



# ANALOG HBLED

## ► Product Portfolio:

- Target commercial, residential, and automotive markets
- LED drivers can be used in a variety of topologies such as buck mode, boost-mode, flyback mode etc.

## ► General Features:

- DC/DC and AC/DC driver ICs
- Active power factor correction
- Non-Dimmable and Dimmable [Analog, PWM, Switch & Triac Dimming]
- Extended operating temperature range
- Compliant with worldwide EMI regulations; Energy Star

## ► Applications:

- General lighting
- Medical
- Automotive Lighting
- Interior

## ► Customer Benefits:

- Broad portfolio of products to address a range of general lighting applications
- Monolithic (integrated power MOSFET) and controller (external MOSFET) based solutions offer flexibility in design
- Robust built in protections for extended life operation

## Product Selector Guide

Switching [AC/DC & DC/DC]

| Part No.    | Driver      | VIN [V]                | IOUT Accuracy  | Effcy [%] | Power Transistor | Typical Applications                       | Package          | Key Feature                                                                       | Status  |
|-------------|-------------|------------------------|----------------|-----------|------------------|--------------------------------------------|------------------|-----------------------------------------------------------------------------------|---------|
| IS31LT3350  | DC/DC Buck  | 6-40                   | 750mA ±5%      | 95        | Built-in         | Low voltage LED lighting, MR16 replacement | SOT23-5, SOT89-5 | Single pin ON/OFF or brightness control with DC/PWM, thermal shutdown             | Prod    |
| IS31LT3352  | DC/DC Buck  | 6-40                   | 750mA ±5%      | 95        | Built-in         | Low voltage LED lighting, MR16 replacement | SOP-8            | Cascadable, temp. compensation and one pin ON/OFF/dimming control                 | Prod    |
| IS31LT3353  | DC/DC Buck  | 6-40                   | Iout: 1A +/-3% | 95        | Built-in         | Low voltage LED lighting, MR16 replacement | SOT23-5, SOT89-5 | Single pin ON/OFF or brightness control with DC/PWM, thermal shutdown             | Prod    |
| IS31LT3354  | DC/DC Buck  | 6-40                   | < 2.5A ±5%     | 98        | External         | Low volt. LED lighting, Illuminated sign   | SOT23-5          | 1200:1 dimming ratio LED driver with thermal shutdown protection                  | Prod    |
| IS31LT3360* | DC/DC Buck  | 6-40                   | 1.2A ±3%       | 98        | Built-in         | MR16, MR11 spot light, PAR light           | SOT89-5          | High efficiency with buck converter, with analog or PWM dimming                   | Prod    |
| IS31LT3380  | DC/DC Buck  | 8.5-40                 | 1.2A ±5%       | 98        | Built-in         | MR16, MR11 spot light, PAR light           | SOP-8            | 3-level switch dimming control, open/short and thermal shutdown protection        | Prod    |
| IS31LT3505  | DC/DC Boost | 6-30                   | 24W ±5%        | 90        | Built-in         | Battery powered LED, solar light           | MSOP-10          | 1MHz Boost Converter with 30V Internal NMOS                                       | Prod    |
| IS31LT3515  | DC/DC       | 5-35                   | ±3%            | 90        | External         | Industrial, street lighting                | SOP-16           | 35V Buck/Boost, Buck/Boost operation                                              | S=Q2/15 |
| IS31LT3948  | DC/DC Boost | 5-100                  | -              | 90        | External         | Street lamp, LED lighting, Gen. illum.     | SOP-8            | Wide input voltage range, Boost, over-voltage/temperature protection              | Prod    |
| IS31LT3910  | AC/DC       | 8-450 DC<br>110/220 AC | 500mA ±7%      | 90        | External         | T8, PAR light                              | SOP-8            | Non-isolation, linear/PWM dimming, temperature compensation                       | Prod    |
| IS31LT3916  | AC/DC       | 90-260 AC              | PF > 0.9       | 85        | External         | T8, Bulb Replacement, PAR light            | MSOP-8           | Isolated and Non-Isolated; Offline LED Driver with Active PFC                     | Prod    |
| IS31LT3953  | DC/DC Buck  | 6-48V                  | -              |           | Integrated       | 3A, PWM Dimmable Lighting                  | SOP-8EP          | 200kHz to 2Mhz DC/DC 3.0A dimmable buck regulator with robust protection features | S=Q2/15 |

