

## DESCRIPTION

The PT6905 is a continuous mode inductive step-down converter with three-stage dimming, designed for driving single or multiple series white LEDs efficiently from a voltage source higher than the output LED voltage. The IC operates from an input supply between 6V and 36V and provides three-stage dimming with output current of up to 1.2Amp.

The PT6905 includes the internal switch and a high-side output current sensing circuit, which uses an external resistor to set the average output current.

The PT6905 has a three-stage dimming function. That is to say the output current will be adjusted to 100% when the first time power on corresponding to stage-one, 30% when the second time power on corresponding to stage-two and 10% when the third time power on corresponding to stage-three. The cycle will restart to stage-one again when the fourth time power on. So this cycle will go on if the power off time is no less than six seconds according to the external capacitor Cs of 10 $\mu$ F. And the power could be saved if less light needed.

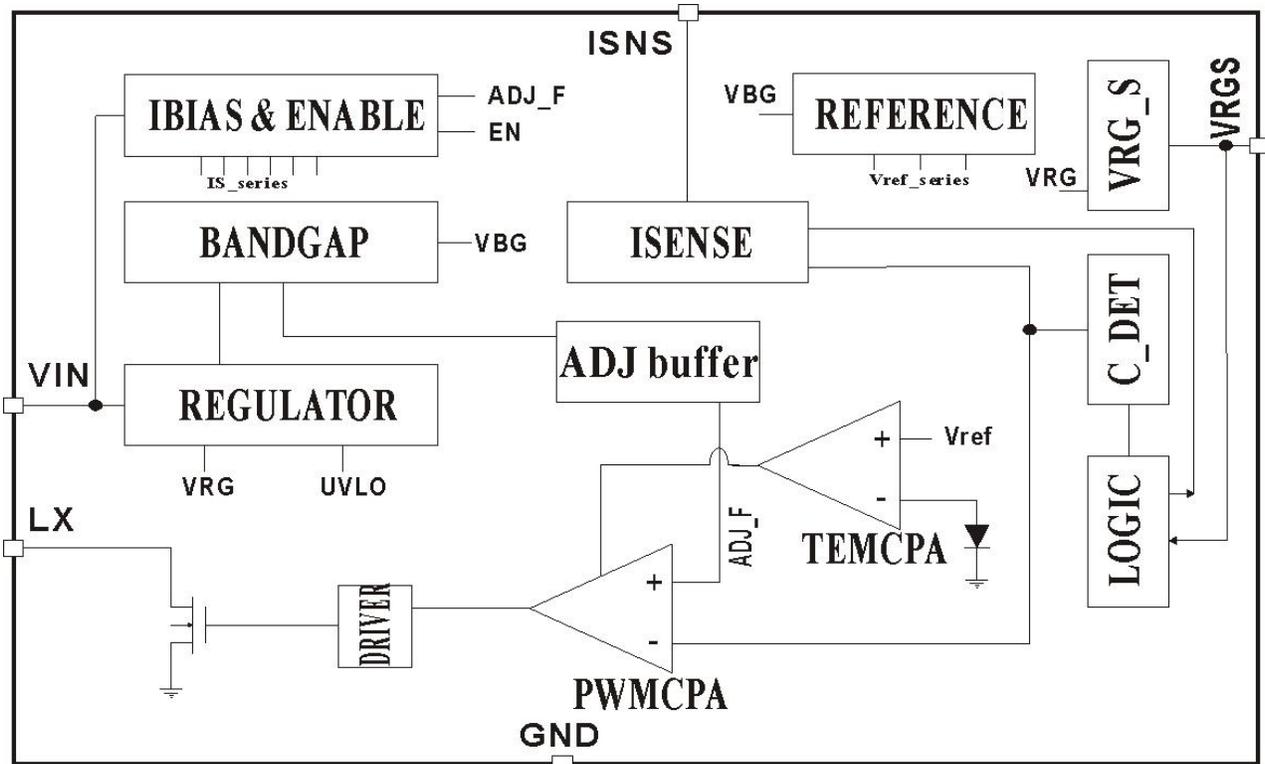
## FEATURES

- High Efficiency (up to 95%)
- Maximum 1.2A Output Current
- Wide Input Voltage: 6V ~ 36V
- Three-Stage Dimming
- Typical 5% Output Current Accuracy
- Thermal Shutdown 150°C Typical
- SOT-89-5L Package

