CYT1002AG single-segment line voltage compensation linear constant current LED control chip

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General Description

CYT1002AG is a dual-channel high-voltage single-segment line voltage compensation linear constant-current LED driver chip, which is used in LED lighting field. The chip achieves a constant current accuracy of less than 4% through a unique patented constant current control technology. With the linear constant current technology, the output current sets the driving current of the LED light string through an external resistor.

CYT1002AG has the function of line voltage compensation, which automatically reduces the output current when the input voltage is too high, so as to ensure that the input power does not change with the input voltage and ensure the heat dissipation stability of the system.

Electric Characteristics

Unless otherwise stated, T_A=25°C.

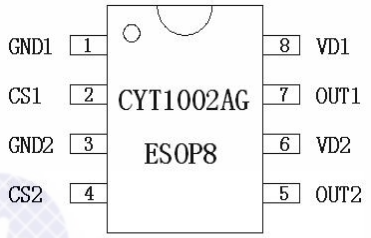
Description	Symbol	Condition	Min	Typ	Max	Unit
Operating voltage	V_{AC}	AC 200V~270V application	0	311	400	V
OUT input voltage	$V_{OUT-MIN}$	I_{OUT}=30mA	15	-	-	V
OUT withstand voltage	V_{OUT}	I_{OUT}=0mA	750	-	-	V
Output current	I_{OUT}	-	5	-	60	mA
Quiescent current	I_Q	V_{OUT}=7.5V, CS dangling	-	130	150	μA
CS port voltage	V_{CS}	V_{OUT}=10V	576	600	624	mV
Drive current	I_{DOUT}	V_{OUT}>25V, sampling resistor 10Ω	-	60	-	mA
I_{OUT} error	D_{IOUT}	I_{OUT}=5mA~60mA	-	±4	-	%
Temperature compensation point	T_{SC}	-	-	145	150	°C

Absolute Maximum Ratings

Unless otherwise stated, T_A=25°C.

Description	Symbol	Range	Unit
OUT port voltage	V_{OUT}	0~750	V
OUT port current	I_{OUT}	5~60	mA
Operating temperature	T_{OPT}	-40~145	°C
Storage temperature	T_{STG}	-50~150	°C
HBM ESD	V_{ESD}	2	kV

Pin Diagram (top view)



Typical Application