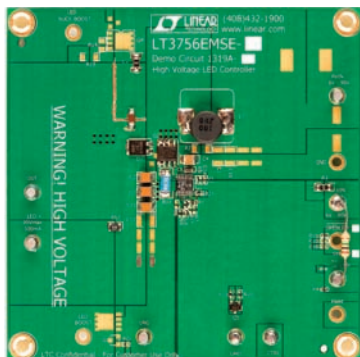




High Current (350 mA to 10A) LED Drivers—Buck

High current, inductor-based, step-down switching LED drivers provide tiny, efficient high power LED lighting solutions for automotive, architectural, and display backlighting. Key features include wide-ranging True Color PWM dimming, wide input voltage range, high side sensing, and high switching frequency.



Features ▶

- LT3756**
- 3000:1 True Color PWM dimming
- Wide input voltage range: 6V to 100V
- Output voltage up to 100V
- Constant-current and constant-voltage regulation
- 100 mV high side current sense

Benefits ▶

- Enables wide dimming range
- Ideal for automotive and industrial applications
- Easy dimming
- Enables one-wire LED connector
- Compact solution footprint

Applications ▶

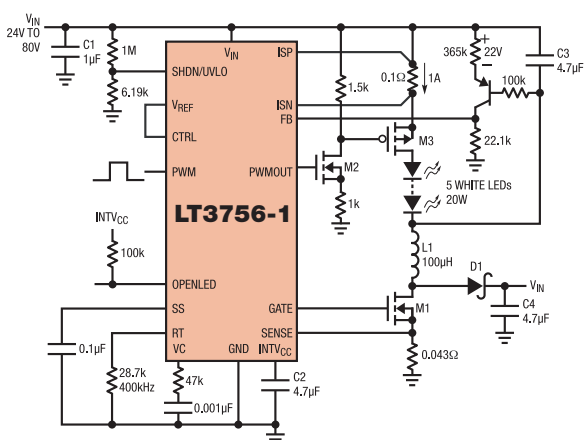
- Automotive and avionic lighting
- Architectural detail lighting
- Display backlighting
- Constant-current sources

Product Specifications ▶												
Part Number	Type	Dimming Type	Number of LEDs/ String	Number of Strings	Configuration	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)**	Peak Efficiency (%)	Diagnostic Capabilities*	Interface	Markets
LT3474/-1	Buck LED driver	400:1 PWM	3 x 500 mA	1	Series (3 max.)	4-36	15	1	87	TSD/OVM	PWM	CL TR BL
LT3592		10:1 Analog	4	1	Series	4-36	30	0.8	88	-	PWM	-
LT3517	Buck/boost/buck-boost	5000:1 PWM	10 x 100 mA	1	Series	3-30 (40 max.)	45	1A	92	TSD/OVM	PWM	CL TR BL SI
LT3518		5000:1 PWM	10 x 200 mA	1	Series	3-30 (40 max.)	45	1A	92	TSD/OVM	PWM	CL TR BL SI
LT3496	Triple LED driver	3000:1 PWM	5	3	3 series strings	3-30	45	3 x 750	92	-	PWM	-
LT3475/-1	Dual-buck LED driver	3000:1 PWM	3 x 1.5A	2	2 x multiple series string (3 max.)	4-36	15	2 x 1.5	88	TSD/OVM	PWM	CL TR BL
LT3478/-1	Buck/boost/buck-boost	3000:1 PWM	8 x 1.5A	1	1 series string (8 max.)	2.7-36	40	4.5	92	TSD/OVM	PWM	CL TR
LT3476	Quad LED driver	1000:1 PWM	5	4	4 series strings	2.8-36	30	4 x 1.5	92	-	PWM	-
LTC3783	SEPIC/buck/boost/buck-boost/flyback/inverter	3000:1 PWM/10:1 analog	4 x 12 x 1A	1	Series/parallel	3-36+	Limited by ext. FET	<10	97	TSD/OVM	PWM	CL TR
LT3755/-1	Buck/buck-boost/boost controller	3000:1 PWM	14 x 1A	1	Series	4.5-40	Ext. FET	Ext. FET	92	TSD/OVM	PWM	CL TR BL SI
LT3756/-1		3000:1 PWM	14 x 1A	1	Series	6-100	Ext. FET	Ext. FET	92	TSD/OVM	PWM	CL TR BL SI

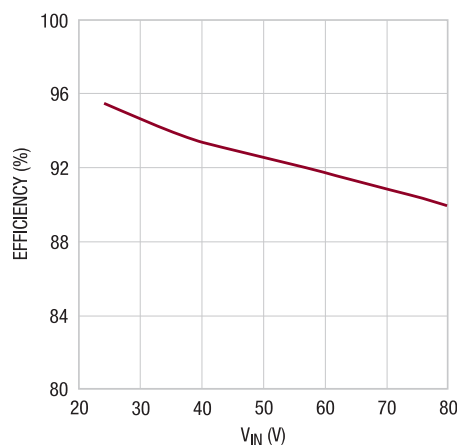
MARKETS LEGEND: CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE

*Diagnostic capabilities: TSD: Thermal shutdown, OVM: Output voltage monitoring

**Switch current



Efficiency vs. V_{IN}



High Current (350 mA to 10A) LED Drivers—Boost

High current, inductor-based, step-up switching LED drivers provide compact, efficient, high power LED lighting solutions for automotive, architectural, and display backlighting. Key features include wide-ranging True Color PWM dimming, wide input voltage range, high side sensing, and high switching frequency.



