet
3. Flicker evaluation: 1 (no flicker) -> 4 (strong flicker)
4. Other issues: description of the issue.
ZSL-UP is an additional circuit that can improve the dimming behaviour of specific lamps.

LED Drivers with different phase-cut dimmers

LCA 21W 300mA flexC PH-C SR ADV (87500603) – Values for dimmers at minimum load

Product name	Article number	Dimmer type ¹	LED drivers per dimmer	Noise rating ²	Flicker rating ³	Min. dimming level	Other issues ⁴
BerKer	283010	leading	1	2	1	9.9 %	
Busch	2247U	leading	1-6	3	1	12.9 %	
Busch Jaeger	6523U	leading	1-5	2	1	0.3 %	
Busch-Jaeger UP, R, 60-600 W	2250 U	leading	1-30	tbd.	1	9 %	
CLIPSAL	32E450LM	leading	2-3	4	1	5.3 %	
CLIPSAL	32E450UDM	universal	1-26	1	1	6.0 %	
CLIPSAL	32E450TM	trailing	1-26	1	1	4.8 %	
E-LITE 500W	U116	trailing	1-25	tbd.	1	6 %	
EHMANN LICHTREGLER T46S	LICHTREGLER T46S	trailing	1-15	tbd.	1	11 %	Not usable
ELKO	315GLE	trailing	1-3	1	1	0.8 %	
ELKO	316GLED	trailing	1-18	1	1	15.8 %	
ELKO 315 GLE-2Pole	315GLE-2Pole	trailing	1-15	tbd.	1	5 %	
Feller 40200.LED.F.61	40200.LED.F.61	universal	1-10	tbd.	1	9 %	
Finder	15.91.8	leading	1-2	2	1	5.3 %	
GIRA	30200	leading	1-3	3	1	7.8 %	
GIRA	117600/I01	trailing	1-25	1	1	9.6 %	
GIRA 1182 00/I01	1182 00/I01	leading	1-18	tbd.	1	8 %	

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GIRA 1184 00/I01	1184 00/I01	leading	1-20	tbd.	1	12 %	
GIRA 2262 00/I01	2262 00/I01	leading	1-5	tbd.	1	10 %	Not usable
Hager	EVN011	universal	1-17	1	1	3.1 %	
Hager	EVN012	universal	1-17	1	1	3.0 %	
JUNG 225 TDE	225 TDE	trailing	1-26	tbd.	1	9 %	
JUNG 225NVDE	225NVDE	leading	1-5	tbd.	4	1 %	Not usable
JUNG 254 UDIE 1	254 UDIE 1	universal	1-30	tbd.	1	13 %	
JUNG 266 GDE	266 GDE	leading	1-26	tbd.	1	10 %	
Legrand	78405	leading	-	3	5	N/A	Not useful
Legrand	78401	trailing	2-23	2	1	0.1 %	
Legrand CAT403L	CAT403L	leading	1-20	tbd.	1	9 %	Not usable
Legrand HPM CAT400T	HPM CAT400T	trailing	1-20	tbd.	1	5 %	
Niko	325	universal	1-19	3	1	0.1 %	
SAL SDA450	SDA450	trailing	1-22	tbd.	1	7 %	
SAL SDD350	SDD350	trailing	1-17	tbd.	1	2 %	
Schneider	40300 RC	trailing	1-17	1	1	7.8 %	
Schneider	40600.RL	leading	1-5	3	1	10.0 %	
Siemens 5TCB 257	5TCB 257	leading	1-25	tbd.	4	3 %	Not usable

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LED Drivers with different phase-cut dimmers

