



- 公司簡介(Product Introduction)
- 服務客戶策略(Supporting Strategy)
- 產品應用選擇(Product Application)
- 產品介紹(Product Introduction)



(Taiwan GTSM: 5351)



(Taiwan GTSM: 5468)

台灣上櫃公司(5468).



鈺創科技
(Taiwan GTSM: 5351)

* 凱鈺科技是為專業積體電路設計公司，為台灣上櫃公司(5468). 主要股東為鈺創科技 (Etron-5351), 總經理為吳炳松博士.

* 主要產品有:

- * 光纖收發驅動, FTTx SOC方案(全世界前五大廠家之一)
- * 安控CCTV/IPCAM IR 驅動IC (T6322為亞太領導產品)
- * LED 照明驅動 I C / 電源管理 I C / 模組方案

* LED 客戶: 眾用, 泰金寶, 金寶達, 正峰新能源, 成貫...

* 車用領域應用產品:

- 頂級行車/倒車紀錄器- IR LED Driver (T8308, T8322)
- 車內吸頂燈-LED Driver (T6322A, T8341, T8322)
- 霧燈, 頭燈, 尾燈, 方向燈, 煞車燈- T8332, T6331, T8306
- 維修燈, 太陽能燈, 帳篷燈- T6331
- 車內致冷箱- T8306
- SOS 燈-T6340, T8341



TMTech LED Driver IC 服務客戶發展策略

- 植基於科技創新, 並放眼世界, 進行不斷之提昇.
- 起步於2合1 移動照明, 手電筒, 腳踏車燈用之LED Driver(T6340, T8341), 目前已是U-Bike 標準配備.
- 進入車用 (After Market) LED 照明市場. (T8302, T6331, T8322, T8306..)
- T8332FN AEC-Q100 Class 1 認證通過

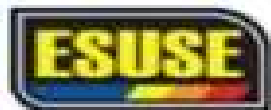
IC Vendor	LED Driver Ics Applications Segment						No. of IC
	TFT LCD Backlighting	Public Display	Consumer Portables	General Lighting	Automotive	High Bay/Street Light	
TMTech			😊	○	♥	○	16
Texas Instruments	♥	♥	😊	○	♥	○	84
Power Analog Microelectronics	♥			♥			9
AnalogicTech	♥		♥				59
Monolithic Power Systems	♥		♥				25
Maxim	♥	😊	😊	♥	♥		112
Linear Technology	♥	😊	😊	♥	♥		95
Analog Devices	♥		○				9
Intersil	♥	○		○	○		15
Freescale	♥			○	○		2
Fairchild				♥		😊	
On Semi	♥	😊	○	○			103
Semtech	♥		♥				33
Infineon				♥	♥		16
STMicroelectroics	○	♥		○			20
Power Integrstions				♥		♥	
Macroblock	○	♥		○		○	33
Supertex	♥			♥		○	26
Diodes	♥			♥	○		25
Rohm Electronics	♥		♥	○			39
Austriamicrosystems	♥		♥				32
Exar	♥		♥	♥			15
Leadis	♥	♥	♥				19
NXP Semicondutors	○	♥	○	😊		😊	52

from: display 2013

Legend: ○ Entry ○ Select 😊 Significant ♥ Focus

服務策略- 以客為尊

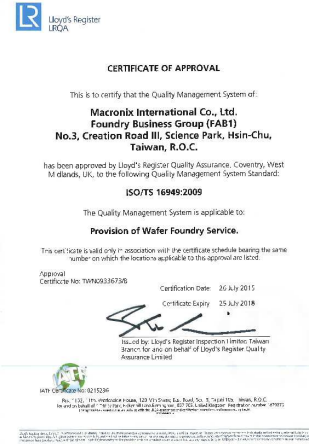
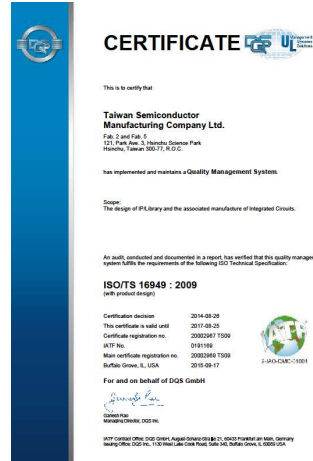
主要客戶群(含最終客戶)



ISO 16949 Certification

(下包製造商)

