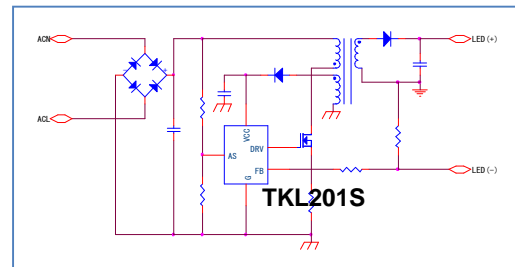
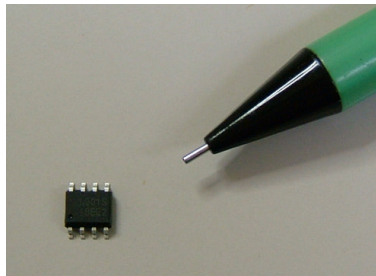


TKL201S

Controller IC of switching regulator designed for fly-back converter for LED drivers. It realizes long life time and high efficiency with lower cost and minimum parts count.

➤ Description

The TKL201S is a switching regulator IC focused on LED driving. It operates with AC supply pulsating current after rectification without smoothing in electrolytic capacitor less method for LED drive. It monitors the load current and realizes constant current drive by adjusting the pulse duty.



Standard isolated driver circuit with minimum parts count

➤ Features

- The TKL201S realizes lower cost and miniaturization of driver circuit with minimum parts count.
- It constitutes isolated and non-isolated fly-back converter.
- It operates with AC supply pulsating current without smoothing by electrolytic capacitor, and also can operate with DC.
- It drives the load with constant current by PWM switching of 67kHz on average to external MOSFET.
- It is capable of worldwide power supply voltage(from 85 to 265V)
- It includes a input voltage monitoring function, which is also simple PFC.
- Over current protection, Over voltage protection, Thermal shut down. If they operate, TKL201S stops switching on latching mode.

➤ Applications

- LED light bulb, LED straight bulb, other LED lighting system
- AC adapter
- Battery charger



➤ **Absolute maximum ratings(Ta=25°C, unless otherwise noted)**

Parameter	Symbol	Ratings	Unit	Note
OCP pin voltage	V _{OCP}	-2~6	V	
Power supply voltage	V _{CC}	32	V	
AS pin voltage	V _{AS}	-0.3~6	V	
LS pin voltage	V _{LS}	-0.3~6	V	
COMP pin voltage	V _{COMP}	-0.3~6	V	
Power dissipation	P _{D1}	1.0	W	※1
Operation temperature	T _{opr}	-20~+125	°C	
Storage temperature	T _{stg}	-40~+125	°C	
Channel temperature	T _{ch}	+150	°C	

