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User's Guide

C22-0501NA

VFD- RoHS Compliant

(Vacuum Fluorescent Display Module)

For product support, contact

Newhaven Display International
2511 Technology Drive, #101
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Tel: (847) 844-8795 Fax: (847) 844-8796

November 10, 2008

用途 Application	空调 (Air-condition)
概要 Features	5GridX 15Anode 3 Colors Cadmium Free Phosphor, Lead Free solder
显示颜色 Color Of Illumination	绿色 Green(G.X=0.250 Y=0.440) 蓝色 Blue (B.X=0.150 Y=0.176) 黄色 Yellow (Y.x=0.470,y=0.490)

外形尺寸 Outer Dimensions	长 Panel Length	106.2±1.0mm
	宽 Panel Height	22.0±1.0mm
	厚 Panel Thickness	6.5±0.7mm
引出端子 Lead	端子间距 Lead Pitch	2.54mm
	端子引出形式 Lead Out	单列折弯

推荐工作电压 Recommended Operating Condition

项 目 Item	符 号 Symbol	最小值 Min	推荐值 Recommended	最大值 Max	单位 Unit
灯丝电压 Filament Voltage	Ef	3.87	4.3	4.73	Vac
栅极电压 Grid Voltage	ec	—	20.0	24.0	Vp-p
阳极电压 Anode Voltage	eb	—	20.0	24.0	Vp-p
占空系数 Duty Factor	Du	—	1/6	—	—
脉冲宽度 Pulse Width	tp	—	100	—	μs
工作温度 Operating Temp	Top	-20	—	+70	℃
储存温度 Storage Temp	Tstg	-55	—	+80	℃