Features ▶

LT3755

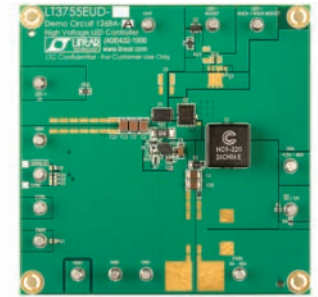
- 3000:1 True Color PWM dimming
- Wide input voltage range: 4.5V to 40V
- Output voltage up to 75V
- Constant-current and constant-voltage regulation
- 100 mV high side current sense

Benefits ▶

- Can drive 6 x 700 mA LEDs in boost configuration
- No need for external sense resistor
- Enhances reliability
- Keeps externals tiny
- Compact solution footprint

Applications ▶

- Automotive and avionic lighting
- Architectural detail lighting
- Display backlighting
- Constant-current sources



Product Specifications ▶

Part Number	Type	Dimming Type	Number of LEDs/String	Number of Strings	Configuration	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)**†	Peak Efficiency (%)	Diagnostic Capabilities*	Interface	Markets
LT3486	Dual LED driver	1000:1 PWM	7 x 350 mA	2	Dual parallel strings	2.7-24	35	2 x 1.3	85	TSD/OVM	PWM	CL TR BL SI
LT3517	Buck/boost/buck-boost	5000:1 PWM	10 x 100 mA	1	Series	3-30 (40 max.)	45	1A	92	TSD/OVM	PWM	CL TR BL SI
LT1618	Buck/boost/buck-boost LED driver	DC/PWM	7 x 350 mA	1	Parallel or series strings	1.6-18	36	1.5	80	TSD/OVM	PWM	CL TR BL SI
LT3518	Buck/boost/buck-boost	5000:1 PWM	10 x 200 mA	1	Series	3-30 (40 max.)	45	1A	92	TSD/OVM	PWM	CL TR BL SI
LT3496	Triple LED driver	3000:1 PWM	4	3	3 series strings	3-30	45	3 x 750	87	–	PWM	–
LT3478/-1	Boost LED driver	3000:1 PWM	6 x 700 mA	1	Series strings	2.7-36	40	4.5	91	TSD/OVM	PWM	CL TR
LT3476	Quad buck/boost/buck-boost LED driver	1000:1 PWM	8 x 350 mA	4	4 x multiple series string	2.8-16	36	4 x 1.5	83	TSD/OVM	PWM	CL TR BL SI
LTC3783	SEPIC/buck/boost/buck-boost/flyback/inverter	3000:1 PWM/ 10:1 analog	12 x 3 x 1A	1	Series/parallel	3-36+	Limited by ext. FET	Ext. FET	95	TSD/OVM	PWM	CL TR
LT3755/-1	Buck/buck-boost/boost controller	3000:1 PWM	14 x 1A	1	Series	4.5-40	Ext. FET	Ext. FET	92	TSD/OVM	PWM	CL TR BL SI
LT3756/-1	Buck/buck-boost/boost controller	3000:1 PWM	14 x 1A	1	Series	6-100	Ext. FET	Ext. FET	92	TSD/OVM	PWM	CL TR BL SI

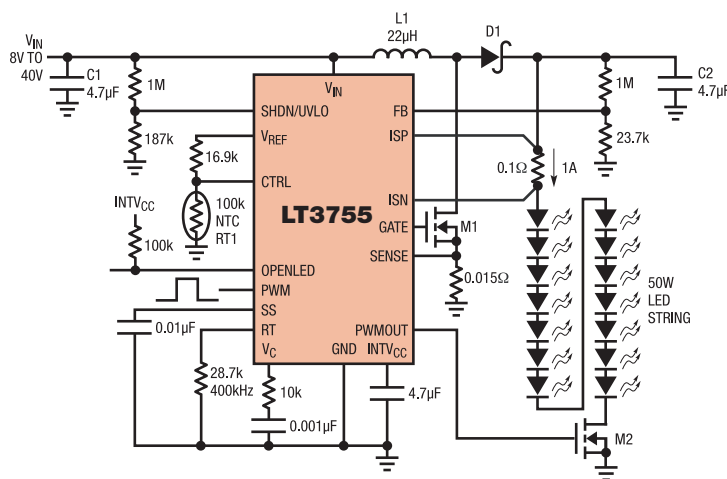
MARKETS LEGEND

CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE

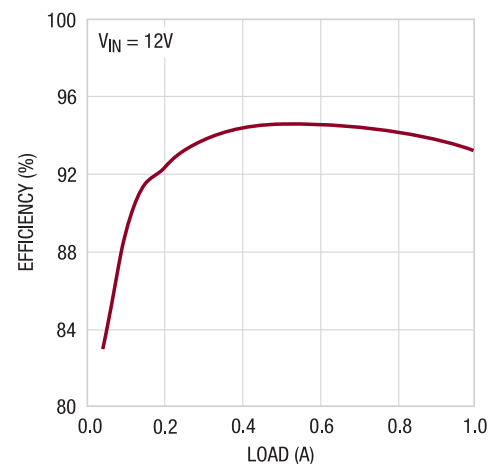
*Diagnostic capabilities: TSD: Thermal shutdown, OVM: Output voltage monitoring

** $I_{OUT} \sim 0.65 I_{SW} \times (V_{IN}/V_{OUT})$ —estimate may vary depending on external component selection

†Switch current



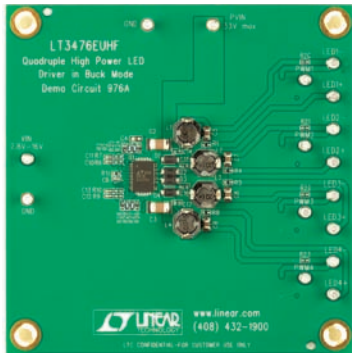
Efficiency vs. Load





High Current (350 mA to 10A) LED Drivers—Buck-Boost

High current, inductor-based, buck-boost switching LED drivers provide flexible, tiny, efficient solutions for TFT backlighting, automotive, and avionic lighting applications. Key features include high current, high voltage switches, adjustable LED currents, wide input voltage range, and high switching frequency.



