# 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 W : 15 W =< 20 devices

# LED Drivers with different phase-cut dimmers

## LCBI 15W 350mA BASIC phase-cut lp (89800255) - Values for dimmers at full load

| Product name | Article number | Dimmer type[1] | LED Drivers per dimmer | Noise rating[2] | Flicker rating[3] | Other issues[4] |
|---|---|---|---|---|---|---|
| Amacher<br>03 5012 60-600w | 435 HAN | leading | 1-20 | 4 | 3 | Flicker,<br>removed by using ZSL-UP[4] |
| B-Ticino<br>Magic SM9350S | SM9350S | leading | 1-10 | 3 | 1 | |
| Bull<br>B6 GD100 | G07D101 | leading | 1-16 | 3 | 1 | |
| Busch & Jaeger<br>2247 U 500w/VA | 2247-500 | leading | 1-16 | 3 | 1 | |
| Busch & Jaeger<br>6513U-102 40-420w/VA | 6513 U-102 | trailing | 1-14 | 2 | 1 | Poor dim depth |
| Busch-Jaeger<br>6523U | 6512-0-0306 | leading | 1-3 | 3 | 1 | |
| Busch-Jaeger<br>6524U | 6512-0-0311 | leading | 1-3 | 2 | 1 | Poor dim depth |
| CHiNT<br>NEW 7-C30510 | 121227E7 | leading | 1-16 | 3 | 2 | Slight flicker at 75 mA |
| CLIPSAL<br>32E 450 UDM | 32E450UDM | trailing | 1-15 | 2 | 1 | |
| CLIPSAL<br>32E 450CFLDM | 32E450CFLDM | trailing | 1-15 | 2 | 1 | |
| CLIPSAL<br>32E 450LM | 32E450LM | leading | 1-15 | 3 | 1 | |
| CLIPSAL<br>32E 450TM | 32E450TM | trailing | 1-15 | 2 | 1 | |
| CLIPSAL<br>60TDM<br>SaturnOneTouch | 4061TD | trailing | 1-11 | 2 | 1 | |
| CLIPSAL<br>C Bus 2 L5508D1A | 10871212 | leading | 1-6 x 8 channel | 4 | 3 | Flashing at minimum |
| CLIPSAL | L5508D1A | universal | - | 4 | 4 | Not usable |
| Crabtree<br>CRO-1w20 60-250w | CRO-1 | leading | 1-8 | 3 | 2 | Slight flicker at 80 mA |
| D & C<br>XHB 15w-150w | | leading | 1-5 | 3 | 1 | Poor dim depth |

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| | | | | | | |
|---|---|---|---|---|---|---|
| DIGINET | MMDM/PB# | leading | 1-12# | 2 | 1 | |
| DIGINET | MEDM | leading | 1-12# | 2 | 1 | |
| DUEWI<br>D16601160-300w | D1 66011 | leading | 1-10 | 4 | 1 | |
| DUEWI<br>ET1 53850 20-300w | ET153850 | trailing | 1-10 | 2 | 2 | Flicker at maximum |
| Elko<br>40 315 VA (315LE) | 1471444 | trailing | 1-10 | 2 | 1 | |
| Elko<br>400 GL1 | 1471450 | leading | 1-13 | 3 | 1 | |
| Feller<br>30583 40 - 500w | 30583 | leading | 1-16 | 3 | 1 | |
| Feller<br>40600-Rc-FMI 61<br>20-300VA | 548 290 000 | trailing | 1-10 | 2 | 1 | |
| Feller<br>40600-RC-FMI 61<br>20-600VA | 548 270 000 | trailing | 1-20 | 2 | 1 | |
| Feller<br>40600-RL-FMI-61<br>40-600 VA | 548 260 000 | leading | 1-20 | 3 | 1 | |
| FUJIYAMA<br>600w | FJ159 | leading | 1-20 | 3 | 1 | |
| GET<br>60w-400w | 08-07-17 | leading | 1-13 | 3 | 1 | |
| GET<br>Transformer 60-400VA | 07-07-26 | leading | 1-13 | 3 | 1 | |
| JUNG<br>225 TDE Tronic Dimmer<br>20-525w | 225 TDE | trailing | 1-17 | 2 | 2 | Slight flicker at 233 mA |
| KLEIN<br>K513/UX20325w | K513/UX | trailing | 1-10 | 2 | 1 | |
| KOPP<br>80.33 40w-400w | 059413051 | leading | 1-13 | 3 | 1 | |
| KOPP<br>80.7820-275w | 807813081 | trailing | 1-8 | 2 | 1 | |
| Legrand<br>ADW-ETL4 | 775903 | trailing | 1-13 | 2 | 1 | |
| Legrand<br>HPM 400L | 21901B | leading | 1-13 | 3 | 1 | |