control No.	QG/ZBOE-VFD 030.07.3-05
Spec. No.	
MODEL	VFD22-0501NA

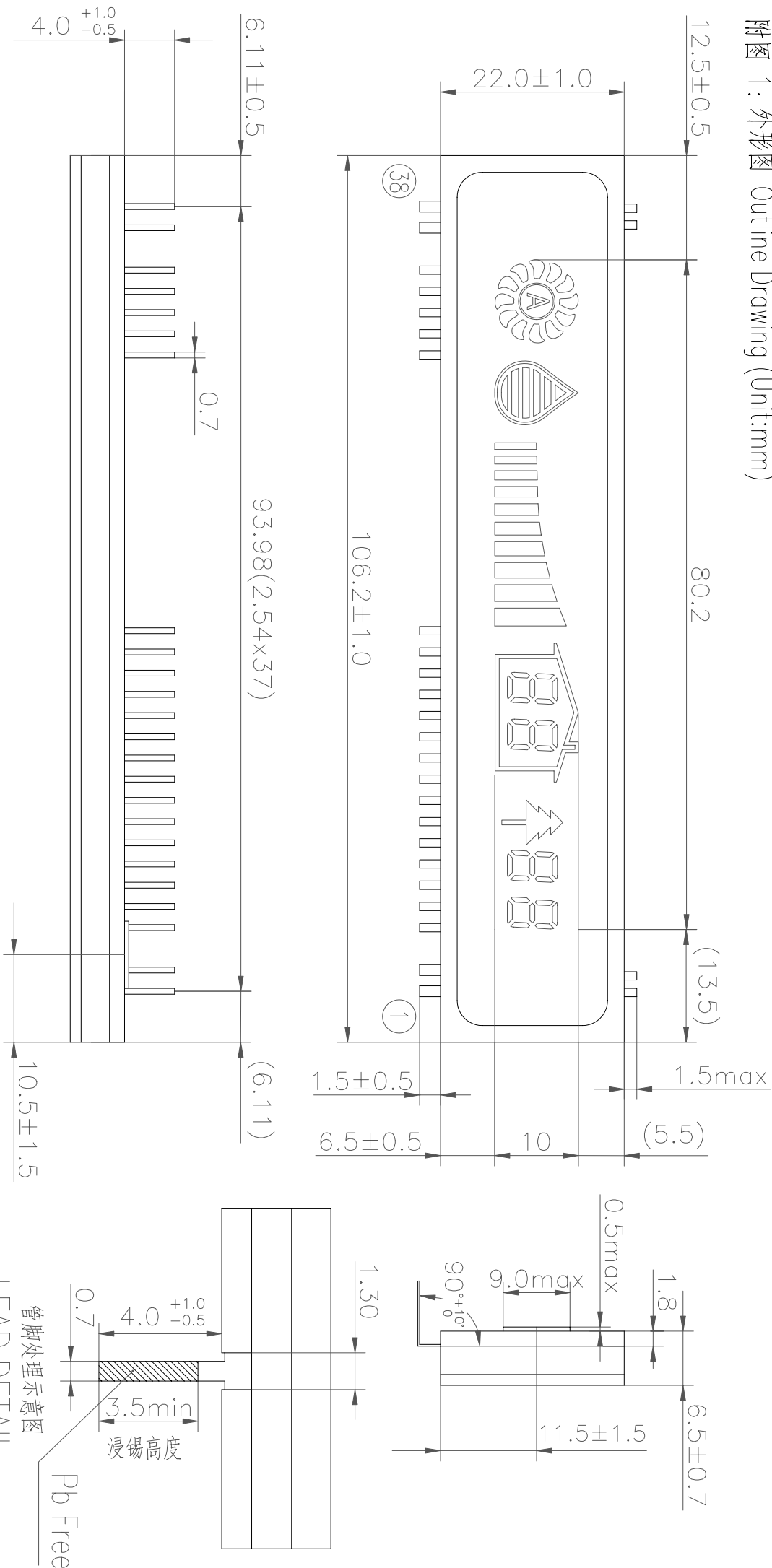
电气特性 Electrical Characteristics

项 目 Item	符 号 Symbol	测试条件 Test Condition	最小值 Min	典型值 Typical	最大值 Max	单位 Unit
灯丝电流 Filament Current	If	Ef=4.3Vac eb=ec=0	126.0	140.0	154.0	mAac
阳极电流 Anode Current	ib/2G	Ef=4.3Vac eb=20.0 Vp-p ec=20.0 Vp-p Du=1/6 tp=100 μs (笔段全亮)	—	5.0	10.0	mAp-p
	ib/1G,4G,5G		—	7.5	15.0	mAp-p
	ib/3G		—	9.0	18.0	mAp-p
	—		—	—	—	mAp-p
	—		—	—	—	mAp-p
栅极电流 Grid Current	ic/2G		—	4.0	8.0	mAp-p
	ic/4G,5G		—	7.5	15.0	mAp-p
	ic/3G		—	8.0	16.0	mAp-p
	ic/1G		—	6.0	12.0	mAp-p
	—		—	—	—	mAp-p
亮度 Luminance	L(G)		350 (102)	700 (204)	—	cd/m ² (fL)
	L(B)		40 (12)	80 (23)	—	cd/m ² (fL)
	L(Y)		50 (14.5)	100 (29)	—	cd/m ² (fL)
	—		—	—	—	cd/m ² (fL)
位间亮度比 Luminance Ratio	Lmin/Lmax		50	—	—	%
栅极截止电压 Grid Cut-off Voltage	Ecco	Ef=4.3Vac Eb=20.0 Vdc	-4.5	—	—	Vdc
阳极截止电压 Anode Cut-off Voltage	Ebco	Ef=4.3Vac ec=20.0 Vp-p Du=1/6 tp=100 μs	-4.5	—	—	Vdc

注：驱动方式 动态
Drive mode: Dynamic state

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附图 1: 外形图 Outline Drawing (Unit:mm)