晶圓製造：



TSMC

MXIC

VIS

封裝測試：



GTK

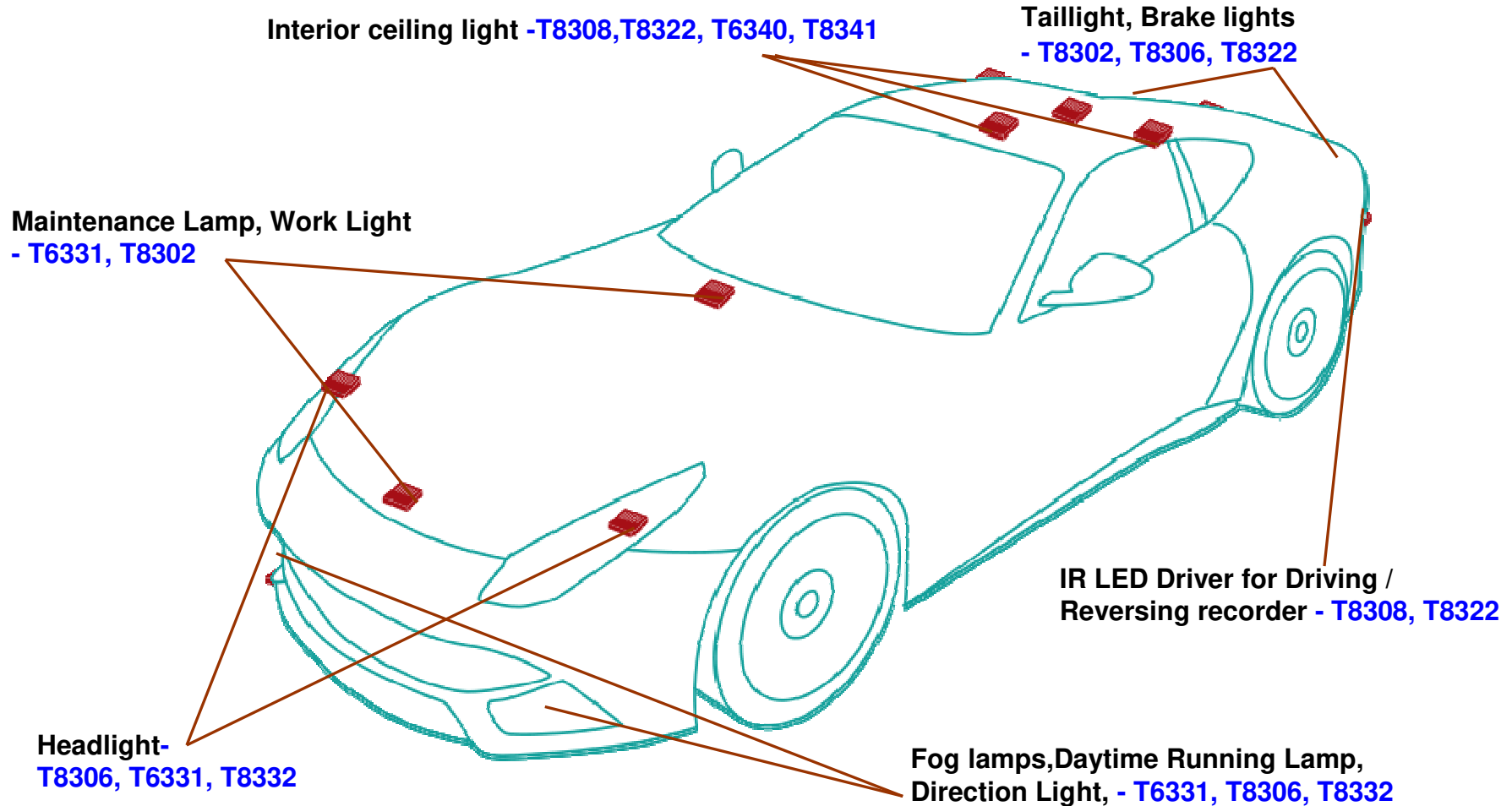


GTBF

Product Selection Guide

P/N	Description	Vin	Max. Iout	Package	Application
T6322A	High Power 1.2A LED Driver With Buck Regulator, 30V	7-30V	1.2A	SOP8,SOT89-5, SOT23	車燈/背光/舞台燈/警示燈/ 檯燈/CCTV/MR16/Lightbar
T8308AX	High Power 0.8A LED Driver With Buck Regulator, 30V	7-30V	0.8A	SOT89-5	車燈/背光/舞台燈/警示燈/ 檯燈/CCTV/MR16/Lightbar
T8322AD/AX	High Power 1.5A LED Driver With Buck Regulator, 30V Working temperature up to 105C	4.5-30V	1.5A	SOP8/SOT89-5	車燈/背光/舞台燈/警示燈/ 檯燈/CCTV/MR16/Lightbar
T6331A	SEPIC(Buck-Boost) LED Driver, External MOSFET	2.7-5.5V	2A @ Vout=10V	SOP8,SOT23-6	車燈/MR16/背光/美甲燈
T8302AX/CD	High Power 1A LED Driver With Buck Regulator, 60V	6-60V	1A	SOT89-5,SOP-8	車燈/舞台燈/RGB球泡燈/ 警示燈
T8306AX/BX	High Power 3A LED Driver With Buck Controller, 36V External MOSFET	7-36V	3A	SOT23-6	車燈/警示燈/魚缸燈
T8332FI/ AD/FN	High Power LED Driver with Buck-boost, Buck, Boost, SEPIC, 60V External MOSFET	5-60V	3A	TSSOP-16, SOP-8, QFN-16	車燈/警示燈/背光/美甲燈
T8300AD	High Power 1.2A LED Driver With Buck Regulator, 30V Working temperature up to 105C	4.5-30V	1.2A	SOP8	CCTV/IP Camera
T8309AD	High Power 1.5A LED Driver With Buck Regulator, 30V Working temperature up to 105C	4.5-30V	1.5A	SOP8	CCTV/IP Camera
T6340A	DC/DC Linear, Constant Current Driver with Programmable Control Function	2.7-6V	0.7A	SOP8,SOT23-6, TO252	露營燈/手電筒/Bikelamp/車 內吸頂燈
T8341A	DC/DC Linear, Constant Current Driver with Programmable Control Function Embedded OTP	2.7-6V	1A	SOP8	露營燈/手電筒/Bikelamp/車 內吸頂燈
T8616AI	60W Linear LED Driver	110VAC/ 220VAC	300mA@110V, 300mA@220V	TSSOP-28	Tube Light/天井燈/路燈/洗 牆燈
T8616AN	100W Linear LED Driver	110VAC/ 220VAC	500mA@110V, 500mA@220V	QFN-48	Tube Light/天井燈/路燈/洗 牆燈

