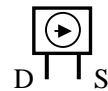
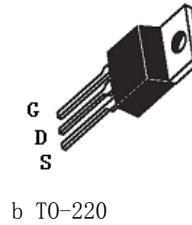
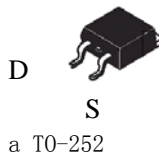


China Nanker Group uses the world first patented N-MOS depletion device, CCS-L series, which supply constant current from 2 to 50 volts for LED lighting application. This series product connected in series with string of LED lights can be connected directly to the output of AC line voltage after full bridge rectifying. It will provide minimum power waste (< 2 %) at normal AC voltage when the number of LED lights is properly chosen so that the total voltage across the LED string is slightly below the normal AC rectified voltage minus the CCS-L turn-on voltage. CCS-L series product serves as voltage and current protection device for all LED lights in series with it. It is also an energy efficient and environmental friendly LED driver. It comes in TO-252 and TO-220 package form.

Features

- Constant Current Specification: 25mA, 50mA, 75mA, 100 mA
- Constant Current Voltage Range: 2.0V-40V
- Current Control Accuracy: ±10%
- Turn-on Voltage: 2-4V
- Working Voltage Range: 220VAC-265VAC
- Very Little EMC Radiation

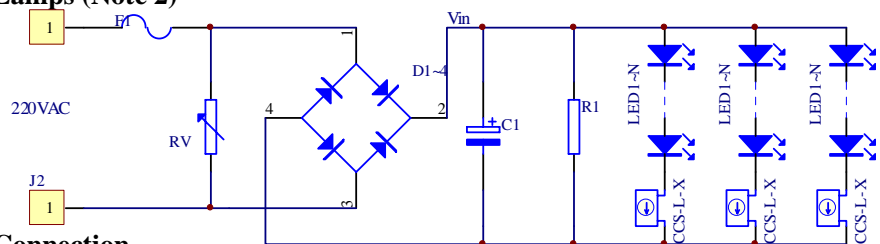


D: Current Input Port, S: Current Output Port

Electric Parameters (@T_J=25°C)

Item NO.	Symbol	Description	Min.	Typ.	Max.	Unit	Remark
CCS-L-X	ΔV_{DSM}	Max. Working Voltage			60	V	Note 2
	ΔV_{DSC}	Constant Current Voltage Range	V_{D50}		50	V	Note 2
	ΔI_P	Current Control Accuracy		±10		%	
	$\rho = P_{CCS}/P_i$	CCS Power/ Input Power Ratio (Power Loss Ratio)		≤2.0		%	@ $\Delta V_{DSC}=5V$
CCS-L-1	V_{D50}	Turn-on Voltage		2.0		V	@ $I_{OUT}=I_{DSC}$
CCS-L-2				3.0			
CCS-L-3				3.5			
CCS-L-4				4.0			
CCS-L-1 (A/B/C/D)	I_{DSC}	Output Current		22/24/28/32		mA	TO-252
CCS-L-2				50			TO-220
CCS-L-3				75			
CCS-L-4				100			

Application Circuit for 220V AC Lamps (Note 2)



Application Note for LED Serial-Connection

$$V_{in} = V_F \times N + [V_{D50} + (2 \sim 5)]$$

- 1 V_F is the Forward Voltage of LED;
- 2 N is the number of LED connected in series, determined by input voltage V_{in} .
- 3 V_{D50} is the turn-on voltage of CCS-L.

China Nanker Group

ADD: Nanker Building, Jian-ye Fifth RD
Gongbei, Zhuhai, Guangdong, 519020, CHINA

TEL: 86-756-8128088(100 Lines)
FAX: 86-756-8889513, 8128078

Shenzhen Sales Office

ADD: No.A101-102, Harbin Institute of
Technology R&D Building, Science South
Tenth Road, High-Tech Region, Shenzhen,
Guangdong, 518100, CHINA

TEL: 86-755-86022782 86022783
FAX: 86-755-86022774

Guangzhou Nanker

ADD: Tianfeng RD, Science City,
Guangzhou, Guangdong, CHINA

TEL: 86-020-32291168
FAX: 86-020-32291088