

DS-1002WE



Features

- Drive 1-lamp
- Wide input voltage operation
- Accurate and stable output current regulation
- Long lamp life with soft start
- Low sleep current
- Selectable dimming control method(option)
 - PWM control ; very wide dimming range
 - Voltage control ; no influence to power ripple
- Protection against lamp open or failure
- High efficiency
- Low EMI and spurious noise

Applications

- 3.8~14.1" Desktop LCD monitor
- Industrial LCD panel

Electrical characteristics

Parameter	Symbol	Conditions*	Specification			Unit
			Min	Typ	Max	
Input supply voltage	V_{IN}		10.0	12.0	14.0	V
Input current	I_{IN}	$V_{IN}=12V, V_{BRT}=0V$	0.34	0.38	0.42	A
Full bright lamp current	$I_{O(MAX)}$	$V_{IN}=12V, V_{BRT}=0V$	6.5	7.0	7.5	mArms
Minimum lamp current	$I_{O(MIN)}$	$V_{IN}=12V, V_{BRT}=3.3V$	1.4	2.2	3.0	mArms
Operating frequency	F_O	$V_{IN}=12V, V_{BRT}=0V$	45	50	55	KHz
Dimming ratio(PWM-dim)		$V_{IN}=12V, V_{BRT}=0$ to 3.3V	5 : 1	7 : 1		
Sleep current	I_{SLEEP}	$V_{IN}=12V, V_{SLEEP}=0V$			10	mA
Efficiency		$V_{IN}=12V, V_{BRT}=0V$	80	88		%

* At the reference 7"- Wide LCD Module

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Absolute maximum ratings

Input supply voltage (V_{IN})	-----	-0.3V to 14V
Output current (I_O)	-----	8.0mA _{rms}
Output power	-----	5.0W
Sleep & Bright adjust signal voltage (V_{SLEEP} , V_{BRT})	----	-0.3V to V_{IN}
Ambient operating temperature	-----	0 °C to 50 °C
Storage temperature range	-----	-30 °C to 80 °C
Operating & storage humidity	-----	10 % to 85 %

Recommended operating conditions (R.C.)

Parameter	Symbol	Recommendation			Units
		Min	R.C.	Max	
Input supply voltage	V_{IN}	10.0	12.0	14.0	V
Full bright lamp current	$I_{O(MAX)}$	6.5	7.0	7.5	mA _{rms}
Brightness control voltage range	V_{BRT}	0		3.3	V
Lamp on/off control voltage	V_{SLEEP}	3.0	5.0	7.0	V
Lamp operating voltage	V_O	460	510	560	V _{rms}
Operating ambient temperature range	T_A	0		50	°C

Connector and functional pin description

- CN1 Connector : 53261-0590(Molex or Equivalent)
 - CN1-1 V_{IN} (Input power supply)
 - CN1-2 G_{ND} (Power supply return)
 - CN1-3 V_{SLEEP} (Lamp On/Off control ; Off at Low, On at High)
 - CN1-4 V_{BRT} (Bright adjust ; 0 to 3.3V)
- CN2 Connector (Option) : SM02(8.0)B-BHS-1 (JST or Equivalent)
or SM02B-BHSS-1 (JST or Equivalent)
 - CN2 -1 High voltage
 - CN2 -2 Lamp current return

Mechanical dimensions

Tolerance : ± 0.2
Unit : mm