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|---|---|---|---|---|---|---|
| Legrand<br>HPM 400T | 21903B | trailing | 1-13 | 2 | 1 | |
| Legrand<br>V8051 | V8051 | leading | 1-20 | 3 | 1 | |
| Lumic<br>LM600 | LM600 | leading | 1-20 | 3 | 1 | |
| OPUS-852-095-20-315w | 852-095 | trailing | 1-10 | 2 | 1 | |
| Panasonic<br>Max 300 | WEG 57813 | leading | 1-10 | 3 | 1 | |
| PEHA<br>433 HAB<br>Tronic-Dimmer 20-315w | D 433 HAB<br>O.A. | trailing | 1-10 | 2 | 1 | |
| RICHMOND<br>10w-600w | MP600TE | trailing | 1-20 | 2 | 1 | Slight flicker at 265 mA with two converters,<br>poor dim depth |
| SIEMENS<br>5TC8 28420.600w<br>20-525VA | 5TC8284 | trailing | 1-16 | 2 | 1 | |
| Simon<br>45E101 | 52120342 | leading | 1-16 | 3 | 1 | |
| TCL<br>L2.0 (Legrand) | | leading | 1-20 | 3 | 1 | |
| WICKES<br>60-400W | 070619 | leading | 1-13 | 3 | 1 | |
| Tridonic<br>DSI - PCD/S | 22 154 333 | universal | 1-25 | 2 | 1 | 1x LCBI - no function<br>2x LCBI - function |
| Tridonic<br>DALI - PCD/S | 22 154 332 | universal | 1-25 | 2 | 1 | same behaviour as Tridonic DSI - PCD/S,<br>no proper turn on |
| Tridonic<br>DALI - PCD 300 one4all | 86 458 303 | universal | 1-7 | 2 | 1 | sometimes no proper turn on, turn on via Tridonic DALI or switchDIM |
| Tridonic<br>DALI - PCD 1-300 one4all | 28 000 441 | universal | 1-7 | 3 | 1 | no proper switchDIM function |
| Tridonic<br>DSI - PCD/S | 22 154 333 | universal | 2-25 | 3 | 1 | no proper turn on |

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|---|---|---|---|---|---|---|
| Tridonic<br>DALI - PCD/S | 22 154 332 | universal | 2-25 | 3 | 1 | no proper turn on |
| Tridonic<br>DALI - PCD 300 one4all | 86 458 303 | universal | 2-7 | 3 | 1 | |
| Tridonic<br>DALI - PCD 1-300 one4all | 28 000 441 | universal | 2-7 | 3 | 1 | no proper switchDIM function |

Explanation:

1. Dimmer types: leading-edge, trailing-edge, universal
2. Noise evaluation: 1 (very little noise) -> 4 (strong noise).
   Noise evaluation was only carried out for full load. Values for minimum load are less critical. For reference refer to full load.
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

## LCBI 15W 350mA BASIC phase-cut lp (89800255) - Values for dimmers at minimum load

| Product name | Article number | Dimmer type[1] | LED Drivers per dimmer | Noise rating[2] | Flicker rating[3] | Other issues[4] |
|---|---|---|---|---|---|---|
| Amacher<br>03 5012 60-600w | 435 HAN | leading | 2-20 | | 4 | Flicker at minimum current,<br>not removed by using ZSL-UP[4] |
| B-Ticino<br>Magic SM9350S | SM9350S | leading | 1-10 | | 1 | |
| Bull<br>B6 GD100 | G07D101 | leading | 1-16 | | 3 | Flicker at minimum |
| Busch & Jaeger<br>2247 U 500w/VA | 2247-500 | leading | 1-16 | | 1 | |
| Busch & Jaeger<br>6513U-102 40-420w/VA | 6513 U-102 | trailing | 2-14 | | 4 | Flicker,<br>poor dim depth |
| Busch-Jaeger<br>6523U | 6512-0-0306 | leading | 1-3 | | 1 | |
| Busch-Jaeger<br>6524U | 6512-0-0311 | leading | 1-3 | | 2 | |
| CHiNT<br>NEW 7-C30510 | 121227E7 | leading | 1-16 | | 2 | Slight flicker at 100 mA |
| CLIPSAL<br>32E 450 UDM | 32E450UDM | trailing | 1-15 | | 1 | Poor dim depth |
| CLIPSAL<br>32E 450CFLDM | 32E450CFLDM | trailing | 1-15 | | 1 | |
| CLIPSAL 32E 450LM | 32E450LM | leading | 1-15 | | 2 | Slight flicker at 120 mA |
| CLIPSAL<br>32E 450TM | 32E450TM | trailing | 1-15 | | 1 | Poor dim depth |
| CLIPSAL<br>60TDM SaturnOneTouch | 4061TD | trailing | 1-11 | | 2 | Slight flicker at 280 mA |
| CLIPSAL<br>C Bus 2 L5508D1A | 10871212 | leading | 1-6 x 8 channel | | 1 | |
| CLIPSAL | L5508D1A | universal | - | 4 | 4 | Not usable |
| Crabtree<br>CRO-1w20 60-250w | CRO-1 | leading | 1-8 | | 1 | |
| D & C<br>XHB 15w-150w | | leading | 1-5 | | 1 | Poor dim depth |