提供完整的 LED 車燈方案



TM LED Driver vs. Suggested Applications

	T6322A	T6340	T6331	T8302	T8308	T8306	T8322	T8300	T8309	T8616	T8332
CCTV(CCD)	V				V	V		V	V		
CCTV(CCD/CMOS)	V				V			V	V		
Bike Lamp		V									
MR16	V		V	V	V		V				V
AR111	V		V	V			V				V
E27/ GU10										V	
T5 Tube							V			V	
T8/T10 Tube				V			V			V	V
Car Lamp	V		V	V		V	V				V
Down Light			V							V	
High Bay										V	
Street Light										V	
Flash Light	V	V					V				
USB Lamp		V					V				

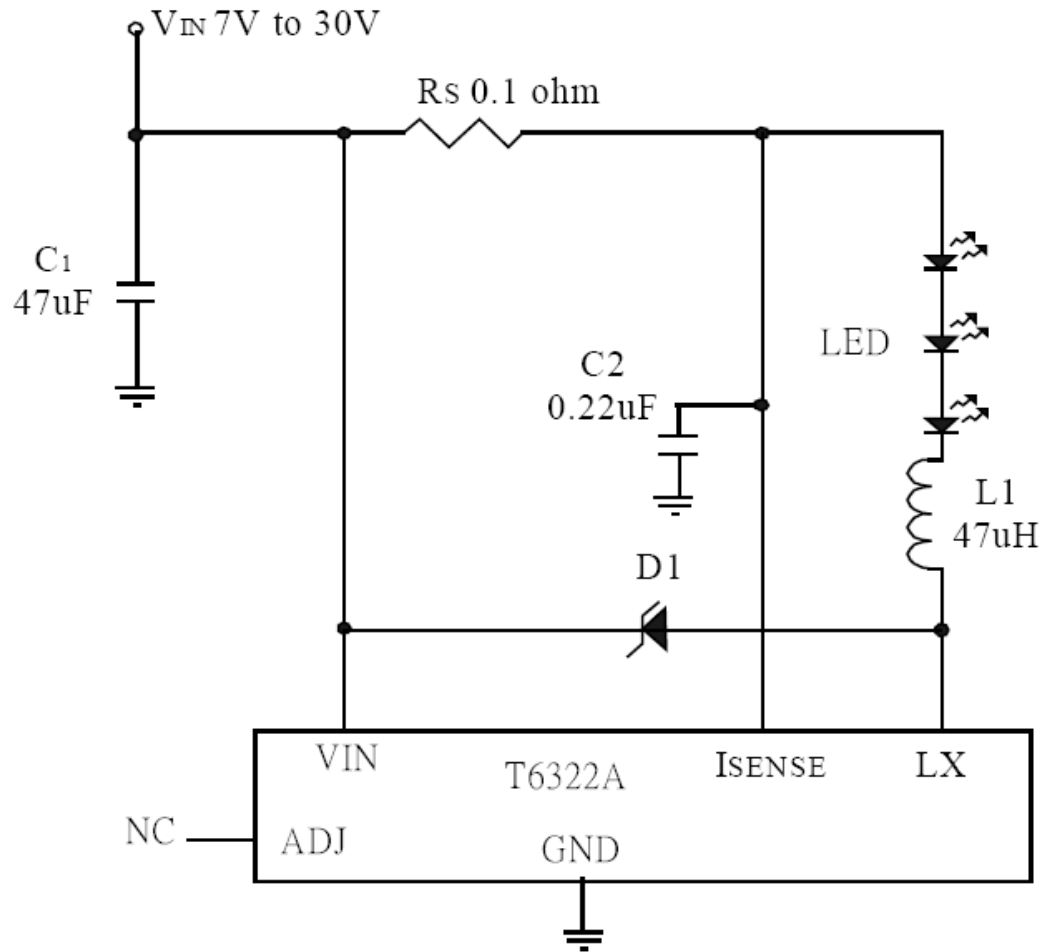
For detail application, need to consult TMTech FAE before production.



