

T&J ELECTRIC (SINGAPORE) PTE LTD

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Date: 30/08/2012

Subject: Lamp Flickering when using with Deco LED Switches

Applicable products:

- W2711L-xx, W2711L-2-xx
 - W271L-xx, W271L-2-xx
 - W272L-xx, W272L-2-xx
 - W273L-xx, W273L-2-xx
- xx : Color code

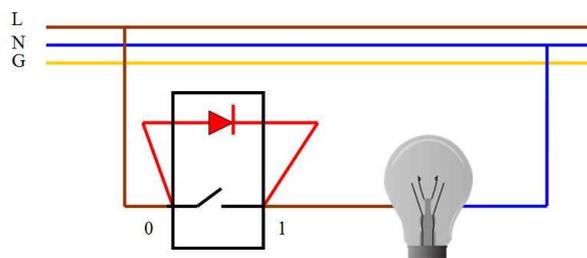
Symptom:

- (1) If light source is low-watt fluorescent lamp, energy saving lamp, LED lamp and other built-in electronic-circuit lamps, the lamp may be flickering when it is turned off by the Deco LED switch.
- (2) When an electrician test the switch output with "test pen", he shall find that the "test pen" is light up even the switch has been turned off.

Reason:

As shown on drawing 1, Deco LED switch has built-in a LED circuit across terminal '0' and '1'.

When switch is turned off, a very small leakage current (around 80uA) shall go through LED circuit and lamp. This leakage current shall light up the built-in LED.



Drawing 1: Schematic drawing of Deco LED switch

if it is a low-watt PLC lamp, fluorescent lamp or other lamp with built-in electronic circuit, this leakage current may strong enough to start up the lamp, but it shall die out quickly as it can not totally turn-on the lamp. That is the cause of flickering on the lamp.

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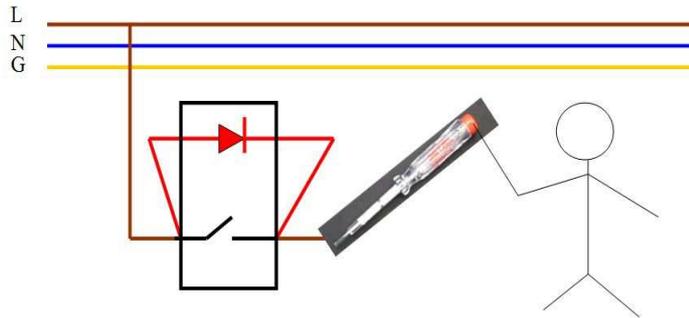
When an electrician use a "test pen" to test the switch output, the "test pen" shall light-up even the switch has been turned-off.

it shall not harm any person even the person touch the switch's output directly.

Since the current flow through LED circuit is in the order of 80uA and there are 6M resistance in the circuit, it shall not cause a electric shock.

Suggestion:

Deco LED switch is designed for incandescent lamp or fluourescent lamp with more than 30W, it cannot be used with other light souce especially lamps with built-in electronic circuit (e.g. LED lamp)



Drawing 2: test Deco switch with "test pen"