管脚连接 (PIN CONNECTION),

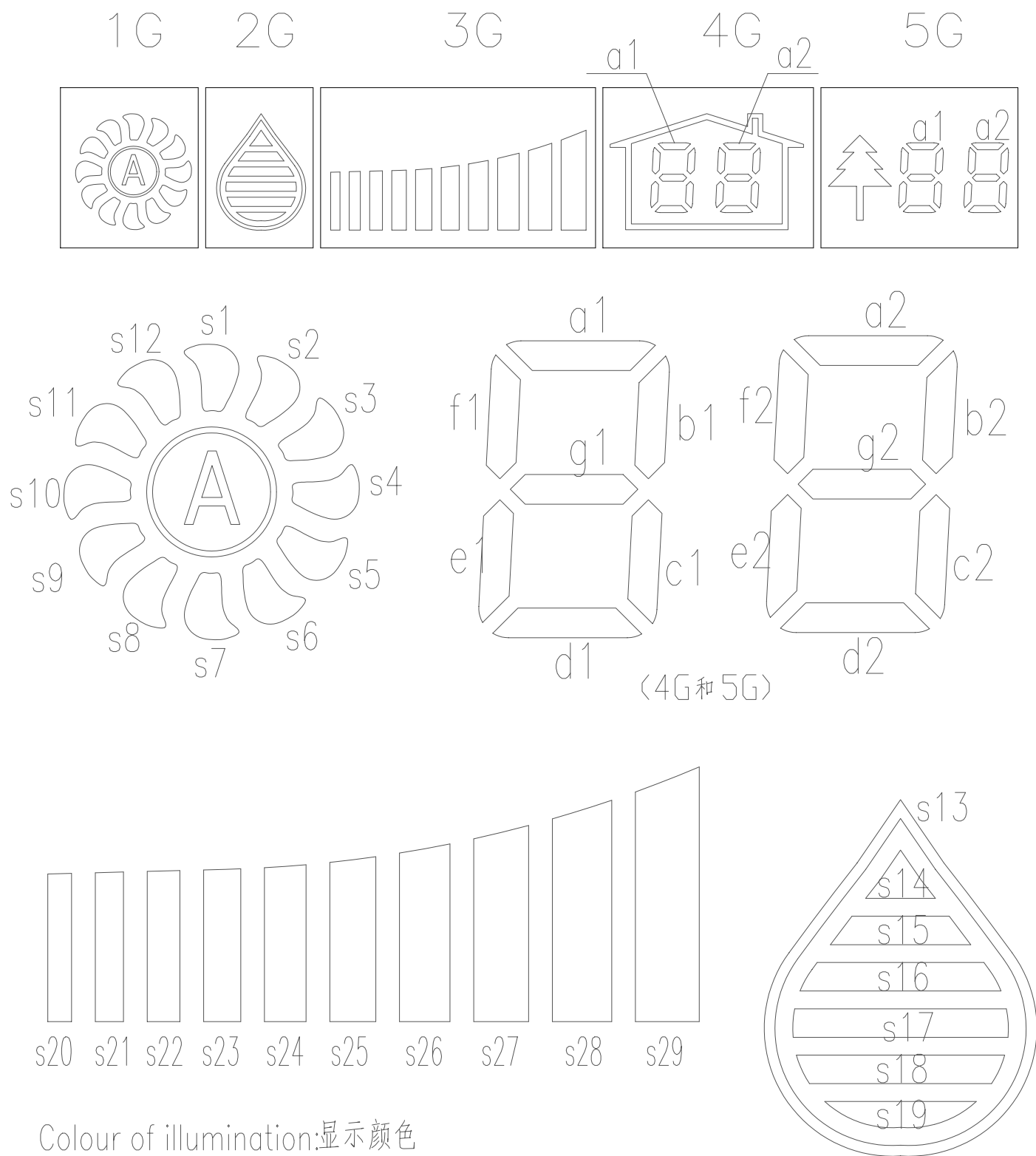
端子序号 (PIN NO.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19-30	31	32	33	34	35	36	37	38
连接 (CONNECTION)	F	F	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	NP	5G	4G	3G	2G	1G	NP	F	F

注: F: 灯丝 (Filament) P: 阳极 (Anode) G: 栅极 (Grid) NP: 无引脚 (NO Pin)

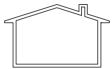
管脚处理示意图
LEAD DETAIL

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附图 2: 显示内容和栅网分割 Display Pattern and Grid Assignment



Colour of illumination: 显示颜色

黄色 Yellow (x=0.470,y=0.490): A, 3G中的显示图案, 



蓝色 Blue (X=0.150, Y=0.176): 2G中的显示图案

绿色 Green (X=0.250, Y=0.440): 其他 Others

Cadmium Free Phosphor Used

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附图 4: 阳极连接 Anode Connection

	1G	2G	3G	4G	5G
P1	S1	S13	S20	a1	a1
P2	S2	S14	S21	b1	b1
P3	S3	S15	S22	f1	f1
P4	S4	S16	S23	g1	g1
P5	S5	S17	S24	c1	c1
P6	S6	S18	S25	e1	e1
P7	S7	s19	S26	d1	d1
P8	S8		S27	a2	a2
P9	S9		S28	b2	b2
P10	S10		S29	f2	f2
P11	S11			g2	g2
P12	S12			c2	c2
P13	A			e2	e2
P14	○			d2	d2
P15					

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