T6322A/T8308/T8322 Features

- Integrate Constant Current Driver and Buck DC-DC Converter
- Ultra High Efficiency up to 97%
- Line Regulation around 0.1%/V
- Wide Input Voltage Range: 7~30V
- Up to 1.2A Driving Current (0.8A for T8308, 1.5A for T8322)
- Embedded PWM & DC Level Dimming Control
- Tiny Package SOT-23-6/SOT-89/SOP-8

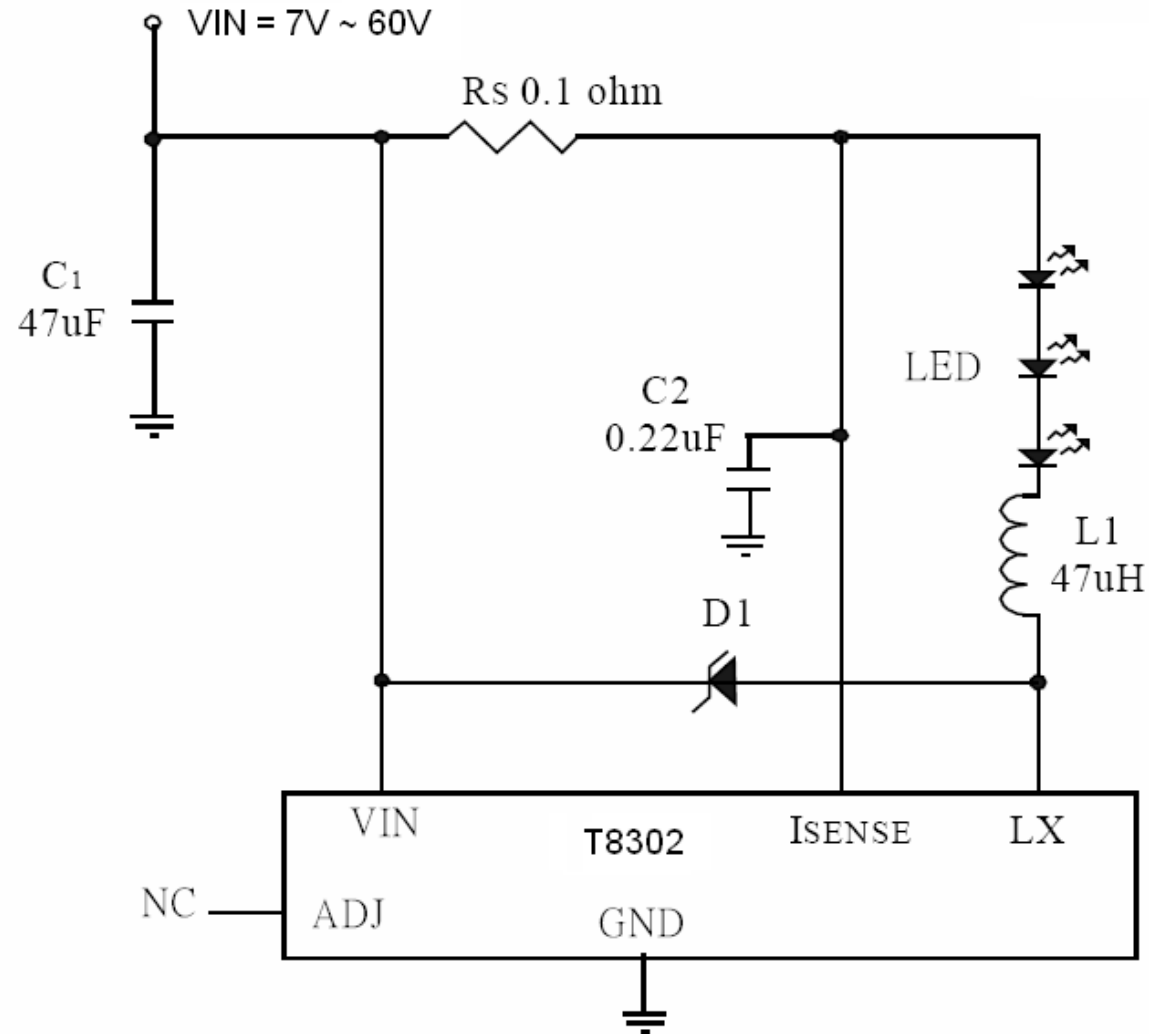
T6322A/T8308/T8322 Application Circuit



T8302 Features

- Integrate Constant Current Driver and Buck DC-DC Converter
- Ultra High Efficiency up to 96%
- Line Regulation around 0.1%/V
- Wide Input Voltage Range: 7V ~ 60V
- Up to 1.0A Driving Current
- Embedded PWM & DC Level Dimming Control
- Tiny Package SOT-89/SOP-8

