CYT8000D

2023.03.07

CYT Semiconductor

CYT8000D switching dimming / toning constant current LED IC chip

General Description

001 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 $< \pm 5\%$.

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, $T_{A}=25^{\circ}C_{c}$

Symbol	Description	Condition	Min.	Тур.	Max.	Unit
I OUT1~2	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
Vcs1~2	CS port voltage	VIN=30V, VOUT1~2=10V	-	0.6/0.3	-	mA
$V_{\text{DET}_\text{CLR}}$	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
Tsc	Over-temperature compensation point	-	-	140	-	°C

Absolute Maximum Ratings

Unless otherwise stated, $T_A=25^{\circ}C$.

Symbol	Description	Range	Unit
Vout	The OUT port voltage	-0.5~500	V
V _{IN}	The VIN port voltage	-0.5~500	V
Vcs	The CS1/CS2 port voltage	-0.5~6	V
V _{DD}	The VDD port voltage	-0.5~8	V
Vcc	The SEL port voltage	-0.5~6	V
PD	power dissipation	1.25	W
$ heta_{JA}$	The thermal resistance from PN junction to environment	100	°C/W
T_{OPT}	Operating temperature	-40~150	°C
Tstg	Storage temperature range	-50~150	С°
V _{ESD}	HBM ESD	2	kV

Pin Diagram(top view)



Typical Application