\*-40C to +125C: Extended temperature range option available

## Switching [AC/DC & DC/DC]

| Part No.   | Driver       | VIN [V]                | IOUT Accuracy | Effcy [%] | Power Transistor | Typical Applications                       | Package         | Key Feature                                                      | Status  |
|------------|--------------|------------------------|---------------|-----------|------------------|--------------------------------------------|-----------------|------------------------------------------------------------------|---------|
| IS31LT3918 | DC/DC AC/DC  | 6-450 DC<br>85-265 AC  | -<br>±3%      | 95        | External         | LED Lighting; Signal & decor. lighting, T8 | SOP-8           | High voltage LED driver with 3-level Switch Dimming              | Prod    |
| IS31LT3932 | AC/DC        | 85-265 AC              | PF > 0.95     | >85       | External         | Retrofit Bulb, Tube, PAR Lighting          | SOP-8           | High Power factor, Low THD Universal Constant Current            | Prod    |
| IS31LT3933 | AC/DC        | 85-305 AC              | PF > 0.95     | >85       | External         | Retrofit Bulb, Tube, PAR Lighting          | SOP-8           | High Power factor, Low THD Universal Constant Current            | S=Q1/15 |
| IS31LT3935 | AC/DC        | 110/220 AC             | PF > 0.95     | 87        | External         | Bulb Replacement, spot light, PAR light    | DFN10 eTSSOP-16 | 25W Triac Dimmable Active PF Isolated and Non-Isolated           | Prod    |
| IS31LT3938 | DC/DC, AC/DC | 10-450 DC<br>85-265 AC | -<br>±3%      | 95        | External         | LED Lighting; Signal & decorative lighting | SOP-8           | High voltage LED driver with Switch Dimming, Single External FET | Prod    |

## Automotive Industrial

| Part No.     | Driver      | VIN [V]    | IOUT Accuracy | Power Transistor | Typical Applications                                     | Package   | Key Feature                                                                                  | Status            |
|--------------|-------------|------------|---------------|------------------|----------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------|-------------------|
| IS32BL3552   | DC/DC Boost | 4.5 - 33V  | ±1.5%         | External         | Automotive lighting, LCD display backlight               | eTSSOP-16 | Two channel LED current sinks, 40 to 360mA per string. String-to-string accuracy 1.5%        | AECQ100 qualified |
| IS32BL3554   | DC/DC Boost | 4.5 - 33V  | ±1.5%         | External         | Automotive lighting, LCD display backlight               | eTSSOP-16 | Four 20 to 180mA channel current sinks. String-to-string accuracy 1.5%                       | AECQ100 qualified |
| IS32BL3556   | DC/DC Boost | 4.75 - 40V | ±0.8%         | External         | Automotive lighting, LCD monitor backlight               | eTSSOP-24 | Four 100mA channel current sinks. String-to-string accuracy 0.8%                             | S=Q3/15           |
| IS32LT3953   | DC/DC Buck  | 6 - 48V    | -             | Integrated       | Automotive lighting, dimmable cabin light                | SOP-8EP   | 200kHz to 2Mhz DC/DC 3.0A dimmable buck regulator with robust protection features            | S=Q2/15           |
| IS32LT3120   | Linear      | 5 - 45V    | -             | Integrated       | Automotive cabin lighting, map & dome light              | SOP-8EP   | Two channel CCR with two debounced switch inputs, LED fade IN/OUT                            | Sample            |
| IS32LT3170/1 | Linear      | 2.8 - 42V  | -             | Integrated       | Automotive lighting, emergency lighting, retail lighting | SOT23-6   | Adjustable CCR 10 to 150mA, negative thermal coeff., low / high side, IS32LT3171 PWM dimming | S=Q2/15           |
| IS32LT3172/3 | Linear      | 2.8 - 42V  | -             | Integrated       | Automotive cabin lighting, map & dome light              | SOP-8EP   | Adjustable CCR 10 to 200mA, negative thermal coeff., low / high side, IS32LT3173 PWM dimming | S=Q2/15           |
| IS32LT3180   | Linear      | 6 - 60V    | ±5.0%         | Integrated       | Automotive RCL, CHMSL, fog lamps, turn signal            | eTSSOP-16 | Eight channel, dual intensity, CCR with fault reporting, 10-75mA                             | Sample            |

## Linear

| Part No.     | Driver           | VIN [V]   | IOUT Accuracy | Power Transistor | Typical Applications                            | Package   | Key Feature                                                                                  | Status  |
|--------------|------------------|-----------|---------------|------------------|-------------------------------------------------|-----------|----------------------------------------------------------------------------------------------|---------|
| IS31LT3135   | Constant Current | 2.7-5.5   | 500mA ±5%     | Built-in         | Miner lamp, Torch, Battery powered LED lighting | SOP-8     | Main/sub dual-channel driver with short circuit and over temp. protection                    | Prod    |
| IS31LT3117   | Linear           | 6 - 53V   | ±5.0%         | Integrated       | Low-side CCR                                    | eTSSOP-16 | Four 350 mA channel current sinks. Support for external ballast transistor                   | Prod    |
| IS31LT3170/1 | Linear           | 2.8 - 42V | -             | Integrated       | Emergency lighting, retail lighting             | SOT23-6   | Adjustable CCR 10 to 150mA, negative thermal coeff., low / high side, IS31LT3171 PWM dimming | S=Q2/15 |
| IS31LT3172/3 | Linear           | 2.8 - 42V | -             | Integrated       | Emergency lighting, retail lighting             | SOP-8EP   | Adjustable CCR 10 to 200mA, negative thermal coeff., low / high side, IS31LT3173 PWM dimming | S=Q2/15 |