CYT3000B linear constant current IC on high voltage LED chips

CYT
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General Description

CYT3000B is a linear constant current IC on high voltage LED chips, used in LED lighting field. Through a unique patented technology and constant current control, IC CYT3000B can realize constant current precision less than ±5%, the output current can be regulated by the external R_{CS} resistor. The IC CYT3000B with high power factor and low harmonic distortion.

CYT3000B have the function of the output current with the temperature automatic adjustment. When the temperature is too high, it will reduce the output current, in order to achieve the effect of lowering the temperature, temperature protection point can set through the pin RTH's external resistance.

CYT3000B has the function of the input power automatic adjustment when the input voltage is too high, it will reduce the output current, reduce the magnitude of the current through the external resistors R_D Settings, to ensure the input power does not change with the input voltage

Simple system structure , the IC CYT3000B has a variety of protection function without transformer and electrolytic capacitor, the IC CYT3000B use few peripheral components, can save the space of electronic components, which can realize all SMT processing and full automatic operation.

Electric Characteristics

Unless otherwise stated, T_A=25°C.

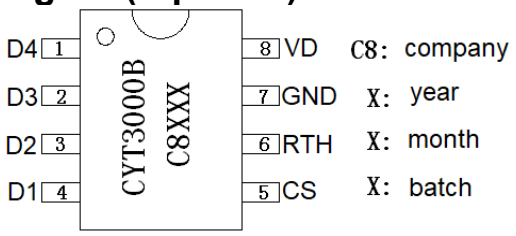
Symbol	Description	Condition	Min.	Typ.	Max.	Unit
V_{D1}	D1 input voltage	-	9	-	-	V
I_{OUT}	Output current	-	-	-	100	mA
V_{R1}	CS port voltage	V_{D1}=10V	-	0.362	-	V
V_{R2}		V_{D1}=V_{D2}=10V	-	0.572	-	V
V_{R3}		V_{D1}=V_{D3}=10V	-	0.70	-	V
V_{R4}		V_{D1}=V_{D4}=10V	-	0.906	-	V
V_{DS_BV1}	D1/D2 Port pressure	I_{D1}=I_{D2}=0A	750	-	-	V
V_{DS_BV2}	D3/D4 Port pressure	I_{D3}=I_{D4}=0A	550	-	-	V
D_{IOUT}	I_{OUT} precision	I_{OUT}=10mA ~100mA	-	±5	-	%
V_{RTH}	The set port voltage of temperature automatic adjustment functions	-	-	1.0	-	V
T_{SC}	Temperature compensation point	RTH pin hanging	-	145	-	°C

Absolute Maximum Ratings

Unless otherwise stated, T_A=25°C.

Symbol	Description	Range	Unit
T_{OPT}	Operating temperature	-20~120	°C
T_{STG}	Storage temperature range	-50~150	°C
V_{ESD}	HBM ESD	2	kV

Pin Diagram(top view)



Typical Application