Features ▶

LT3476

- True Color PWM delivers up to 5000:1 dimming ratio
- LED current regulation with high side sense
- V_{ADJ} pin accurately sets LED current sense threshold over range 10 mV to 120 mV
- Four independent driver channels with 1.5A, 36V internal NPN switches
- Frequently adjust pin: 200 kHz to 2 MHz

Benefits ▶

- Enables one-wire connection of LEDs
- Easy dimming
- Compact solution for 4-channel applications
- Keeps solution footprint tiny
- Reduces heat

Applications ▶

- RGGB lighting
- Automotive and avionic lighting
- TFT LCD backlighting
- Constant-current sources

Product Specifications ▶

Part Number	Type	Dimming Type	Number of LEDs/String	Number of Strings	Configuration	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)**	Peak Efficiency (%)	Diagnostic Capabilities*	Interface	Markets
LT3517	Buck/boost/buck-boost	5000:1 PWM	3 x 100 mA	1	Series	3-30 (40 max.)	45	1A	92	TSD/OVM	PWM	CL TR BL SI
LT3518	Buck/boost/buck-boost	5000:1 PWM	3 x 200 mA	1	Series	3-30 (40 max.)	45	1A	92	TSD/OVM	PWM	CL TR BL SI
LT3496	Triple LED driver	3000:1 PWM	3	3	3 series strings	3-30	45	3 x 750	80	-	PWM	-
LT3478/-1	Buck/boost/buck-boost	3000:1 PWM	4 x 1A	1	Series	2.7-36	40	4.5	92	TSD/OVM	PWM	CL TR
LT3476	Quad buck/boost/buck-boost LED driver	1000:1 PWM	4 x 350 mA	4	4 x multiple series string	2.8-16	36	4 x 1.5	78	TSD/OVM	PWM	CL TR BL
LTC3783	SEPIC/buck/boost/buck-boost/flyback/inverter	3000:1 PWM, 10:1 analog	12 x 3 x 1A	1	Series/parallel	3-36	Limited by ext. FET	Ext. FET	93	TSD/OVM	PWM	CL TR
LT3755/-1	Buck/buck-boost/boost controller	3000:1 PWM	6 x 1A	1	Series	4.5-40	Ext. FET	Ext. FET	92	TSD/OVM	PWM	CL TR BL SI
LT3756/-1	Buck/buck-boost/boost controller	3000:1 PWM	6 x 1A	1	Series	6-100	Ext. FET	Ext. FET	92	TSD/OVM	PWM	CL TR BL SI

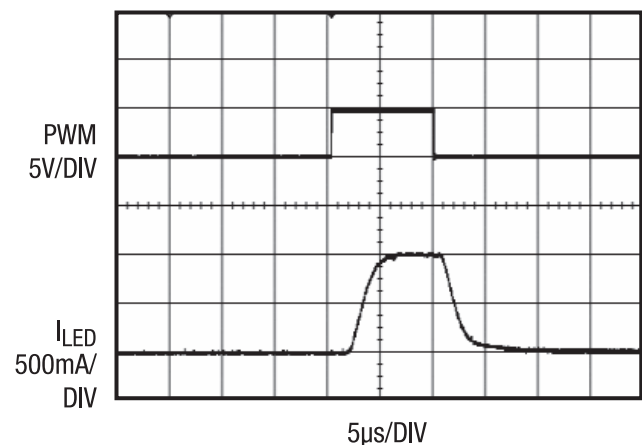
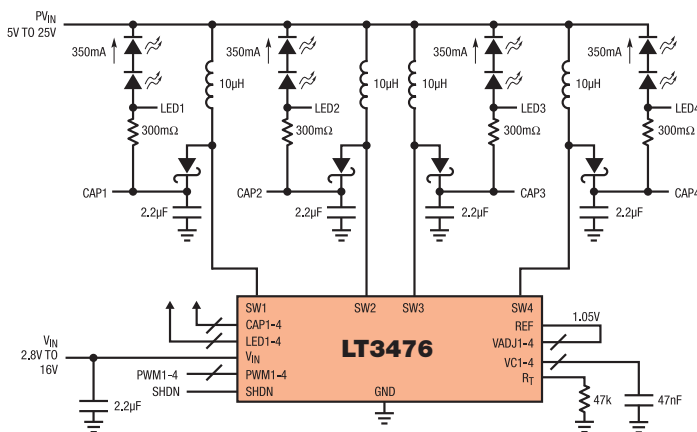
MARKETS LEGEND

CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE

*Diagnostic capabilities: TSD: Thermal shutdown, OVM: Output voltage monitoring

**Switch current

1000:1 PWM Dimming at 100 Hz



High Current (350 mA to 10A) LED Drivers— SEPIC and Flyback



High current, inductor-based, multi topology, switching LED drivers provide flexible solutions for high voltage LED arrays. Key features include high current, wide input voltage range, scalable output power, and wide-ranging True Color dimming.