LCA 21W 450mA flexC PH-C SR ADV (87500603) – Values for dimmers at full load

Product name	Article number	Dimmer type ¹	LED drivers per dimmer	Noise rating ²	Flicker rating ³	Min. dimming level	Other issues ⁴
BerKer	283010	leading	1-8	2	1	7.2 %	
Busch	2247U	leading	1-13	3	1	9.3 %	
Busch Jaeger	6523U	leading	1-2	2	1	0.0 %	
Busch-Jaeger UP, R, 60-600 W	2250 U	leading	1-13	tbd.	1	9 %	
CLIPSAL	32E450LM	leading	1-7	2	1	4.4 %	
CLIPSAL	32E450UDM	universal	1-11	1	1	2.5 %	
CLIPSAL	32E450TM	trailing	1-11	1	1	1.7 %	
E-LITE 500W	U116	trailing	1-11	tbd.	1	3 %	
EHMANN LICHTREGLER T46S	LICHTREGLER T46S	trailing	1-7	tbd.	1	6 %	Not usable
ELKO	315GLE	trailing	1-6	1	1	0.2 %	
ELKO	316GLED	trailing	1-8	1	1	10.1 %	
ELKO 315 GLE-2Pole	315GLE-2Pole	trailing	1-7	tbd.	1	2 %	
Feller 40200.LED.F.61	40200.LED.F.61	universal	1-4	tbd.	1	4 %	
Finder	15.91.8	leading	1	2	1	3.3 %	
GIRA	30200	leading	1-7	3	1	5.5 %	
GIRA	117600/I01	trailing	1-11	1	1	4.6 %	
GIRA 1182 00/I01	1182 00/I01	leading	1-8	tbd.	1	4 %	

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GIRA 1184 00/I01	1184 00/I01	leading	1-8	tbd.	1	15 %	
GIRA 2262 00/I01	2262 00/I01	leading	1-2	tbd.	1	13 %	
Hager	EVN011	universal	1-7	1	1	1.0 %	
Hager	EVN012	universal	1-7	1	1	1.1 %	
JUNG 225 TDE	225 TDE	trailing	1-11	tbd.	1	4 %	
JUNG 225NVDE	225NVDE	leading	1-2	tbd.	1	0 %	
JUNG 254 UDIE 1	254 UDIE 1	universal	1-13	tbd.	1	7 %	
JUNG 266 GDE	266 GDE	leading	1-11	tbd.	1	11 %	
Legrand	78405	leading	-	3	5	N/A	Not useful
Legrand	78401	trailing	2-10	3	1	0.0 %	
Legrand CAT403L	CAT403L	leading	1-8	tbd.	4	6 %	Not usable
Legrand HPM CAT400T	HPM CAT400T	trailing	1-8	tbd.	1	2 %	
Niko	325	universal	1-8	3	1	0.0 %	
SAL SDA450	SDA450	trailing	1-10	tbd.	1	3 %	
SAL SDD350	SDD350	trailing	1-7	tbd.	1	0 %	
Schneider	40300 RC	trailing	1-7	1	1	3.2 %	
Schneider	40600.RL	leading	1-15	3	1	7.2 %	
Siemens 5TCB 257	5TCB 257	leading	1-11	tbd.	1	1 %	

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Product name	Article number	Dimmer type ¹	LED drivers per dimmer	Noise rating ²	Flicker rating ³	Min. dimming level	Other issues ⁴
BerKer	283010	leading	1-4	2	5	10.1 %	
Busch	2247U	leading	1-6	3	1	8.7 %	
Busch Jaeger	6523U	leading	1-3	2	1	0.6 %	
Busch-Jaeger UP, R, 60-600 W	2250 U	leading	1-20	tbd.	1	11 %	
CLIPSAL	32E450LM	leading	1-5	3	1	6.5 %	
CLIPSAL	32E450UDM	universal	1-17	1	1	4.8 %	
CLIPSAL	32E450TM	trailing	1-17	1	1	3.7 %	
E-LITE 500W	U116	trailing	1-16	tbd.	1	5 %	
EHMANN LICHTREGLER T46S	LICHTREGLER T46S	trailing	1-10	tbd.	1	9 %	Not usable
ELKO	315GLE	trailing	1-3	1	1	0.5 %	
ELKO	316GLED	trailing	1-12	1	1	11.3 %	
ELKO 315 GLE-2Pole	315GLE-2Pole	trailing	1-10	tbd.	1	3 %	
Feller 40200.LED.F.61	40200.LED.F.61	universal	1-6	tbd.	1	7 %	
Finder	15.91.8	leading	1	2	1	5.2 %	
GIRA	30200	leading	1-4	2	1	7.9 %	
GIRA	117600/I01	trailing	1-16	1	1	7.8 %	
GIRA 1182 00/I01	1182 00/I01	leading	1-12	tbd.	1	6 %	