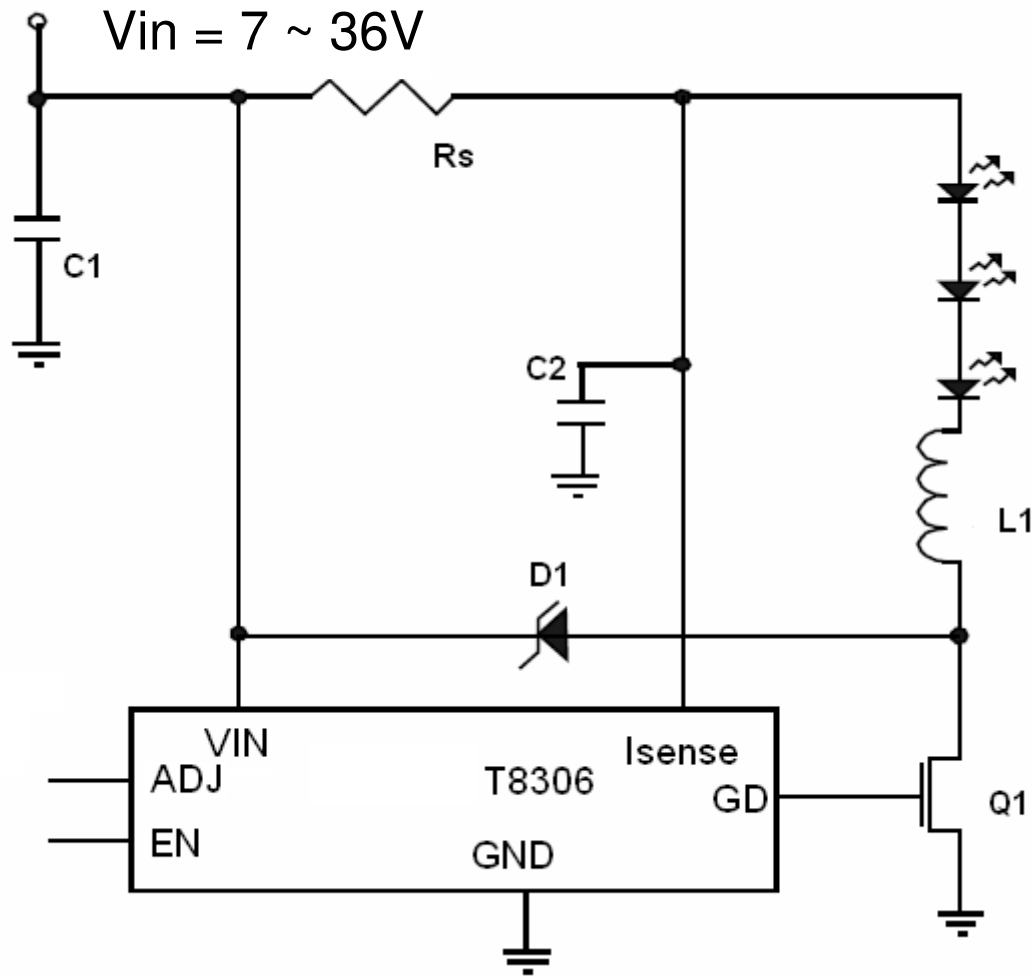
T8302 Application Circuit



T8306 Features

- Integrate Buck Constant Current Controller
- Ultra High Efficiency up to 95%
- Line Regulation around 0.2%/V
- Input Voltage Range: 7V ~ 36V
- Up to 3.0A Driving Current
- Tiny Package SOT-23