Features ▶

LT3755

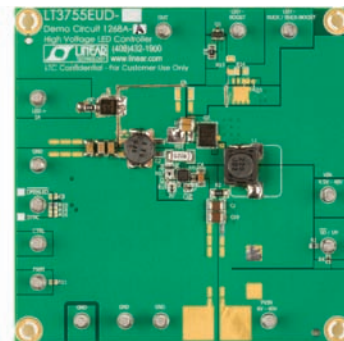
- High current
- High voltage
- Protection
- True Color PWM 3000:1 digital dimming
- Multi topology

Benefits ▶

- Delivers high current ($\geq 1.5A$) and powers high brightness (HB) and super HB-LEDs
- Easily drives strings (series) or clusters (series + parallel) of LEDs
- Accurate current and output voltage protects HB-LEDs; additional protection includes overvoltage, overcurrent, and soft start
- Preserves LEDs constant color over a wide dimming ratio; capable of additional analog 100:1 dimming
- Adjustable LED brightness

Applications ▶

- High power LED applications
- Industrial
- Automotive



Product Specifications ▶

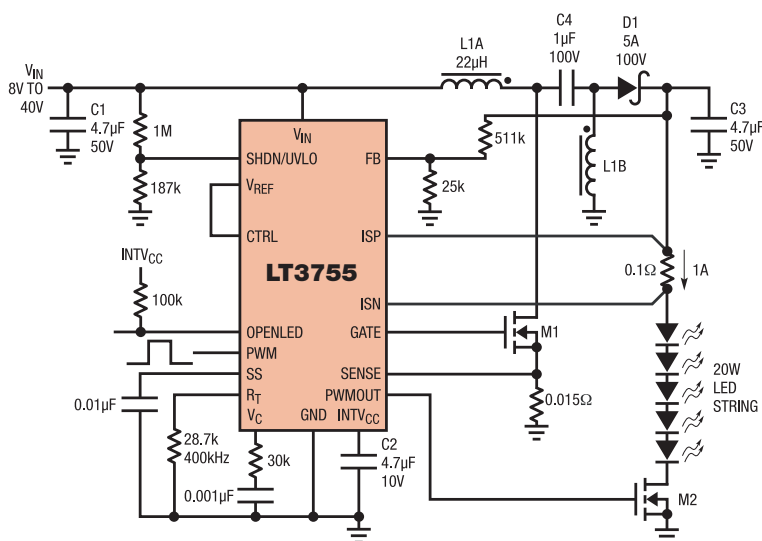
Part Number	Type	Dimming Type	Number of LEDs/String	Number of Strings	Configuration	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)**	Peak Efficiency (%)	Diagnostic Capabilities*	Interface	Markets
LT3517	Buck/boost/buck-boost	5000:1 PWM	10 x 100 mA	1	Series	3-30 (40 max.)	45	1A	92	TSD/OVM	PWM	CL TR BL SI
LT3518	Buck/boost/buck-boost	5000:1 PWM	10 x 200 mA	1	Series	3-30 (40 max.)	45	1A	92	TSD/OVM	PWM	CL TR BL SI
LT3478/-1	Buck/boost/buck-boost	3000:1 PWM	8 x 1.5A (in buck-mode)	1	Series	2.7-36	Depends on configuration	4.5	92	TSD/OVM	PWM	CL TR
LT3476	Quad buck/boost/buck-boost LED driver	1000:1 PWM	4 x 8 x 1A (in buck-mode)	4	4 x multiple series string	2.8-16	Depends on configuration	4 x 1.5	96	TSD/OVM	PWM	CL TR BL
LTC3783	SEPIC/buck/boost/buck-boost/flyback/inverter	3000:1 PWM, 10:1 analog	4 x 12 x 1A (in buck-mode)	1	Series/parallel	3-36	Limited by ext. FET	Ext. FET	90+	TSD/OVM	PWM	CL TR
LT3755/-1	Buck/buck-boost/boost controller	3000:1 PWM	14 x 1A	1	Series	4.5-40	Ext. FET	Ext. FET	92	TSD/OVM	PWM	CL TR BL SI
LT3756		3000:1 PWM	14 x 1A	1	Series	6-100	Ext. FET	Ext. FET	92	TSD/OVM	PWM	CL TR BL SI

MARKETS LEGEND

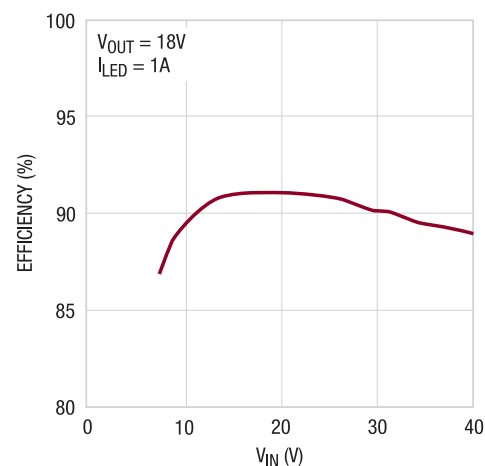
CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE

*Diagnostic capabilities: TSD: Thermal shutdown, OVM: Output voltage monitoring

**Switch current



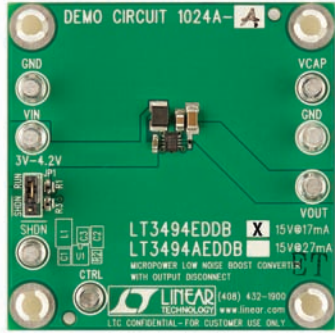
SEPIC Efficiency vs. V_{IN}





Organic LED (OLED) Bias—Low to High Current (50 mA to 2A) Drivers

Linear Technology delivers highly integrated solutions for OLED bias applications. Key features include output disconnect, soft start, and integrated Schottky diodes. Their small circuit size and high efficiency make them ideal solutions for space-conscious, portable device applications such as cellular phones and media players.