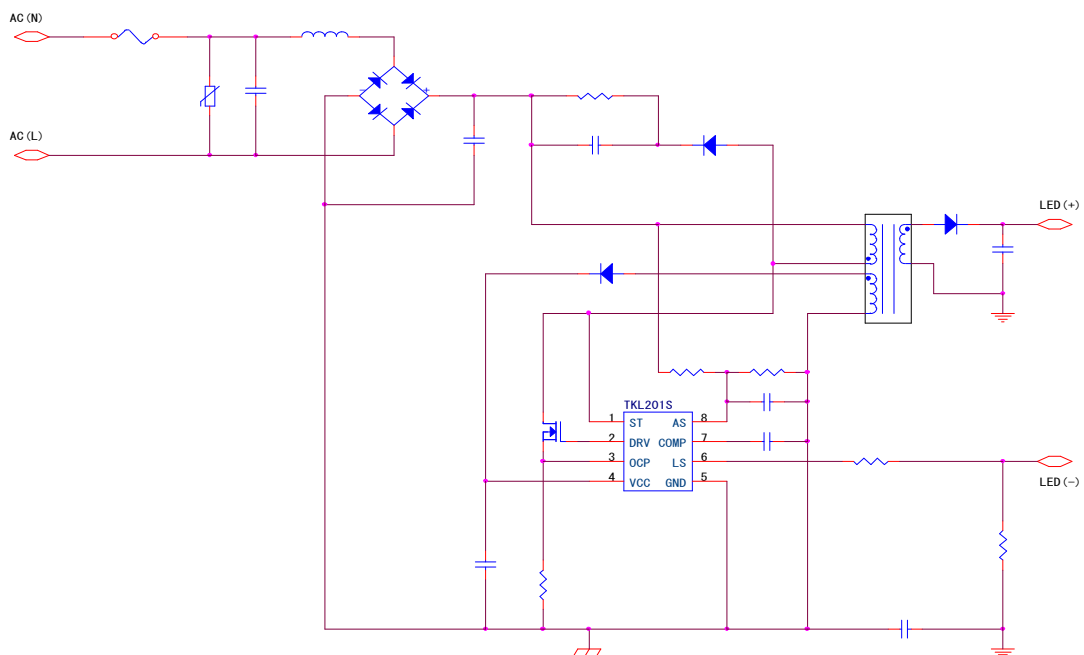
※1 : Mounted on Board TBD,SOP8



Top View

➤ **Example of application**

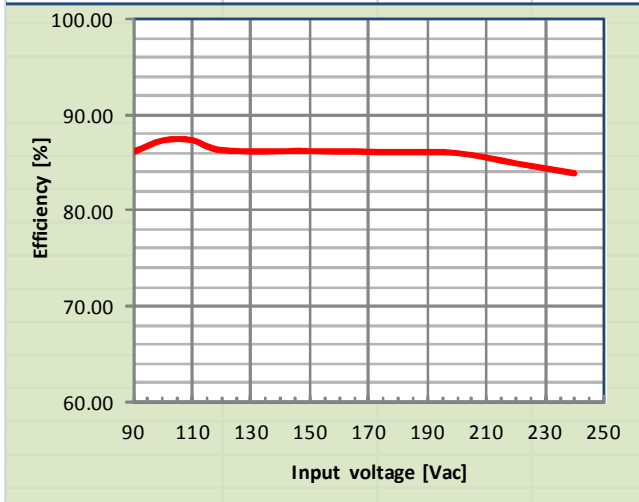
LED light bulb (non isolated, worldwide power supply voltage input, Maximum output is 9W.)



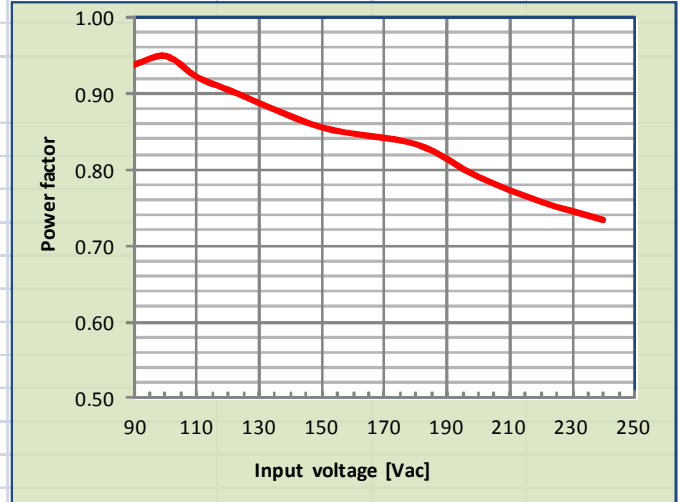
➤ Typical Performance Characteristics

A power supply of 9W as power consumption(output 78V, 0.1A)