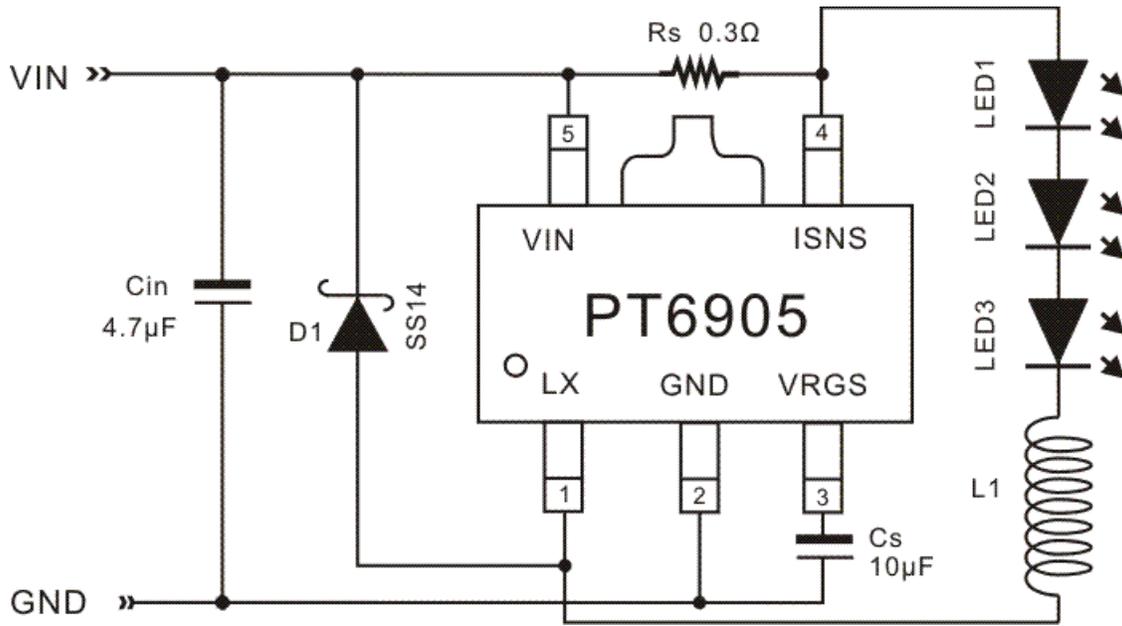
## APPLICATIONS

- DC/DC LED Driver
- Low Voltage Industrial LED Lighting
- Low Voltage Halogen Replacement LEDs
- Decorative LED Lighting
- LED Table Lighting

## BLOCK DIAGRAM



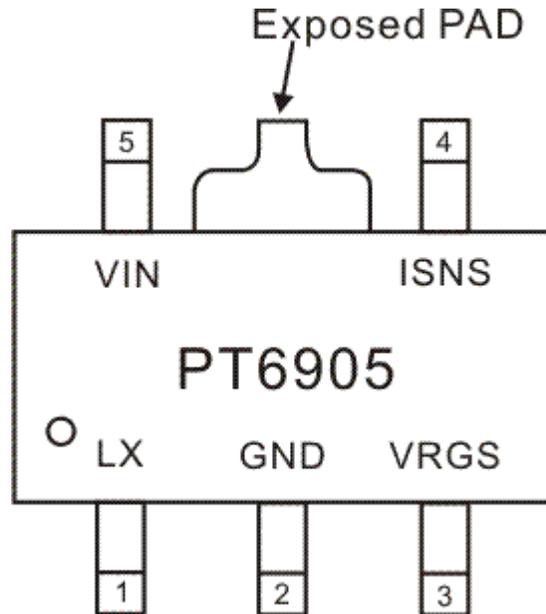
# TYPICAL APPLICATION



## ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT6905	SOT-89-5L	PT6905

## PIN CONFIGURATION



## PIN DESCRIPTION

Pin Name	Description	Pin No.
LX	Drain of The Internal NMOS Switch	1
GND	Signal Ground	2
VRGS	Output of Internal Regulator Voltage of Logic	3
ISNS	Inductance Current Sense Pin	4
VIN	Input Supply Pin. Must be locally bypassed.	5
Exposed PAD	Power Ground	

## **IMPORTANT NOTICE**

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PTC cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a PTC product. No circuit patent licenses are implied.

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