Features >

- LT3494**
- Low-quiescent current
 - 65 μ A in active mode
 - 1 μ A in shutdown mode
 - Switching frequency is non-audible over entire load range; ideal for wireless and MP3 applications
 - Integrated power NPN:
 - 350 mA current limit (LT3494A)
 - 180 mA current limit (LT3494)
 - Integrated Schottky diode
 - Integrated output disconnect

Benefits >

- Maximizes battery-run time
- Ideal for OLED display
- Compact, highly-integrated OLED solution

Applications >

- Organic LED power supply
- Digital cameras
- White LED power supply
- Cellular phones
- Medical diagnostic equipment

Product Specifications >

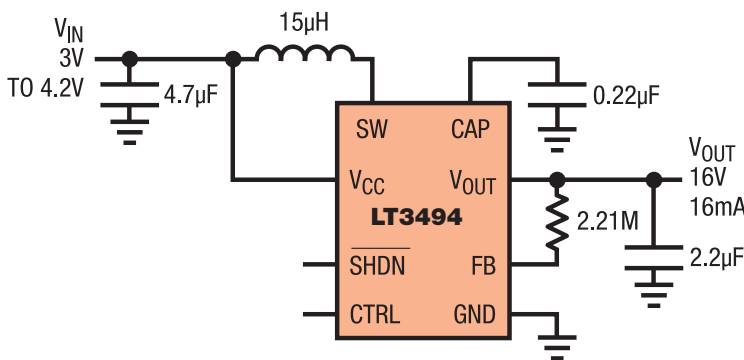
Part Number	Type	Dimming Type	Number of LEDs/String	Number of Strings	Configuration	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)**	Peak Efficiency (%)	Diagnostic Capabilities*	Interface	Markets
LTC3459	Synchronous boost	-	1	-	Single	1.5-5.5	10	60	89	TSD	-	CL TR BL SI
LTC3464	Boost	-	1	-	Single	2.3-10	34	85	84	TSD	-	CL TR BL SI
LT3494/A		Pin adj.	1	-	Single	2.3-16	40	150/350	85	TSD	-	CL TR BL SI
LT3498	LED driver plus OLED power	DC/PWM	10 x 25 mA + OLED	2	Single LED/string OLED	2.5-12	32	10 x 25 + 30	75	TSD	PWM	CL TR BL SI
LT3463	Boost and inverter	-	2	-	Dual	2.4-15	\pm 40	180/320	77	TSD	-	CL TR BL SI
LT3472		-	2	-	Dual	2.2-16	\pm 40	250/300	83	TSD	-	CL TR BL SI
LT3582		-	2	-	Dual	2.58-5.5	\pm 14	290/500	83	TSD	-	CL TR BL SI
LT1613	Boost	-	1	-	Single	0.9-10	34	550	89	TSD	-	CL TR BL SI
LT3495(B)/-1		Pin adj.	1	-	Single	2.3-16	40	650/350	85	TSD	-	CL TR BL SI
LT3487	Boost and inverter	-	2	-	Dual	2.3-16	\pm 28	750/900	77	TSD	-	CL TR BL SI
LT3473/A	Boost	-	1	-	Single	2.2-16	36	1.2A	77	TSD	-	CL TR BL SI
LT3467/A		-	1	-	Single	2.4-16	40	1.4A	90	TSD	-	CL TR BL SI
LT3471	Boost or inverter	-	2	-	Dual	2.4-16	\pm 40	2A/1.5A	86	TSD	-	CL TR BL SI
LTC3458/L	Synchronous boost	-	1	-	Single	1.5-6	7.5/6	1.4A/1.7A	96	TSD	-	CL TR BL SI

MARKETS LEGEND

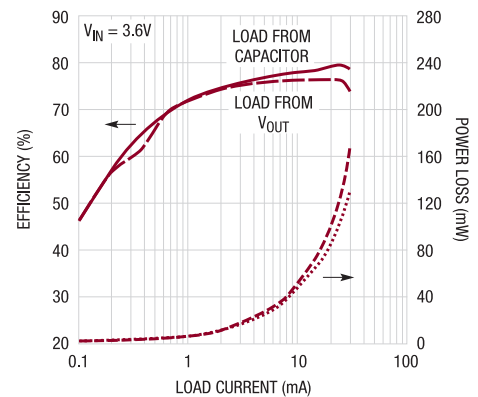
CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE

*Diagnostic capabilities: TSD: Thermal shutdown

**Switch current



AV_{DD} Efficiency vs. V_{IN}



Medium Current (100 mA to 350 mA) LED Drivers—Buck



Medium current, inductor-based, step-down switching LED drivers provide tiny, efficient high power LED lighting solutions for automotive, architectural, and display backlighting. Key features include wide-ranging True Color PWM dimming, wide input voltage range, high side sensing, and high switching frequency.