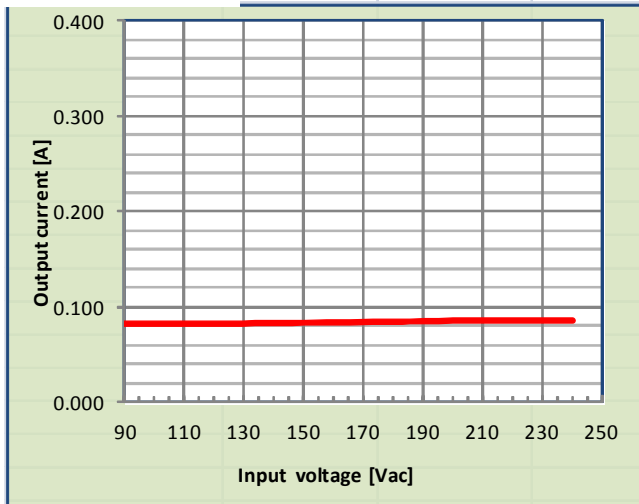
Efficiency



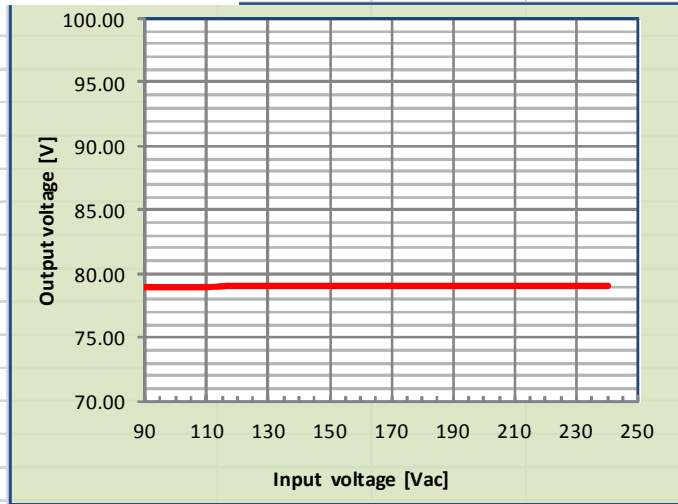
Power Factor



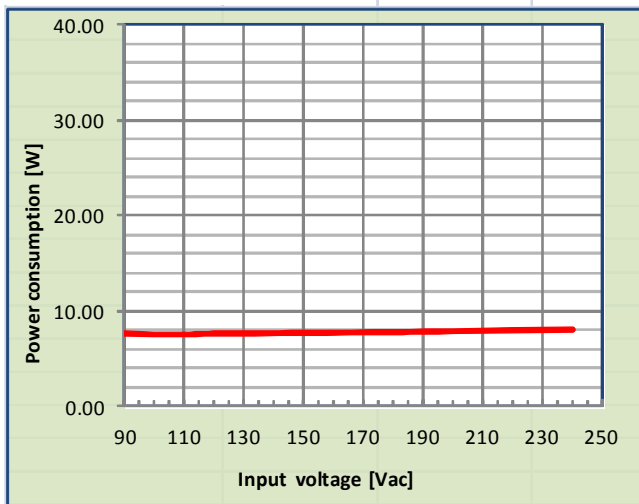
Output Current



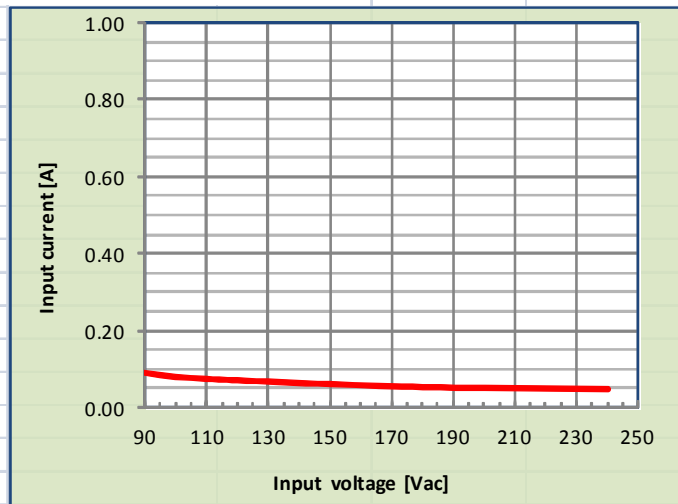
Output Voltage



Power Consumption



Input Current



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➤ Contact

Distributor	
SIIX Corporation(sole agent)	
the person in charge	Tokyo office : Suzuki, Ijichi
TEL	+81-3-3238-7002
FAX	+81-3-3238-7010
Mail	hideo.suzuki@siix.co.jp, NORIKO.IJICHI@siix.co.jp
Web	http://www.siix.co.jp/
Manufacturer	
Takion Co., Ltd.	
TEL	+81-3-3495-4801
FAX	+81-3-3495-6040
Mail	info@takion.jp
Web	http://www.takion.jp/