



## User's Guide

# C-29-1201

# VFD

(Vacuum Fluorescent Character Display Module)

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For product support, contact

New haven Display International  
2511 Technology Drive #101  
Elgin , IL 601 24  
Tel: (847) 8 44-8795 Fax: (847) 8 44-8796

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# Vacuum Fluorescent Display Specification

**PART NUMBER:** C-29-1201

**FEATURES:** 6 Digits, Alphanumeric, with Icons – AUDIO / DVD

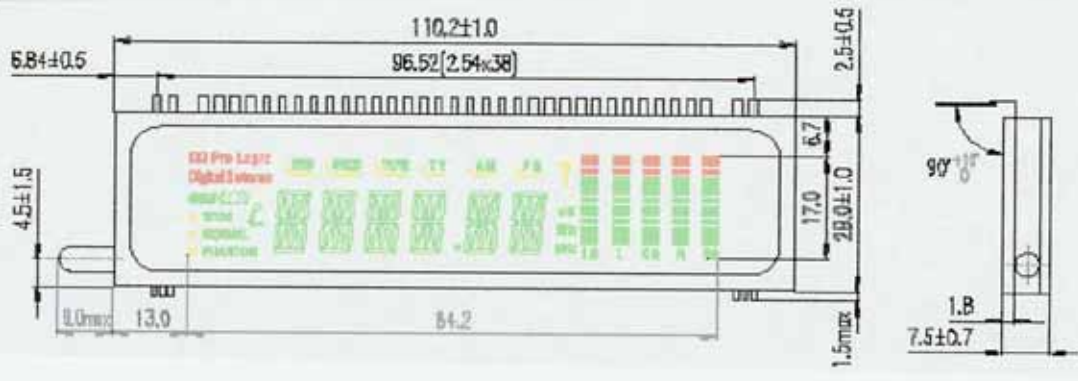
**APPLICATION:** Character Display (Alphanumeric)

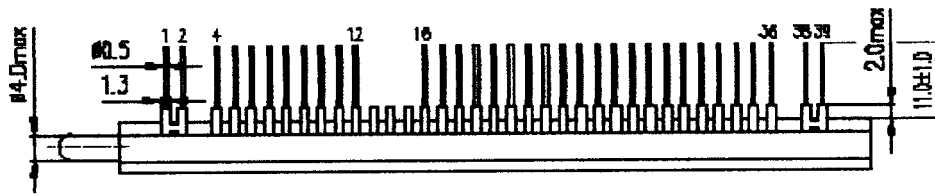
**RATINGS:** Below

<b>Outer Dimensions</b>	Panel Length	P.L.	100.2	mm	
	Panel Height	P.H.	29.0	mm	
	Panel Thickness	P.T.	7.5	mm	
<b>Leads</b>	Lead Pitch	L.P.	2.54	Mm	
	Lead Out	-	SIL		
<b>Character Size</b>	Character Height	C.H.	10.5	mm	
	Character Width	C.W.	5.0	mm	
<b>Item</b>	<b>Symbol</b>	<b>Min.</b>	<b>Recommended</b>	<b>Max.</b>	<b>Unit</b>
<b>Filament Voltage</b>	Ef	3.7	4.2	4.6	Vac
<b>Peak Grid Voltage</b>	Ec	-	28.0	35.0	Vp-p
<b>Peak Anode Voltage</b>	Eb	-	28.0	35.0	Vp-p
<b>Cut-off Bias</b>	Ek	-	-	-	-
<b>Duty Cycle</b>	Du	-	1/13	-	-
<b>Pulse Width</b>	Tp	-	100	-	uS
<b>Operating Temperature</b>	Topr	-20	-	+ 70	C
<b>Storage Temperature</b>	Tstg	-55	-	+ 80	C
<b>Color of Illumination</b>	Green / Red / Yellow				

Electrical Characteristics

Item	Symbol	Test Condition	Min.	Typical	Max.	Unit
<b>Filament Current</b>	lf -	Ef = 4.2 Vac eb = ec = 0	145.0 -	162.0 -	178.0 -	mAac -
<b>Anode Current</b>	ib/1G	Ef = 4.2 Vac eb = 28.0 Vp-p ec = 28.0 Vp-p Du = 1/13 tp = 100 uS	-	14.0	28.0	mAp-p
	ib/2~6G		-	11.0	22.0	mAp-p
	ib/7G		-	9.5	19.0	mAp-p
	ib/8~12G		-	7.5	15.0	mAp-p
	-		-	-	-	-
<b>Grid Current</b>	ic/1G		-	13.0	26.0	mAp-p
	ic/2~6G		-	10.0	20.0	mAp-p
	ic/7G		-	9.5	19.0	mAp-p
	ic/8~12G		-	7.5	15.0	mAp-p
	-		-	-	-	-
<b>Luminance</b>	L(G)		350 (102)	700 (204)	-	cd/m <sup>2</sup> (fL)
	L(R)		35 (10)	70 (20)		cd/m <sup>2</sup> (fL)
	L(Y)		60 (17)	120 (34)		cd/m <sup>2</sup> (fL)
<b>Luminance Ratio</b>	Lmin/Lmax		50	-	-	%
<b>Grid Cut-off Voltage</b>	Ecco	Ef = 4.2 Vac Eb = 28.0 Vdc	-5.0	-	-	Vdc
<b>Anode Cut-off Voltage</b>	Ebco	Ef = 4.2 Vac ec = 28.0 Vp-p Du = 1/13 tp = 100 uS	-5.0	-	-	Vdc