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| | | | | | | |
|---|---|---|---|---|---|---|
| DIGINET | MMDM/PB# | leading | 1-18# | 2 | 1 | |
| DIGINET | MEDM | leading | 1-18# | 2 | 1 | |
| DUEWI<br>D16601160-300w | D1 66011 | leading | 1-10 | | 2 | Flicker at maximum, improves at lower settings |
| DUEWI<br>ET1 53850 20-300w | ET153850 | trailing | 1-10 | | 4 | Flicker at maximum |
| Elko<br>40 315 VA (315LE) | 1471444 | trailing | 1-10 | | 1 | |
| Elko<br>400 GL1 | 1471450 | leading | 1-13 | | 1 | |
| Feller<br>30583 40 - 500w | 30583 | leading | 1-16 | | 1 | |
| Feller<br>40600-Rc-FMI 61<br>20-300VA | 548 290 000 | trailing | 1-10 | | 1 | |
| Feller<br>40600-RC-FMI 61<br>20-600VA | 548 270 000 | trailing | 1-20 | | 1 | |
| Feller<br>40600-RL-FMI-61 40-600<br>VA | 548 260 000 | leading | 1-20 | | 2 | Slight flicker at 115 mA |
| FUJIYAMA<br>600w | FJ159 | leading | 1-20 | | 3 | Flicker at minimum current,<br>not removed by using ZSL-UP[4] |
| GET<br>60w-400w | 08-07-17 | leading | 1-13 | | 1 | |
| GET<br>Transformer 60-400VA | 07-07-26 | leading | 1-13 | | 1 | |
| JUNG<br>225 TDE Tronic Dimmer<br>20-525w | 225 TDE | trailing | 1-17 | | 1 | Poor dim depth |
| KLEIN<br>K513/UX20325w | K513/UX | trailing | 1-10 | | 1 | Poor dim depth |
| KOPP<br>80.33 40w-400w | 059413051 | leading | 1-13 | | 1 | |
| KOPP<br>80.7820-275w | 807813081 | trailing | 2-8 | | 4 | Flicker at maximum, improves at lower settings,<br>poor dim depth |

# LED Drivers with different phase-cut dimmers

| | | | | | | |
|---|---|---|---|---|---|---|
| Legrand<br>ADW-ETL4 | 775903 | trailing | 1-13 | | 1 | |
| Legrand<br>HPM 400L | 21901B | leading | 1-13 | | 1 | |
| Legrand<br>HPM 400T | 21903B | trailing | 1-13 | | 1 | |
| Legrand<br>V8051 | V8051 | leading | 1-20 | | 2 | Slight flicker at 210 mA |
| Lumic<br>LM600 | LM600 | leading | 1-20 | | 2 | Slight flicker at minimum |
| OPUS-852-095-20-315w | 852-095 | trailing | 1-10 | | 1 | |
| Panasonic<br>Max 300 | WEG 57813 | leading | 2-10 | | 3 | Flicker at minimum current,<br>removed by using ZSL-UP[4] |
| PEHA<br>433 HAB Tronic-Dimmer 20-315w | D 433 HAB O.A. | trailing | 1-10 | | 1 | Poor dim depth |
| RICHMOND<br>10w-600w | MP600TE | trailing | 2-20 | | 4 | Flicker at maximum, improves at lower settings,<br>poor dim depth |
| SIEMENS<br>5TC8 28420.600w 20-525VA | 5TC8284 | trailing | 1-16 | | 1 | |
| Simon<br>45E101 | 52120342 | leading | 1-16 | | 1 | |
| TCL<br>L2.0 (Legrand) | | leading | 1-20 | | 2 | Slight flicker at minimum |
| WICKES<br>60-400W | 070619 | leading | 1-13 | | 1 | |

Explanation:

1. Dimmer types: leading, trailing, universal
2. Noise evaluation: 1 (very little noise) -> 4 (strong noise).
   Noise evaluation was only carried out for full load. Values for minimum load are less critical. For reference refer to full load.
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 behavior of specific lamps.