LED Drivers with different phase-cut dimmers

GIRA 1184 00/I01	1184 00/I01	leading	1-13	tbd.	1	18 %	
GIRA 2262 00/I01	2262 00/I01	leading	1-3	tbd.	1	16 %	Not usable
Hager	EVN011	universal	1-11	1	1	2.8 %	
Hager	EVN012	universal	1-11	1	1	2.9 %	
JUNG 225 TDE	225 TDE	trailing	1-17	tbd.	1	7 %	
JUNG 225NVDE	225NVDE	leading	1-3	tbd.	3	2 %	Not usable
JUNG 254 UDIE 1	254 UDIE 1	universal	1-20	tbd.	1	10 %	
JUNG 266 GDE	266 GDE	leading	1-17	tbd.	1	14 %	
Legrand	78405	leading	-	3	5	N/A	Not useful
Legrand	78401	trailing	2-15	3	1	0.1 %	
Legrand CAT403L	CAT403L	leading	1-13	tbd.	4	8 %	Not usable
Legrand HPM CAT400T	HPM CAT400T	trailing	1-13	tbd.	1	4 %	
Niko	325	universal	1-12	3	1	0.0 %	
SAL SDA450	SDA450	trailing	1-15	tbd.	1	5 %	
SAL SDD350	SDD350	trailing	1-11	tbd.	1	0 %	
Schneider	40300 RC	trailing	1-11	1	1	6.0 %	
Schneider	40600.RL	leading	1-7	3	1	10.2 %	
Siemens 5TCB 257	5TCB 257	leading	1-16	tbd.	4	3 %	Not usable

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tbd. = to be defined, no rating results available yet
3. Flicker evaluation: 1 (no flicker) -> 4 (strong flicker)
4. Other issues: description of the issue.
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LED Drivers with different phase-cut dimmers

LCA 21W 500mA flexC PH-C SR ADV (87500603) – Values for dimmers at full load

Product name	Article number	Dimmer type ¹	LED drivers per dimmer	Noise rating ²	Flicker rating ³	Min. dimming level	Other issues ⁴
BerKer	283010	leading	1-9	2	1	7.7 %	
Busch	2247U	leading	1-11	3	1	9.4 %	
Busch Jaeger	6523U	leading	1-2	2	1	0.0 %	
Busch-Jaeger UP, R, 60-600 W	2250 U	leading	1-12	tbd.	1	12 %	
CLIPSAL	32E450LM	leading	1-8	2	1	4.5 %	
CLIPSAL	32E450UDM	universal	1-10	1	1	2.5 %	
CLIPSAL	32E450TM	trailing	1-10	1	1	1.7 %	
E-LITE 500W	U116	trailing	1-10	tbd.	1	2 %	
EHMANN LICHTREGLER T46S	LICHTREGLER T46S	trailing	1-6	tbd.	1	28 %	Not usable
ELKO	315GLE	trailing	1-6	1	1	0.2 %	
ELKO	316GLED	trailing	1-7	1	1	9.1 %	
ELKO 315 GLE-2Pole	315GLE-2Pole	trailing	1-6	tbd.	1	6 %	
Feller 40200.LED.F.61	40200.LED.F.61	universal	1-4	tbd.	1	4 %	
Finder	15.91.8	leading	1	2	1	2.9 %	
GIRA	30200	leading	1-14	3	1	6.0 %	
GIRA	117600/I01	trailing	1-10	1	1	4.4 %	
GIRA 1182 00/I01	1182 00/I01	leading	1-7	tbd.	1	3 %	