T8306 Application Circuit

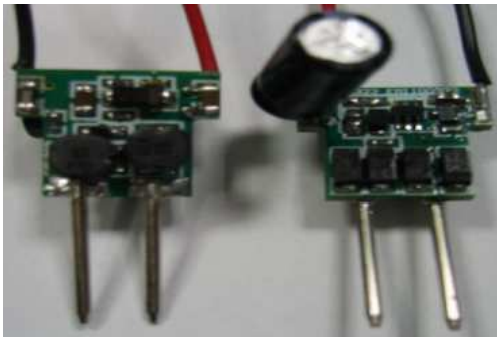


Note: ADJ Depend on Package

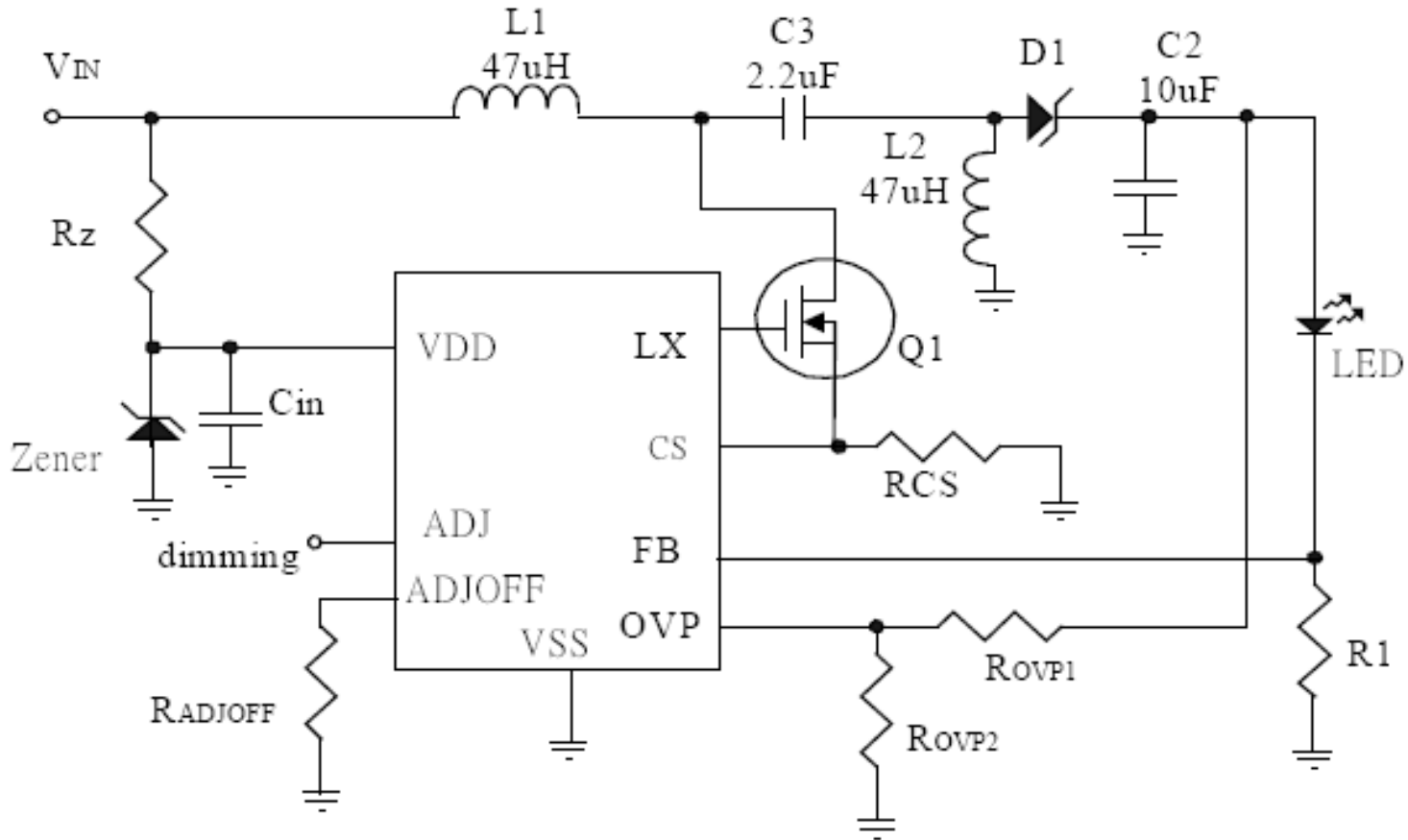
TM CONFIDENTIAL & PROPRIETARY INFORMATION

T6331A Features

- Boost or SEPIC (Buck-Boost) Topologies.
- Feedback Voltage is 0.15V.
- External Switching MOSFET is Needed.
- Support Analog & PWM Dimming Function
- Adjustable Turn-off Voltage for Analog Dimming
- Soft Start & Under Voltage Lock Out Function
- V_{DD} Voltage 2.5 ~ 6.0V
- SOT-23-6/SOP-8 Package.



