User's Guide

D0220SD-35-4002FN

VFD- RoHS Compliant

(Vacuum Fluorescent Display Module)

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NEWHAVEN DISPLAY INTERNATIONAL

Vacuum Fluorescent Display Specification

PART NUMBER: **D0220SD-35-4002FN**

FEATURES: 2x20 Digits – 5x7 dot matrix, Pb-Free, No exhaust tip , RoHS Compliant

APPLICATION: Character Display- Dot Matrix

RATINGS: Below

Outer Dimensions	Panel Length	P.L.	125.0	mm
	Panel Height	P.H.	35.0	mm
	Panel Thickness	P.T.	7.8	mm
Leads	Lead Pitch	L.P.	2.54	mm
	Lead Out	-	DIL	
Character Size	Character Height	C.H.	5.0	mm
	Character Width	C.W.	3.5	mm

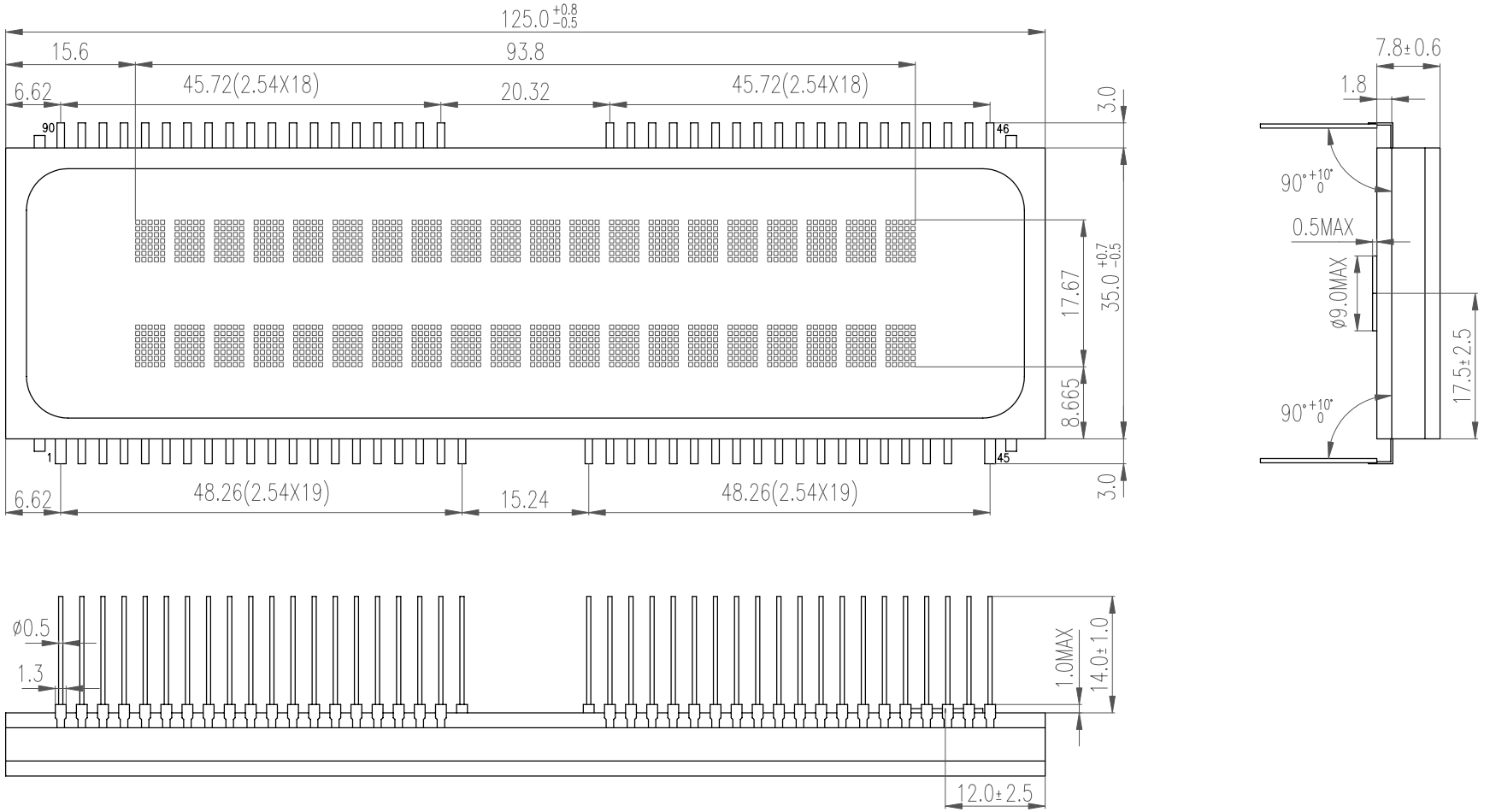
Item	Symbol	Min.	Recommended	Max.	Unit
Filament Voltage	Ef	4.8	5.3	5.8	Vac
Peak Grid Voltage	ec	-	50.0	60.0	Vp-p
Peak Anode Voltage	eb	-	50.0	60.0	Vp-p
Cut-off Bias	Ek	-	0	-	Vdc
Duty Cycle	Du	-	1/45	-	-
Pulse Width	tp	-	100	-	uS
Operating Temperature	Topr	-40	-	+ 85	C
Storage Temperature	Tstg	-50	-	+ 85	C
Color of Illumination	Green				