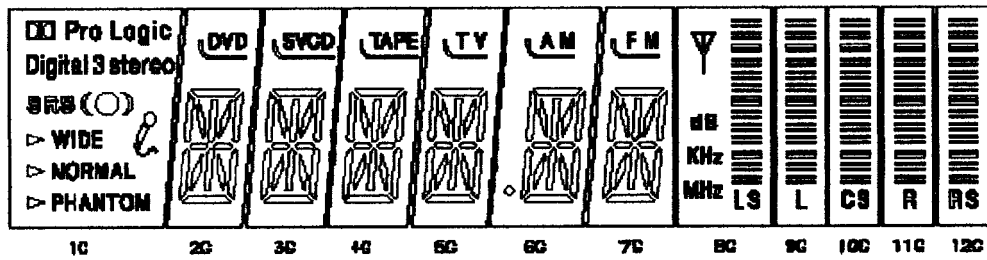
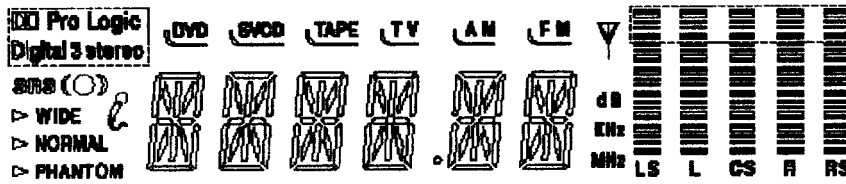


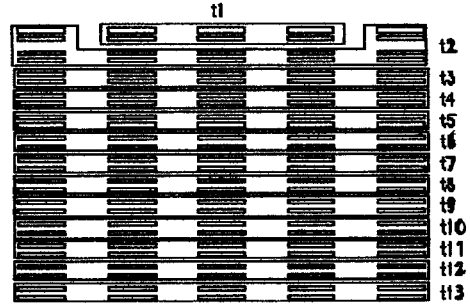
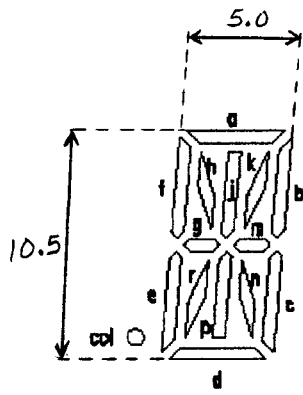


**PINOUT CONNECTIONS**

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Connect	F	F	NP	P9	P8	P7	P6	P5	P4	P3	P2	P1	NC	NC	NC	1G	2G	3G	4G	5G
Pin No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
Connect	6G	7G	8G	9G	10G	11G	12G	P10	P11	P12	P13	P14	P15	P16	P17	P18	NP	F	F	

F: Filament G: Grid P: Anode NC: No Connection NP: No Pin





	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G
P1	DID Pts Logic	DND	SVCD	TAPE	TV	AM	FM	t2	t1	t1	t1	
P2	Digital							t3	t2	t2	t2	t2
P3	3	a	a	a	a	a	a	t4	t3	t3	t3	t3
P4	stereo	f	f	f	f	f	f	t5	t4	t4	t4	t4
P5	SBS (O)	h	h	h	h	h	h	t6	t5	t5	t5	t5
P6	▷ (WIDE)	j	j	j	j	j	j	t7	t6	t6	t6	t6
P7	▷ (NDRML)	k	k	k	k	k	k	t8	t7	t7	t7	t7
P8	▷ (PHANTOM)	b	b	b	b	b	b	t9	t8	t8	t8	t8
P9	WIDE, NORMAL, PHANTOM	q	q	q	q	q	q	t10	t9	t9	t9	t9
P10	ℓ	m	m	m	m	m	m	t11	t10	t10	t10	t10
P11		e	e	e	e	e	e	t12	t11	t11	t11	t11
P12		r	r	r	r	r	r	t13	t12	t12	t12	t12
P13		p	p	p	p	p	p	t8	t13	t13	t13	t13
P14		n	n	n	n	n	n	LS				
P15		c	c	c	c	c	c	LS				
P16		d	d	d	d	d	d	LS	L	CS	R	RS
P17								Y				
P18						col						