T6331A Application Circuit

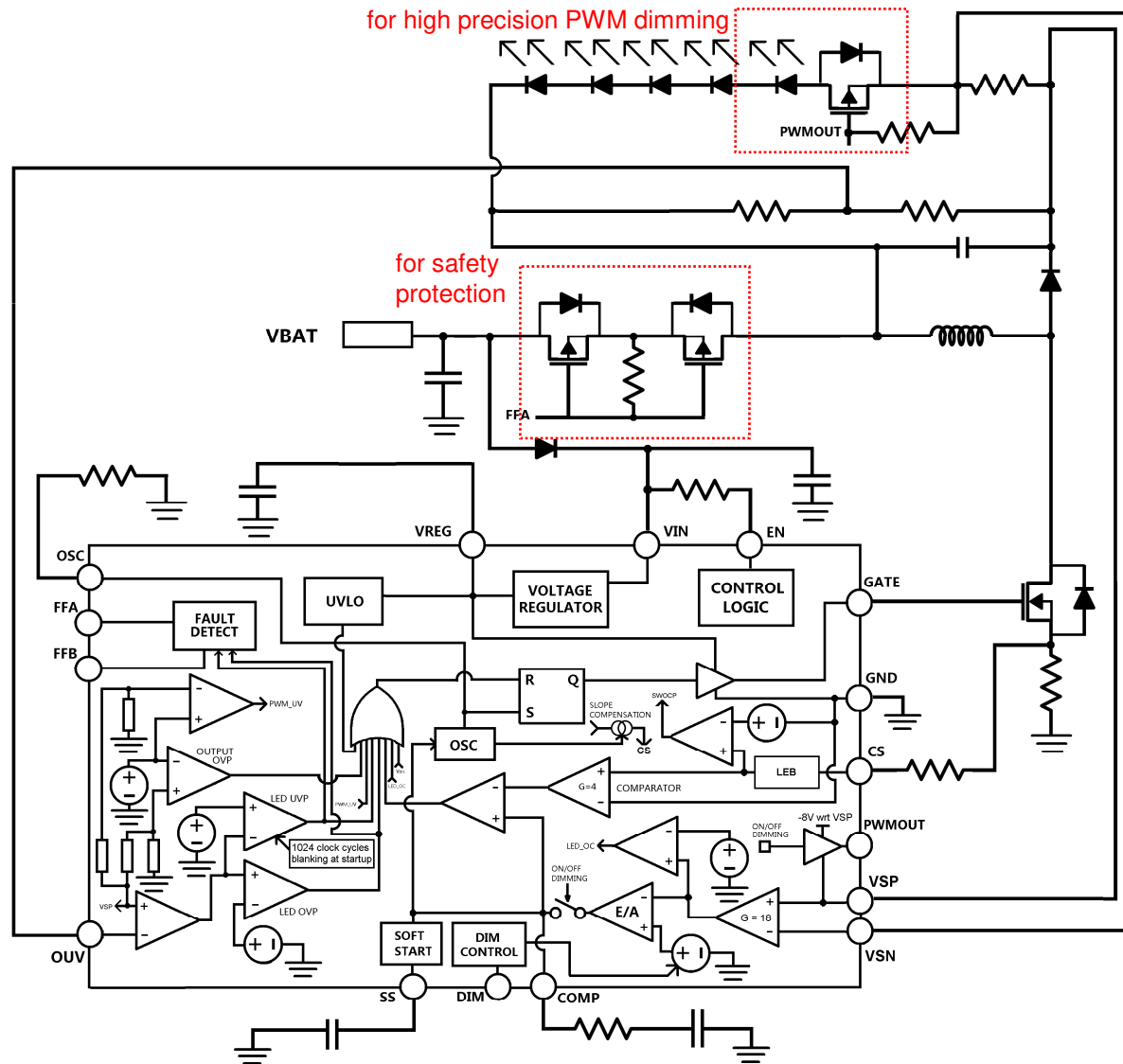


SEPIC (Buck-boost) Reference Circuit

T8332 Features

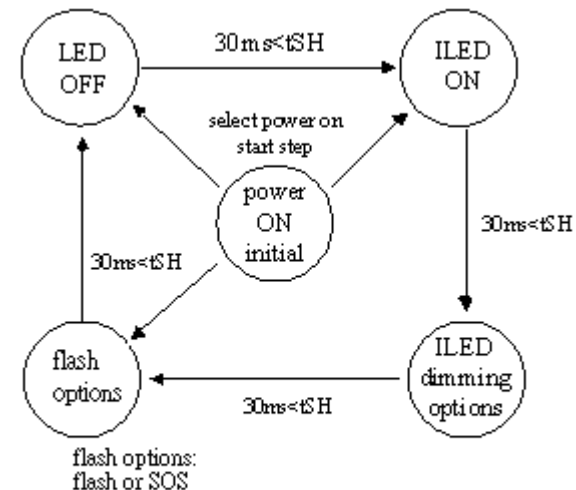
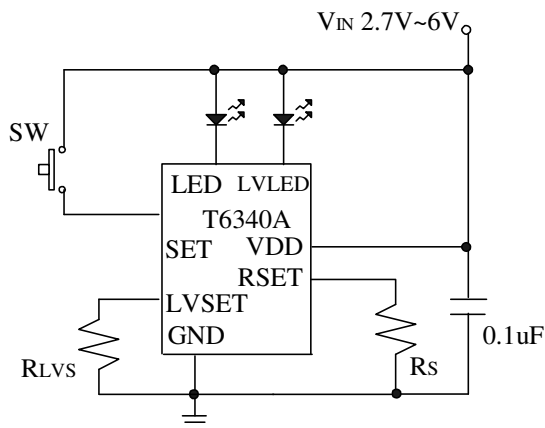
- Buck-boost, Buck, Boost, SEPIC Topologies.
- AEC-Q100 Class 1 Qualified (only for T8332FN)
- Wide Input Voltage : 5~60V
- High Power Driving > 30W
- Low EMI (Frequency Dithering)
- No E-cap
- OVP, OCP, OTP, LED open/short protection
- High Current Accuracy : $\pm 3\%$
- Automotive Temperature Range : -40 ~ 125°C
- External MOSFET is Needed.
- Support Analog & PWM Dimming Function
- TSSOP-16/SOP-8/QFN-16 Package.

