



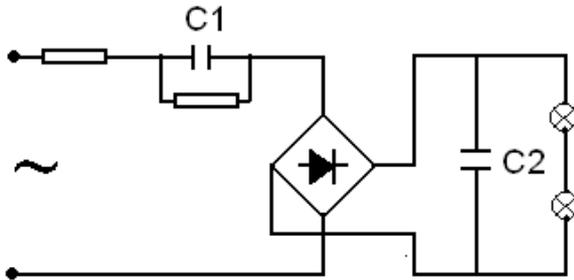
Film capacitors' solutions for LED

The power of LED is from 1W to 18W. (All in one LED lamp)

The main designs are as following:

1: Using design of the film capacitors for capacitive divider

C1:film capacitor,C2:Elec capacitor,according to different designs,C1 as capacitive divider is having two below different situations.



1.1:when the input voltage is equal to 110Vac,C1 is strongly recommended to use the design of FARA CL21III-250V (advantage:Low price) ,also being recommended to use the design of FARA CL25-250V (advantage:Small size)

C1	CL21III-250V-104~475(mainly recommended)
	CL25-250V-104~475(recommended according to customer's requirements)

1.2:when the input voltage is up to 220Vac,

A:when the power of LED is supplied from using high voltage chip,the divided voltage between C1 will be 160Vac,for this design of LED,we strongly recommend the below FARA parts:

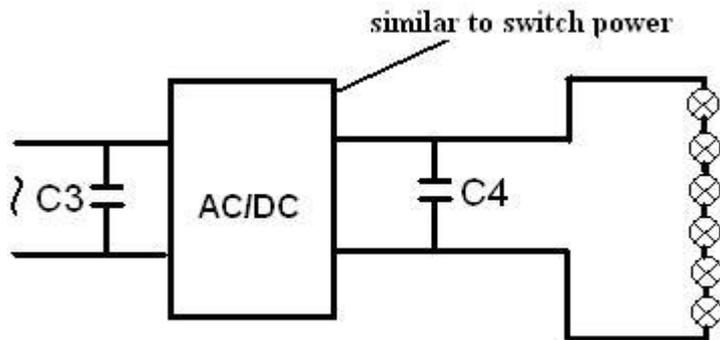
C1	CL21III-250V-104~475(strongly recommend)
	CL25-250V-104~475(recommended according to customer's requirement)
	CL21-250V-474/564/684/824KP10 (Special design,pitch will be P10,getting suggestion from technical engineer according to customer's application)
	CL21-300V-274/334/394KP10 (special design, the highest voltage of C1 will be 180VAC,getting suggestion from technical engineer according to customer's application)

B: when the power of LED is supplied from using low voltage chip, the input voltage is completely divided by C1, the voltage of C1 will be 220Vac, for this design of LED, we strongly recommend the below FARA parts:

C1	CL21III-400V-104~155(strongly recommended) (customer always require the voltage of U_R will be up to 220Vac)
	CL21-630V-104~155J(customer always require the voltage of U_R will be up to 305Vac,required special design,contacting with technical engineer)



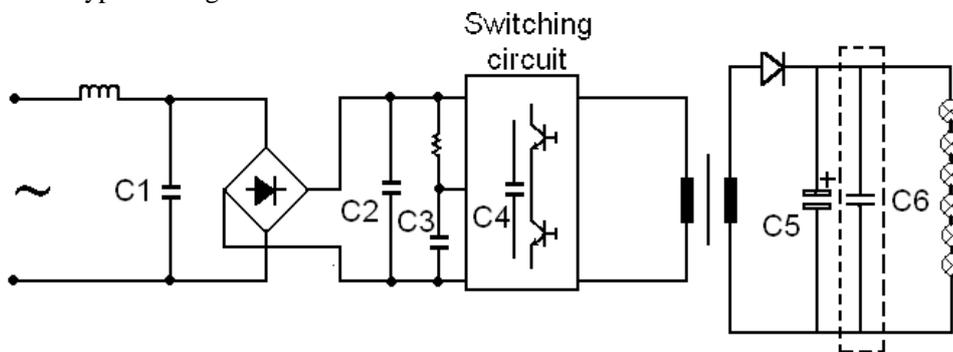
2:The design of LED using the design similar to switch power (typical circuit as following)



The designs for LED have many different ideas, such as having EMI or not, having PFC or not, etc. For the above design, the below FARA film caps are strongly recommended:

C3	MKP62-305VAC-103/223/333/473P7.5----104P10(mainly recommended)
	CL21III-400V series (mainly recommended)
C4	CL21X-250V/400V/450V(mainly recommended)
	CL23B/CL25-250V/400V(recommended according to customer's requirements)

3:The typical design of CFL:



C1	CL21III-250V/400V(mainly recommended)
C2	CL21X-250V/400V/450V(mainly recommended)
	CL23B/CL25-250V/400V(recommended according to customer's requirements)
C3	CL23B-63V/100V(mainly recommended)
C4	CL23B-630V or CBB21-630V/1000V(mainly recommended)
C5/C6	CL23B/CL25/CL23-50V/63V-225/475/685/106

If having anything I can do for you, pls feel free to contact me!

Xiamen FARATRONIC Co.,Ltd

David@faratronic.com.cn

2013-02