Features ▶

LT3592

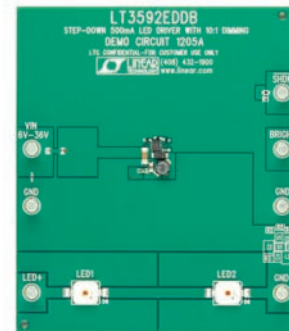
- Wide input voltage range operation from 3.6V to 36V
- Resistor adjustable 400 kHz to 2.2 MHz switching frequency
- Shorted and open-LED protection
- External resistor programs LED current, pin selects 10:1 ratio
- 50 mA/500 mA LED current settings

Benefits ▶

- Enables wide dimming range
- Ideal for automotive and industrial applications
- Easy dimming
- Enables one-wire LED connector
- Compact solution footprint

Applications ▶

- Automotive and avionic lighting
- Architectural detail lighting
- Display backlighting
- Constant-current sources



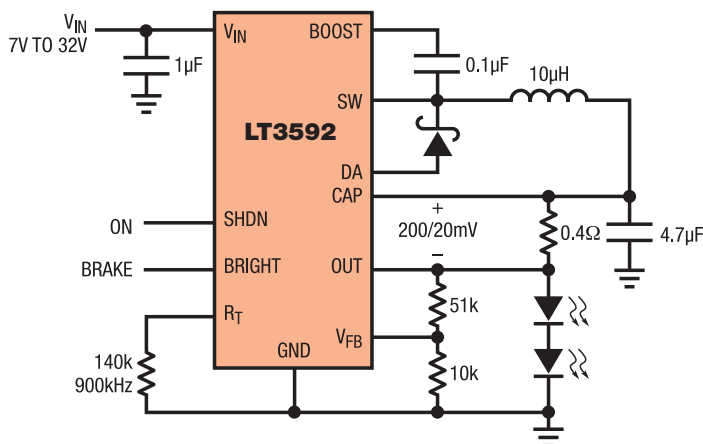
Product Specifications ▶

Part Number	Type	Dimming Type	Number of LEDs/String	Number of Strings	Configuration	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Peak Efficiency (%)	Diagnostic Capabilities*	Interface	Markets
LT3591	Buck	80:1 PWM	5 x 200 mA	1	Series	2.5-12	30	0.5	92	TSD/OVM	PWM	CL TR BL SI
LT3517		5000:1 PWM	5 x 300 mA	1	Series	3-30	30	1.5	92	TSD/OVM	PWM	CL TR BL SI
LT3592		10:1 analog	6 x 350 mA	1	Series	3-36	32	0.8	92	-	-	-
LT3496		3000:1 PWM	3 x 5 x 300 mA	3	3x multiple series	3-30	30	3 x 0.75	92	TSD	PWM	CL TR BL SI

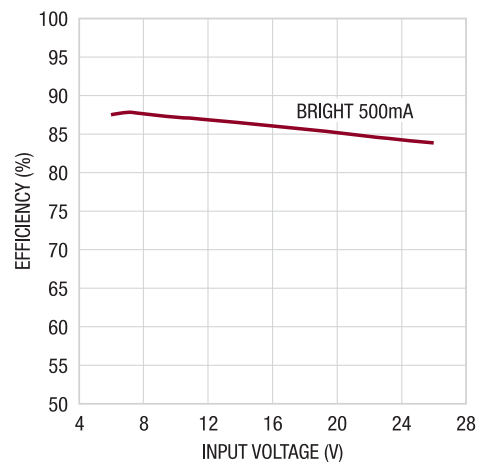
MARKETS LEGEND

CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE

*Diagnostic capabilities: TSD: Thermal shutdown, OVM: Output voltage monitoring



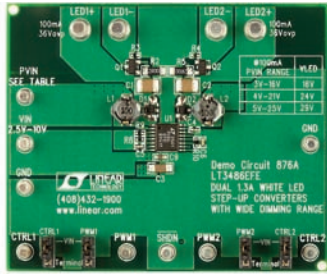
LED Power Efficiency vs I_{LED}





Low to Medium Current (20 mA to 100 mA/LED) Multi Channel LED Drivers—Inductor Based

Multi display, inductor-based, white LED drivers are capable of driving up to 20 white LEDs from a single-cell Li-Ion input. Key features include high voltage internal power switches, internal Schottky diodes, adjustable switching frequency, DC dimming control, open LED protection, and optimized internal compensation. They are ideal solutions for multi panel LCD backlight applications or space constrained portable applications such as cellular phones, PDAs, and digital cameras.



Features ▶

- LT3486**
- Drives up to 16 white LEDs at 25 mA from a 3.6V supply
- Drives up to 16 white LEDs at 100 mA from a 12V supply
- True Color PWM dimming delivers constant color with 1000:1 dimming range
- Two independent step-up DC/DC converters with independent dimming and shutdown
- Wide input voltage range: 2.5V to 24V

Benefits ▶

- Ideal for TFT-LCD screens up to 6" in handhelds
- Ideal for automotive displays with TFT-LCD screens up to 10"
- Eliminates the color shift normally associated with LED current dimming
- 1000:1 dimming ratio is required on many automotive and handheld displays
- Ideal for applications with multiple screens

Applications ▶

- Main/sub-displays
- Digital cameras and sub-notebook PCs
- PDAs/handheld computers
- Automotive