T8332 Application Circuit



T6340A/T8341 Features

- Low Drop-out Voltage Constant Current LED Driver
- Flexible Control Function: 5 Step Dimming Control, Flash Control, Embedded OTP (T8341 only)
- Directly Drive without Extra MOSFET, Maximum Current 1A (0.7A for T6340)
- Built-in Low Voltage Detect Function
- SOT-23-6/SOP-8/TO-252 Package (T8341 only SOP-8)



T6340A/T8341 Applications

- Miner's Lamp
- Flash Light, Bike Lamp, Camping Lamp
- Portable Lighting Equipments
- Automotive Interior Lamp



Camping Lamp



Flash Light



Bike Lamp

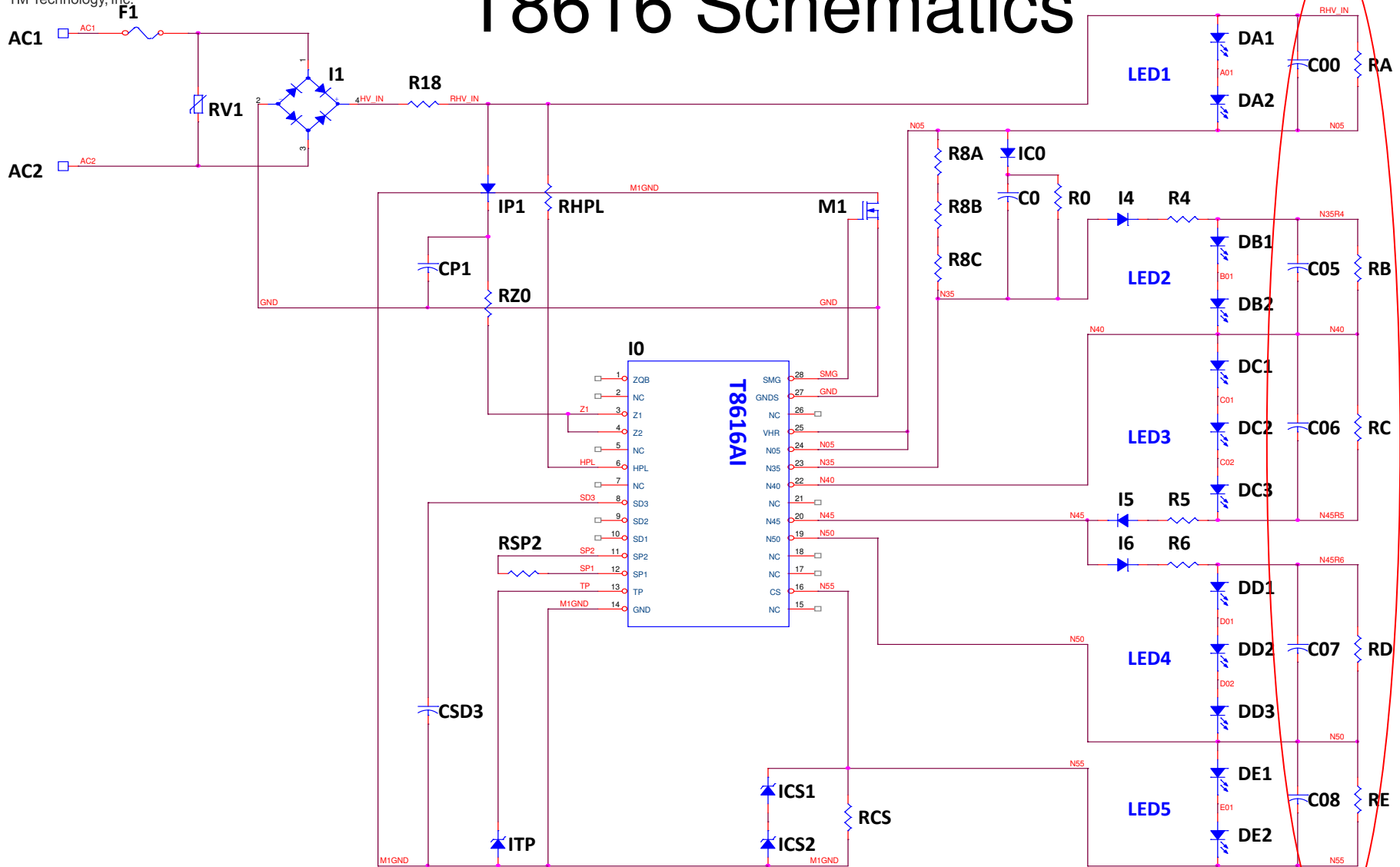


Miner's Lamp

T8616 Features

- 5 LED Chains in Series Linear Driver
- High PF (> 0.95), High Efficiency (> 85%)
- Constant Power
- Thermal De-rating While Junction Temperature over 140°C
- Maximum Driving Current 500mA
- Maximum Driving Power 110W @ AC220V, 60W @ AC110V

T8616 Schematics



Option for flicker improvement