Electrical Characteristics

Item	Symbol	Test Condition	Min.	Typical	Max.	Unit
Filament Current	If	Ef = 5.3 V_{ac}	108.0	120.0	132.0	mAac
	-	eb = ec = 0	-	-	-	-
Anode Current	ib / 1~40G	Ef = 5.3 V_{ac}	-	4.0	8.0	mAp-p
	-	eb = 50.0 V_{p-p}	-	-	-	-
	-	ec = 50.0 V_{p-p}	-	-	-	-
	-	Du = 1/45	-	-	-	-
	-	tp = 100uS	-	-	-	-
Grid Current	ic / 1~40G	(All segs are ON)	-	8.0	16.0	mA_{p-p}
	-		-	-	-	-
	-		-	-	-	-
	-		-	-	-	-
	-		-	-	-	-
	L(G)		427	855	-	cd/m^2
Luminance	-		(125)	(250)		fL
Luminance Ratio	Lmin/Lmax		50	-	-	%
Grid Cut-off Voltage	Ecco	Ef = 5.3 Vac Eb = 50.0 Vdc	-5.0	-	-	Vdc
Anode Cut-off Voltage	Ebco	Ef = 5.3 Vac ec = 50.0 Vp-p Du = 1/45 Tp = 100uS	-1.0	-	-	V_{dc}

DRIVE MODE: Dynamic State

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	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
连接 (CONNECTION)	F	P19	P20	P21	P22	P23	P24	P25	P26	P27	P28	P29	P30	P31	P32	P33	P34	P35	40G	39G	NP	NP	NP	NP	NP	38G	37G	36G	35G	34G	33G	32G	31G	30G	29G	28G	27G	26G	25G	24G	23G	22G	21G	NP	F
端子序号 (PIN NO.)	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
连接 (CONNECTION)	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	1G	NP	NP	NP	NP	NP	NP	NP	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	14G	15G	16G	17G	18G	19G	20G

注 Note： F: 灯丝 (Filament) P: 阳极 (Anode) G: 栅极 (Grid) NP: 无引出脚(No pin)