Product Specifications ▶

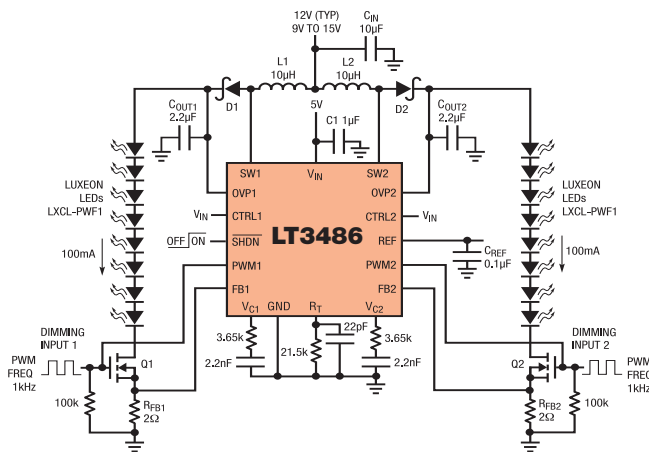
Part Number	Type	Dimming Type	Number of LEDs/String	Number of Strings	Configuration	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)**	Peak Efficiency (%)	Diagnostic Capabilities*	Interface	Markets
LT3466-1	LED driver and boost converter	DC/PWM	10 x 25 mA	1	Series	2.7-24	39.4	2 x 320	84	TSD	PWM	CL TR BL SI
LT3466	Dual LED driver	DC/PWM	10 x 25 mA	2	Dual series strings	2.7-24	39.4	2 x 320	84	TSD	PWM	CL TR BL SI
LTC3452	Synchronous buck-boost LED driver	DC/PWM	5 x 20 mA + 1 x 200 mA	1	Parallel	2.7-5.5	4.5	1A	88	TSD	PWM	CL TR BL SI
LT3486	Dual LED driver	1000:1 PWM	10 x 100 mA	2	Dual series strings	2.7-24	35.4	2 x 1.3A	85	TSD	PWM	CL TR BL SI
LT3598	6-channel boost LED driver	3000:1 PWM	10	6	6 strings of series LEDs	3-30	44	30	90	-	PWM	TR BL SI
LT3599	4-channel boost LED driver	3000:1 PWM	10	4	4 strings of series LEDs	3-30	44	30	90	-	PWM	TR BL SI

MARKETS LEGEND

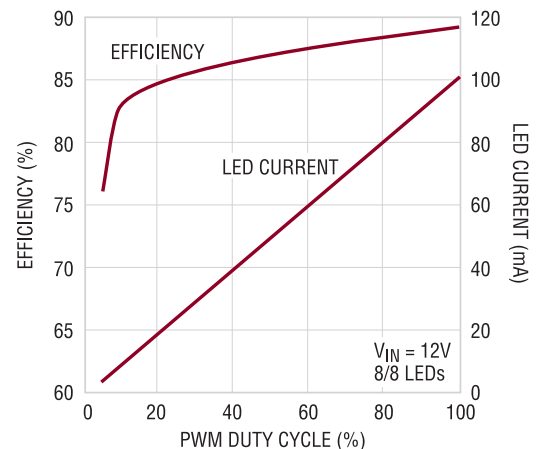
CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE

*Diagnostic capabilities: TSD: Thermal shutdown

**Switch current



LED Efficiency and Current vs. PWM Duty Cycle



Low Current (20 mA to 50 mA) LED Drivers—Boost

Low current, inductor-based switching LED drivers ensure light intensity matching across LEDs. Key features include the purest white LED color dimming control, low standby mode quiescent current, selectable current level, guaranteed LED brightness matching, and extremely small circuit size, making them well suited for cellular phone and other portable backlight applications.



Features ▶

LT3593

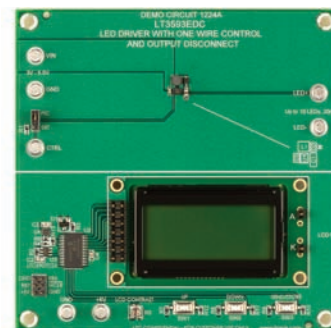
- Drives up to 10 white LEDs from a 3V supply
- One-pin shutdown and current programming
- LEDs disconnected in shutdown
- 32:1 linear brightness control range
- V_{IN} range: 2.7V to 5.5V

Benefits ▶

- Ideal for most cell phones/PDAs/MP3 and media players
- Enables one-wire current source
- Ideal for single-cell Li-Ion/Polymer applications
- Keeps noise out of critical RF bands, enables the use of tiny externals
- Enables precise dimming control for handheld application without color shifts of the LEDs

Applications ▶

- Cellular phones
- Digital cameras
- PDAs/handheld computers
- MP3 players
- GPS receivers



Product Specifications ▶

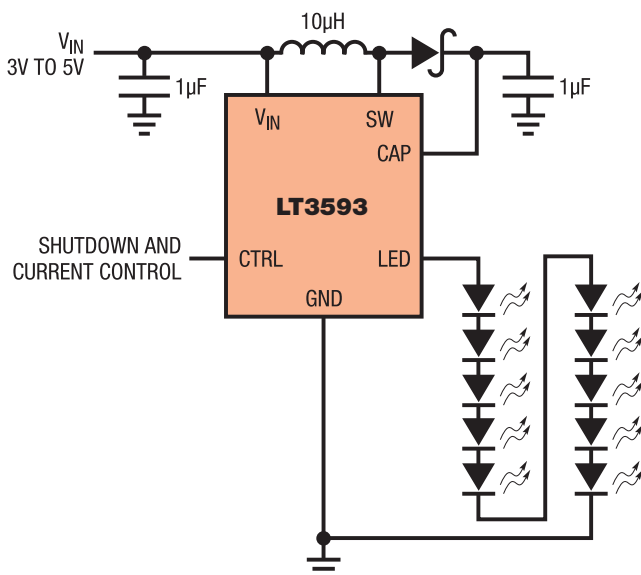
Part Number	Type	Dimming Type	Number of LEDs/String	Number of Strings	Configuration	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)**	Peak Efficiency (%)	Diagnostic Capabilities*	Interface	Markets
LT3491	Boost LED driver	300:1 PWM	6 x 25 mA	1	Series	2.5-12	27	260	76	TSD/OVM	PWM	CL FL TR BL SI
LT3498	Boost LED driver and OLED	DC/PWM	6	1	Series	2.5-12	32	300 + 180	80	TSD/OVM	PWM	CL FL TR BL SI
LT3591	Boost LED driver	90:1 PWM	10 x 20 mA	1	Series	2.5-12	42	450	77	TSD/OVM	PWM	CL FL TR BL SI
LT3593		DC/PWM	10	1	Series	2.5-5.5	45	550	80	-	-	-
LT3497	Dual boost LED driver	DC/PWM	6	2	Dual series strings	2.5-10	32	2 x 300	80	-	-	TR BL SI
LT3466		DC/PWM	2 x 10 x 25 mA	2	2 parallel series strings of 10	2.7-24	40	2 x 320	84	TSD/OVM	PWM	CL FL TR BL SI
LT3466-1	LED driver/boost converter	DC/PWM	10 x 25 mA	1	Series	2.7-24	40	2 x 320	84	TSD/OVM	PWM	CL FL TR BL SI
LT3598	6-channel boost LED driver	DC/PWM	10	6	6 series strings	3-30 (40V _{MAX})	44	1.5A	88	-	-	-
LT1942	Quad DC/DC converter and LED driver	DC/PWM	12 x 25 mA	1	2 parallel series strings of 6	2.6-16	44	550	77	TSD/OVM	PWM	CL FL TR BL SI

