CYT8000D switching dimming / toning constant current LED IC chip

CYT
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General Description

CYT8000D is a switching dimming / toning constant current LED IC chip. It's suitable for AC 180V-240V or AC 90V-130V input voltage, constant precision< ± 5%.

When the CYT8000D is used to 3 channel dimming, the output current can be changed by turning on / off power supply, thus changing the brightness of LED. The dimming ratio can be set through external CS resistors.

When the CYT8000D is used to 3 channel color temperature adjustment, the current of two output port can be changed by turing on / off power supply to achieve the LED lamp bead light on / out alternately of two different color LED , and then achieve the function of adjusting color temperature. The output power can be set through external CS resistors.

Simple overall design structure, with over-temperature and over voltage protection function, no transformer and electrolytic capacitance, fully SMT processing and automatic operation can be realized with only a few components on the periphery of the drive scheme.

Electric Characteristics

Unless otherwise stated, T_A=25°C.

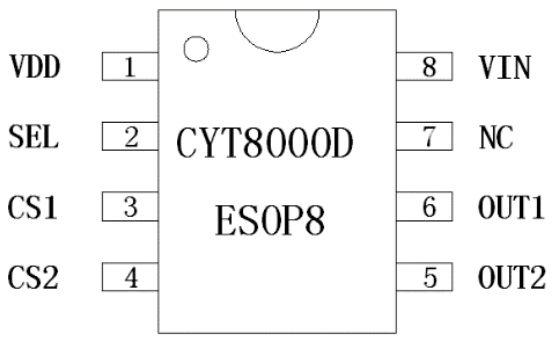
Symbol	Description	Condition	Min.	Typ.	Max.	Unit
$I_{OUT1\sim2}$	Output current	-	-	-	100	mA
I_{JEFT}	JFET max curent	-	0.8	2.0	2.5	mA
I_{DD}	Quiescent current	V_{IN}=30V	0.05	0.11	0.15	mA
$V_{CS1\sim2}$	CS port voltage	V_{IN}=30V， $V_{OUT1\sim2}$=10V	-	0.6/0.3	-	mA
V_{DET_CLR}	Switch detection reset	-	-	2.3	-	V
V_{CC_ON}	VCC staring voltage	-	-	5.6	-	V
V_{CC_UVLO}	VCC under voltage protection threshold	-	-	5.1	-	V
I_{SEL}	Mode selection current	-	-	6.5	-	μA
T_{SC}	Over-temperature compensation point	-	-	140	-	℃

Absolute Maximum Ratings

Unless otherwise stated, T_A=25°C.

Symbol	Description	Range	Unit
V_{OUT}	The OUT port voltage	-0.5～500	V
V_{IN}	The VIN port voltage	-0.5～500	V
V_{CS}	The CS1/CS2 port voltage	-0.5～6	V
V_{DD}	The VDD port voltage	-0.5～8	V
V_{CC}	The SEL port voltage	-0.5～6	V
P_D	power dissipation	1.25	W
θ_{JA}	The thermal resistance from PN junction to environment	100	℃/W
T_{OPT}	Operating temperature	-40~150	°C
T_{STG}	Storage temperature range	-50~150	°C
V_{ESD}	HBM ESD	2	kV

Pin Diagram(top view)



Typical Application