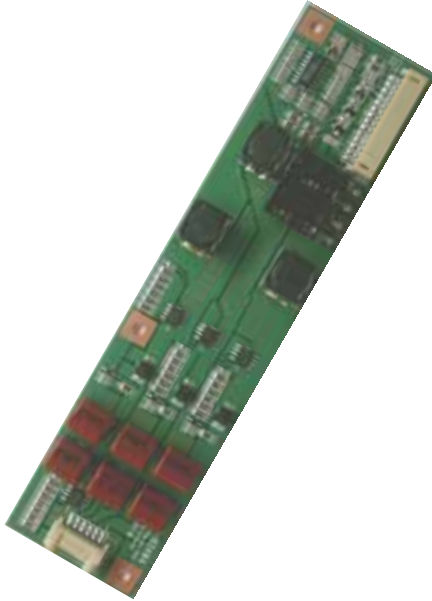


## DS-1624WA



### Features

- Nominal current 350 mA for LED Back-light
- 21.6 to 26.4 V input voltage range
- Accurate and stable output current regulation
- Analog dimming or External-PWM dimming selectable
- Protection against load open or over voltage
- High efficiency
- Low EMI and spurious noise
- Built-in Fuse
- Single sided PCB layout

### Applications

- 24" Wide LED Back-light LCD monitor

### Electrical characteristics for Analog dimming

Parameter	Symbol	Conditions*	Specification*			Unit
			Min	Typ	Max	
Input supply voltage	$V_{IN}$		21.6	24.0	26.4	V
Input current	$I_{IN}$	$V_{IN}=24V, V_{BRT}=3.3V$	2.7	3.2	3.7	A
Full bright LED current	$I_{O(MAX)}$	$V_{IN}=24V, V_{BRT}=3.3V$	320	350	380	mA
Minimum LED current	$I_{O(MIN)}$	$V_{IN}=24V, V_{BRT}=0V$	50	75	100	mA
Dimming ratio		$V_{IN}=24V, V_{BRT}=3.3$ to $0V$		5 : 1		
Sleep current	$I_{IN}$	$V_{IN}=24V, V_{SLEEP}=3.3V$			10	mA

### Electrical characteristics for External -PWM dimming

Parameter	Symbol	Conditions*	Specification*			Unit
			Min	Typ	Max	
Input supply voltage	$V_{IN}$		21.6	24.0	26.4	V
Input current	$I_{IN}$	$V_{IN}=24V, Duty=100\%$	2.7	3.2	3.7	A
Full bright LED current	$I_{O(MAX)}$	$V_{IN}=24V, Duty=100\%$	320	350	380	mA
Minimum LED current	$I_{O(MIN)}$	$V_{IN}=24V, Duty=20\%$	30	55	80	mA
Dimming ratio		$V_{IN}=24V, Duty=100 \sim 0\%$		100 : 1		
Sleep current	$I_{IN}$	$V_{IN}=24V, V_{SLEEP}=0V$			10	mA

\* At the reference 24" LCD-Module(LM240WU6) of LG Display

**DS-Plus Inc./ ( )**

Room 403, Ssangyong IT twin tower-1, 442-17 Sangdaewon-dong, Jungwon-gu, Seongnam-city 462-807, Korea  
Tel : 82-31-608-7100~3, Fax : 82-31-608-7104

**Absolute maximum ratings**

Input supply voltage ( $V_{IN}$ )	-----	-0.3V to 26.4V
Output voltage, no load	-----	Internally limited to zero volt
Output current ( $I_O$ )	-----	400mA
Sleep & Bright adjust signal voltage ( $V_{SLEEP}$ , $V_{BRT}$ )	----	-0.3V to 10.0V
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	$V_{IN}$	23.0	24.0	25.0	V
Full bright LED current	$I_{O(MAX)}$	320	350	380	mA
Brightness control voltage range(Analog dim)	$V_{BRT}$	0		3.3	V
Brightness control PWM Duty(Ext-PWM dim)	Duty	0		100	%
Lamp on/off control voltage	$V_{SLEEP}$	3.0	5.0	7.0	V
LED operating voltage	$V_O$		64.0		V
Operating ambient temperature range	$T_A$	0		40	°C

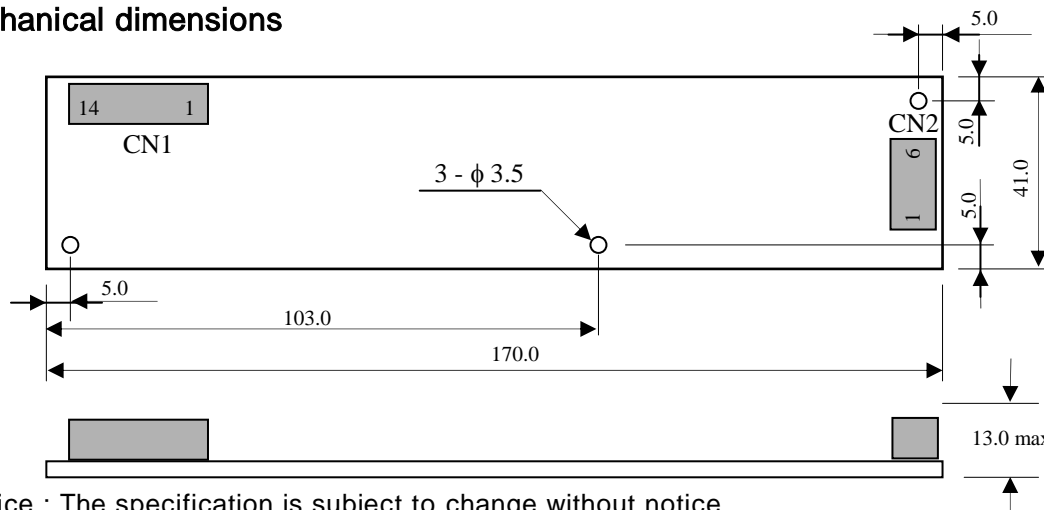
**Connector and functional pin description**

- CN1 Connector : 2002WR-14A00 (YEONHO or Equivalent)
- CN1-1,2,3,4,5  $V_{IN}$  (DC Input ; 24.0V)
- CN1-6,7,8,9,10  $G_{ND}$
- CN1-12  $V_{SLEEP}$  (Back-light On/Off control ; Off at Low, On at High)
- CN1-13  $V_{BRT}$  (Analog Dimming-Bright adjust ; 3.3 to 0V)
- CN1-14 External-PWM Dimming control (Bright Adjust )  
(5Vpp, Duty 100 to 0% square wave input)

- CN2 Connector : 20037WR-06 (YEONHO or Equivalent)
- CN2-2,3,5 LED(Anode) operating voltage
- CN1-1,4,6 Current return

Tolerance : ± 0.5  
Unit : mm

**Mechanical dimensions**



Notice : The specification is subject to change without notice