

# HK612

## TOUCH DIMMER IC

## LIGHT CONTROL WITH 4 SECTIONS

### Features

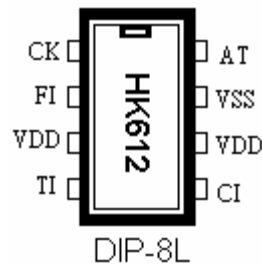
- \* No mechanically switch elements.
- \* High sensitivity and stability for long connecting wire and heavy loading ( 400pf ) on sense-plate for human body capacity = 50pf.
- \* Very small number of peripheral components required.

### General Description

The HK612 IC is a kind of CMOS technology permitted to design 4 steps touch-dimmer. The detailed functions are as follow :

STEPS	BRIGHTNESS DELAY (60Hz)	BRIGHTNESS DELAY (50Hz)
Off		
↓		
Night Light	5.9 +/- 0.4 mS	7.0 +/- 0.4mS
↓		
Mood Light	4.6 +/- 0.3 mS	4.7 +/- 0.3mS
↓		
Medium Light	3.0 +/- 0.3 mS	3.5 +/- 0.3mS
↓		
High Light	1.0 +/- 0.2 mS	1.0 +/- 0.2mS
↓		
Off		

### PinOut Diagram



### Pin Assignment

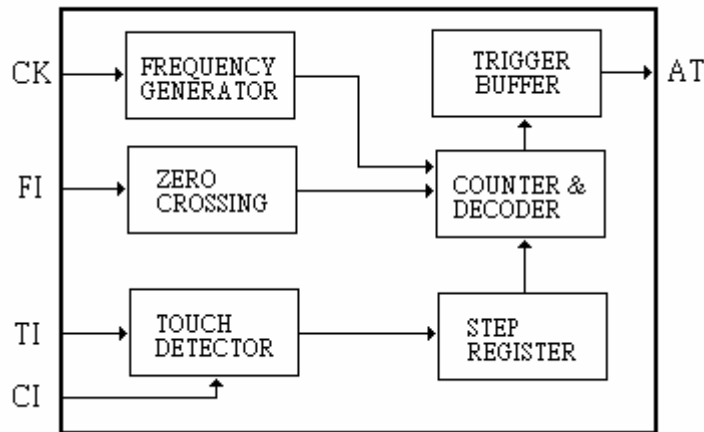
PIN NO	PIN NAME	DESCRIPTION	I/O
1	CK	Clock Input	I
2	FI	60 Or 50 Hz Line Frequency	I
3	VDD	Power Supply Pin	P
4	TI	Touch Input	B
5	CI	Sense Control Input	B
6	VDD	Power Supply Pin	P
7	VSS	Power Supply Pin	P
8	AT	Angle-Trigger Output	O

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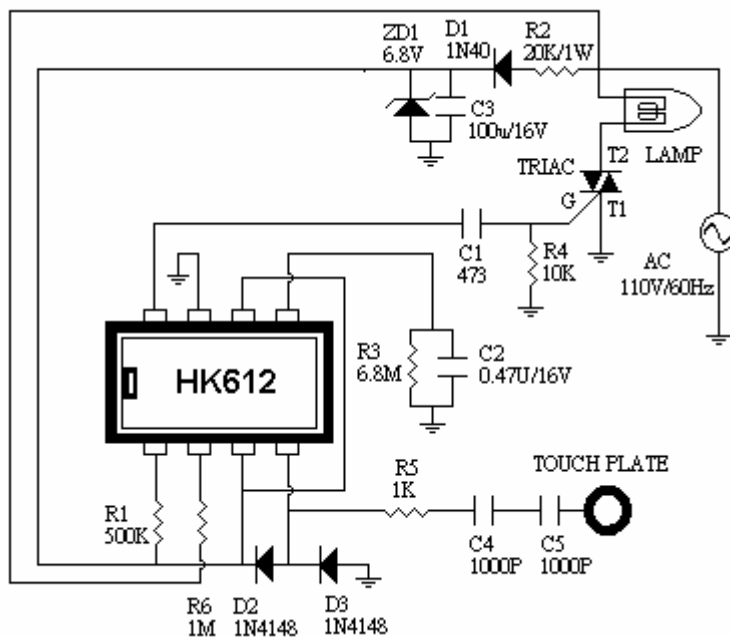
### Block Diagram



### Operating Parameter :

- ( 1 ) Operating Voltage : 5 - 6.8 V
- ( 2 ) Operating Current :  $\leq 2.0$  mA
- ( 3 ) Trigger Sinking Current  
AT Pin  $\leq -40$  mA ( $V_{out} = 3v$ )
- ( 4 ) Input Leakage :  $\leq 0.5$   $\mu$ A
- ( 5 ) Input Low Voltage :  $\leq V_{SS} + 0.5$  V
- ( 6 ) Input High Voltage :  $\geq V_{DD} - 0.5$  V
- ( 7 ) Operating Temperature :  $0^{\circ}C \sim 80^{\circ}C$
- ( 8 ) Storage Temperature :  $-20^{\circ}C \sim 120^{\circ}C$

### Application Circuit



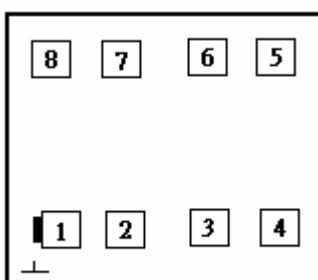
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POWER SUPPLY (AC / F)	100V ~ 120V	220V ~ 240V	50Hz	60Hz
R1	-----	-----	620K	500K
R2	20K/1W	40K/2W	---	---
R6	1M	1.5M	---	---

### Pad Diagram



CHIP SIZE : 800 x 810 um\*um

PIN NAME	PIN NO.	X	Y
CK	1	-264.70	-274.00
FI	2	-133.20	-274.00
VDD	3	128.40	-274.00
TI	4	254.00	-274.00
CI	5	245.00	274.00
VDD	6	113.20	274.00
VSS	7	-82.20	274.00
AT	8	-248.20	274.00