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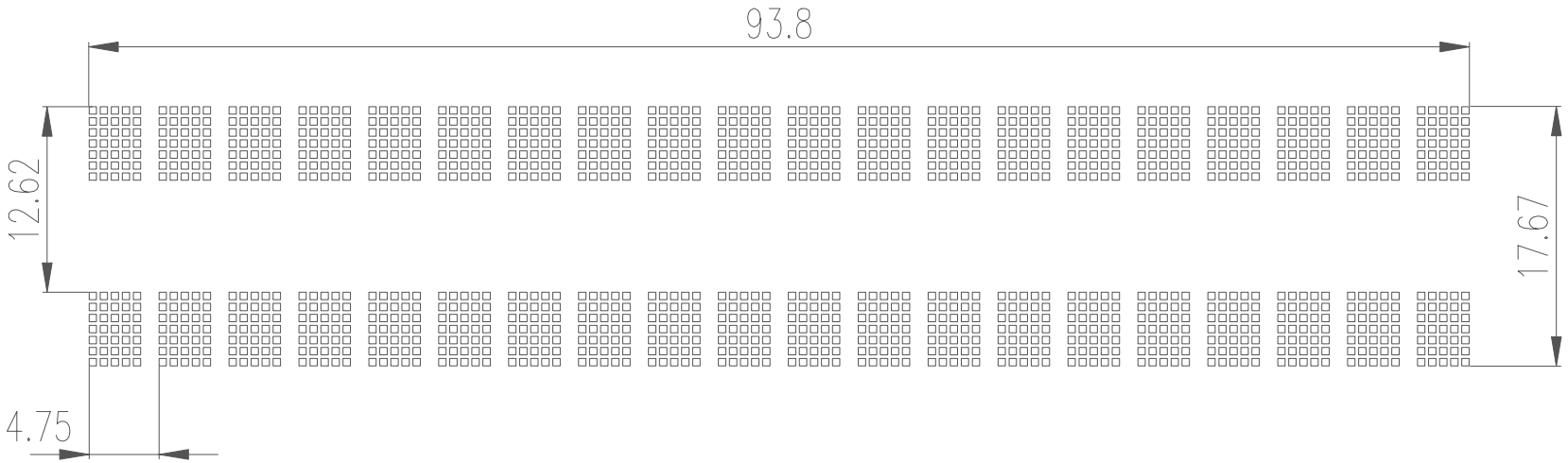
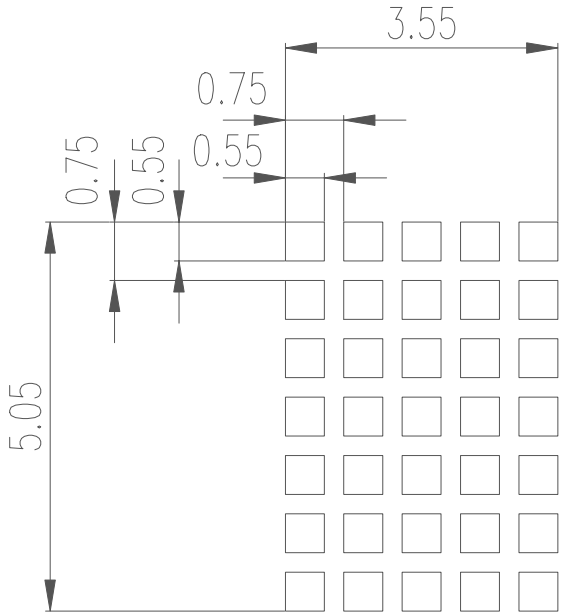
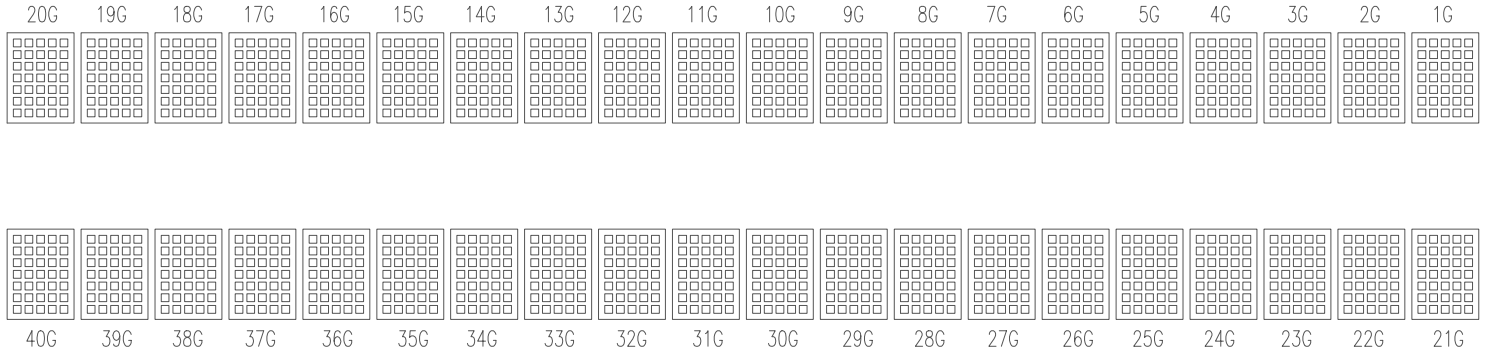
附图 2: 显示内容 DiAplay Pattern

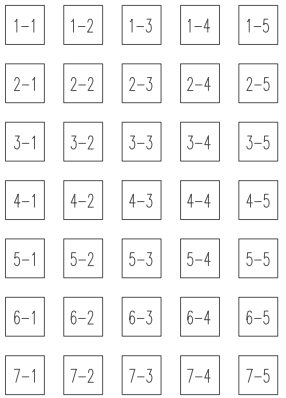




绿色 Green : 全部 ALL (X=0.250, Y=0.440)

附图 3: 栅网分割 Grid AAsignment





(1~40G)

附图 4: 阳极连接 Anode Connection

	1G~40G		1G~40G		1G~40G
P1	1-1	P15	3-5	P29	6-4
P2	1-2	P16	4-1	P30	6-5
P3	1-3	P17	4-2	P31	7-1
P4	1-4	P18	4-3	P32	7-2
P5	1-5	P19	4-4	P33	7-3
P6	2-1	P20	4-5	P34	7-4
P7	2-2	P21	5-1	P35	7-5
P8	2-3	P22	5-2		
P9	2-4	P23	5-3		
P10	2-5	P24	5-4		
P11	3-1	P25	5-5		
P12	3-2	P26	6-1		
P13	3-3	P27	6-2		
P14	3-4	P28	6-3		