MARKETS LEGEND

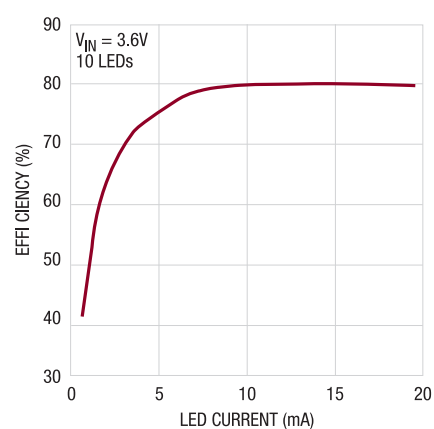
CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE

*Diagnostic capabilities: TSD: Thermal shutdown, OVM: Output voltage monitoring

**Switch current



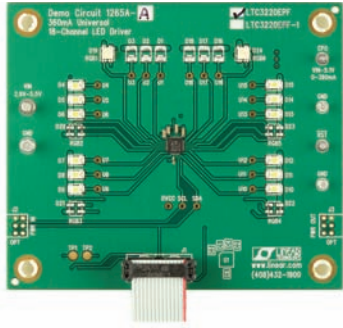
Conversion Efficiency





Low Current Multi Display LED Drivers—Inductorless

Linear Technology's family of inductorless, charge pump-based, multi display LED drivers features the highest level of integration, smallest footprint, and highest efficiency. Universal configuration and individual display driver outputs eliminate the need for ballast resistors. These ICs optimize flexibility for product designers, ranging from fully-featured, multi display cellular phones to high current/high resolution camera flash electronic devices to keypad illumination.



Features ▶

LTC3220/-1

- Drives up to 18 universal independently configurable 20 mA current sources
- 64-step brightness control
- Slow-rate limited switching
- High efficiency operation up to 91%:
1x, 1.5x, or 2x boost modes with automatic mode switching
- 28-lead (4 mm x 4 mm x 0.55 mm) ultra-thin QFN package, <math><56\text{ mm}^2</math> solution area

Benefits ▶

- Design flexibility for highly featured, multi-display cell phones and system status LED lighting
- High resolution
- Reduces conducted and radiated noise
- Extends battery run time
- Compact, ultra-low profile footprint

Applications ▶

- Ideal for applications with noise sensitive circuitry onboard, minimizes size of externals

Product Specifications ▶

Part Number	Type	Dimming Type	Number of LEDs/String	Number of Strings	Configuration	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Peak Efficiency (%)	Diagnostic Capabilities*	Interface	Markets
LTC3212	Multi display LED driver	1-wire	3	1	Parallel, RGB	2.7-5.5	-	75	92	TSD	1-wire	FL BL
LTC3230		1-wire	5	1	Parallel, Main/SUB + 2 LDOs	2.7-5.5	-	125	91	TSD	1-wire	FL BL
LTC3219		I ² C	9	1	Parallel, Universal	2.9-5.5	-	250	93	TSD	I ² C	FL BL
LTC3220/-1		I ² C	18	1	Parallel, Universal	2.9-5.5	-	360	91	TSD	I ² C	FL BL
LTC3206		SPI**	9	1	Parallel, Main/SUB/RGB	2.8-4.5	-	400	90	TSD	SPI**	FL BL
LTC3210/-1		1-wire	5	1	Parallel, Main/CAM	2.9-4.5	-	500	93	TSD	1-wire	FL BL
LTC3209-1		I ² C	8	1	Parallel, Main/CAM/Aux.	2.9-4.5	-	600	94	TSD	I ² C	FL BL
LTC3209-2		I ² C	8	1	Parallel, Main/CAM/Aux.	2.9-4.5	-	600	94	TSD	I ² C	FL BL
LTC3207		I ² C	13	1	Parallel, Universal	2.9-5.5	-	600	90	TSD	I ² C	FL BL
LTC3208		I ² C	17	1	Parallel, Main/SUB/CAM/RGB/Aux.	2.9-4.5	-	1,000	90	TSD	I ² C	FL BL

MARKETS LEGEND

CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE

*Diagnostic capabilities: TSD: Thermal shutdown

**Serial peripheral interface

