


# LED Driver Solution

1. Offline AC-DC LED driver ,
2. Isolated with Flyback or non-isolated with buck-boost
3. Tight constant current for line & loading regulation and temperature drift
4. High Efficiency, High power Factor and Least Parts Solution
5. With advantage OTP feature (thermal de-rating for high reliability)

A large, colorful, wavy graphic element on the right side of the slide, composed of multiple overlapping, blurred lines in shades of blue, green, yellow, and red, creating a sense of motion and energy.

...personal  
...portable  
...connected

# Dialog LED driver solution \_\_ Non-dimmable

## Digital Power LED Lighting Driver Selection Guide

|                         | 1W-6W                                      | Up to 5-10W                | Up to 30W                  | Up to 5-12W                        | Up to 10-20W                             | Up to 30W                      |
|-------------------------|--|----------------------------|----------------------------|------------------------------------|--|--------------------------------|
| Applications            | Low-power Low-cost<br>Small-size           | High-power<br>density      | PSR CC/ CV                 | PSR CC/ CV<br>Single stage PF      | PSR CC/ CV<br>Single stage PF            | PSR CC /CV<br>2 stage True PFC |
|                         | E14,GU10,PAR16,<br>Candle ,bulb            | GU10 Bulb<br>PAR20         | GU10 Bulb<br>PAR20 30 38   | GU10 Bulb<br>PAR20                 | Bulb PAR Tube<br>Power module            | Power module<br>PAR Tube       |
| Part Numbers            | <b>IW1812IW1816<br/>CR1510</b>             | <b>IW1706</b>              | <b>IW3620/1710</b>         | <b>IW3626/<br/>CR5006</b>          | <b>IW3628</b>                            | <b>IW3623</b>                  |
| Int. or External Drive  | Integrated<br>800V BJT                     | BJT<br>13003/ 3005         | Mosfet 2A                  | BJT<br>13003/ 13005                | BJT<br>13003/ 13005                      | PF__BJT<br>Flyback_ Mosfet     |
| Switching Frequency     | 64KHz                                      | 64kHz                      | up to 130kHz               | Up to 72kHz                        | Up to 72kHz                              | up to 130kHz                   |
| Package                 | SOIC8                                      | SOT23-5                    | SOIC8                      | SOT23-6                            | SOT23-8                                  | SOIC14                         |
| Efficiency              | >78% @3w Isolated<br>>86%@ 5w Non isolated | >85% @5w                   | >85% @10w                  | >83% @5w                           | >85% @10w                                | >87% @30w                      |
| CC tolerance            | 3~ 5%                                      | 3~5%                       | 3~5%                       | 3~5%                               | 3~5%                                     | 3~7%                           |
| Isolated Non-isolated   | Both                                       | Both                       | Both                       | Both                               | Both                                     | Both                           |
| Primary-feedback,       | Yes  | Yes                        | Yes                        | Yes                                | Yes                                      | Yes                            |
| Power Factor            | >0.5 or<br>Valley fill>0.7                 | >0.5 or<br>Valley fill>0.7 | >0.5 or<br>Valley fill>0.7 | >0.7 ~0.9                          | >0.7 ~0.9                                | >0.95 THD<10%                  |
| OTP                     | Shut down<br>On chip OTP                   | No OTP                     | Shut down<br>Ext. NTC      | De-rating<br>On chip OTP           | De-rating<br>On chip OTP                 | De-rating<br>Ext. NTC          |
| Proposed<br>transformer | EE10/ EE13/<br>EPC13                       | EE13/ EPC13/EE16/          | EE16RM6/RM<br>PQ2016       | EE13/ EE13W<br>EE19/EE16/<br>EFD20 | EE13/ EE13W<br>EE19/EE16/<br>EFD20/ERD26 | RM6/RM8/PQ2016                 |
| Applications            |  |                            |                            | Low ripple <30%                    | Low ripple <30%                          | Zero ripple <5%                |






# Dialog LED driver solution \_\_ Dimmable

## Digital Power LED Lighting Driver Selection Guide

|                      | Dimmable                 |                       |                          |                       |                          |                          |                       |
|----------------------|--------------------------|-----------------------|--------------------------|-----------------------|--------------------------|--------------------------|-----------------------|
| Applications         | 3W-7W                    |                       | Up to 12W                | Up to 30W             | Up to 15W                | Up to 40W                | Up to 40W             |
|                      | Low power                |                       | High-Power density       | High-Power density    | High-Power density       | High-Power density       | High-PF Low THD       |
|                      | GU10 / Candle            |                       | Bulb PAR GU10            | Bulb PAR T8           | Bulb PAR T8 Power Module | Bulb PAR T8 Power Module | PWM DIM<br>0-10V DIM  |
| Part Numbers         | IW3602-00                | IW3602-01             | IW3608/CR5608            | IW3614                | IW3616                   | IW3617                   | IW3630                |
| Optimized for        | 120V/230V                | 120V/230V             | 100V/120V/230V           | 120V/230V             | 120V/230V                | 120V/230V                | 120V/230V             |
| Chopping PFC         | No Chopping              | Chopping PFC          | Single stage PFC         | Chopping PFC          | True PFC                 | True PFC                 | True PFC              |
| Fly back MOS/BJT     | MOSFET 1-2A              | MOSFET 1- 2A          | BJT 13005                | MOSFET 2-4A           | MOSFET 2-4A              | MOSFET 2A-4A             | MOSFET 4-6A           |
| PFC/ Bleeder         | MOSFET 2A                | MOSFET 2A             | MOSFET 2A                | MOSFET 4A             | BJT/13005                | BJT/13005                | BJT/13005             |
| Switching Frequency  | Up to 200KHz             | Up to 200K            | Up to 72kHz              | Up to 200kHz          | Up to 200kHz             | Up to 200kHz             | Up to 200kHz          |
| IC Package           | SOIC8                    | SOIC8                 | SOIC8                    | SOIC8                 | SOIC14                   | SOIC14                   | SOIC14                |
| Efficiency           | >75% @3W<br>Non-isolated | >75% @3W<br>Isolated  | >82% @10W<br>Isolated    | >82% @15W<br>Isolated | >85% @30W<br>Isolated    | >85% @30W<br>Isolated    | >85% @30W<br>Isolated |
| CC tolerance         | 3~5%                     | 3~5%                  | 3~5%                     | 3~5%                  | 3~5%                     | 3~5%                     | 3~5%                  |
| Power Factor         | 0.5-0.6                  | >0.7                  | >0.95. THD<25%           | >0.9                  | PF>0.98<br>THD<10%       | PF>0.98<br>THD<10%       | PF>0.98<br>THD<10%    |
| OTP                  | De-rating<br>Ext. NTC    | De-rating<br>Ext. NTC | De-rating<br>On chip OTP | De-rating<br>Ext. NTC | De-rating<br>Ext. NTC    | De-rating<br>Ext. NTC    | De-rating<br>Ext. NTC |
| Isolated/ Non-iso.   | Both                     | Both                  | Both                     | Both                  | Both                     | Both                     | Both                  |
| Proposed transformer | EE10/ EPC13              | EE10E13EE16           | RM6/RM8/PQ20             | RM6/RM8/PQ20          | RM6/RM8/PQ20             | RM6/RM8/PQ20             | EFD/PQ20              |
| Applications         |                          |                       | Ripple current<30%       |                       | Zero ripple              | Zero ripple              | Zero ripple           |



# The power to be...

-  personal
-  portable
-  connected