LED Drivers with different phase-cut dimmers

GIRA 1184 00/I01	1184 00/I01	leading	1-8	tbd.	1	15 %	
GIRA 2262 00/I01	2262 00/I01	leading	1-2	tbd.	1	13 %	
Hager	EVN011	universal	1-7	1	1	1.1 %	
Hager	EVN012	universal	1-7	1	1	1.1 %	
JUNG 225 TDE	225 TDE	trailing	1-10	tbd.	1	4 %	
JUNG 225NVDE	225NVDE	leading	1-2	tbd.	1	0 %	
JUNG 254 UDIE 1	254 UDIE 1	universal	1-12	tbd.	1	12 %	
JUNG 266 GDE	266 GDE	leading	1-10	tbd.	1	11 %	
Legrand	78405	leading	-	3	5	N/A	Not useful
Legrand	78401	trailing	2-9	3	1	0.0 %	
Legrand CAT403L	CAT403L	leading	1-8	tbd.	4	6 %	Not usable
Legrand HPM CAT400T	HPM CAT400T	trailing	1-8	tbd.	1	2 %	
Niko	325	universal	1-7	2	1	0.1 %	
SAL SDA450	SDA450	trailing	1-9	tbd.	1	3 %	
SAL SDD350	SDD350	trailing	1-7	tbd.	1	0 %	
Schneider	40300 RC	trailing	1-7	1	1	3.1 %	
Schneider	40600.RL	leading	1-14	3	1	7.7 %	
Siemens 5TCB 257	5TCB 257	leading	1-10	tbd.	1	2 %	

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BerKer	283010	leading	1-3	2	1	10.1 %	
Busch	2247U	leading	1-17	3	1	12.6 %	
Busch Jaeger	6523U	leading	1-3	1	1	0.7 %	
Busch-Jaeger UP, R, 60-600 W	2250 U	leading	1-18	tbd.	1	12 %	
CLIPSAL	32E450LM	leading	1-6	2	1	6.4 %	
CLIPSAL	32E450UDM	universal	1-16	1	1	4.6 %	
CLIPSAL	32E450TM	trailing	1-16	1	1	3.6 %	
E-LITE 500W	U116	trailing	1-15	tbd.	1	4 %	
EHMANN LICHTREGLER T46S	LICHTREGLER T46S	trailing	1-9	tbd.	1	9 %	Not usable
ELKO	315GLE	trailing	1-3	1	1	0.5 %	
ELKO	316GLED	trailing	1-11	1	1	10.3 %	
ELKO 315 GLE-2Pole	315GLE-2Pole	trailing	1-9	tbd.	1	3 %	
Feller 40200.LED.F.61	40200.LED.F.61	universal	1-6	tbd.	1	7 %	
Finder	15.91.8	leading	1	2	1	4.5 %	
GIRA	30200	leading	1-4	3	1	8.0 %	
GIRA	117600/I01	trailing	1-15	1	1	7.1 %	
GIRA 1182 00/I01	1182 00/I01	leading	1-10	tbd.	1	4 %	

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GIRA 1184 00/I01	1184 00/I01	leading	1-12	tbd.	1	18 %	
GIRA 2262 00/I01	2262 00/I01	leading	1-3	tbd.	1	16 %	
Hager	EVN011	universal	1-10	1	1	2.2 %	
Hager	EVN012	universal	1-10	1	1	2.3 %	
JUNG 225 TDE	225 TDE	trailing	1-15	tbd.	1	7 %	
JUNG 225NVDE	225NVDE	leading	1-3	tbd.	3	2 %	Not usable
JUNG 254 UDIE 1	254 UDIE 1	universal	1-18	tbd.	1	10 %	
JUNG 266 GDE	266 GDE	leading	1-15	tbd.	1	14 %	
Legrand	78405	leading	-	3	5	N/A	Not useful
Legrand	78401	trailing	2-14	3	1	0.0 %	
Legrand CAT403L	CAT403L	leading	1-12	tbd.	4	17 %	Not usable
Legrand HPM CAT400T	HPM CAT400T	trailing	1-12	tbd.	1	4 %	
Niko	325	universal	1-11	2	1	0.0 %	
SAL SDA450	SDA450	trailing	1-13	tbd.	1	5 %	
SAL SDD350	SDD350	trailing	1-10	tbd.	1	0 %	
Schneider	40300 RC	trailing	1-10	1	1	5.6 %	
Schneider	40600.RL	leading	1-8	3	1	10.2 %	
Siemens 5TCB 257	5TCB 257	leading	1-15	tbd.	4	3 %	Not usable

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