

User's Guide

C-33-1606F

VFD

(Vacuum Fluorescent Character Display Module)

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

October 31, 2006

Vacuum Fluorescent Display Specification

PART NUMBER: C-33-1606F

FEATURES: 12 Digits, Custom Dot Matrix, with Icons – AUDIO

APPLICATION: Character Display (*Custom DM*)

RATINGS: Below

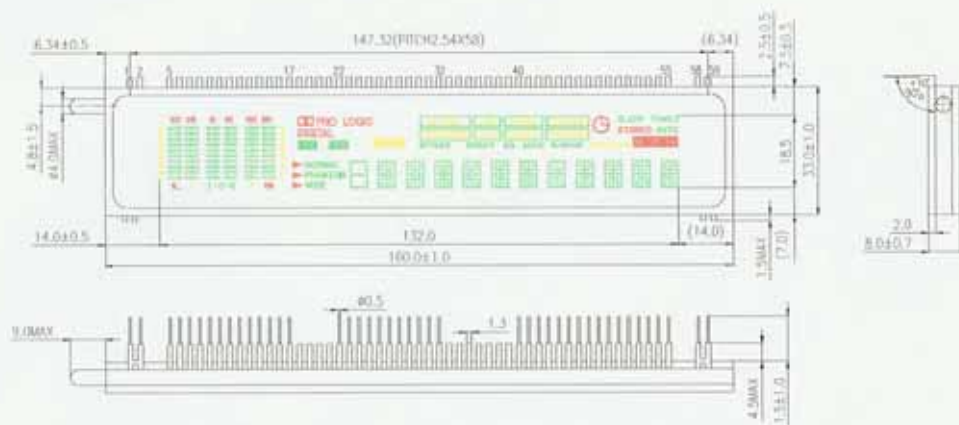
Outer Dimensions	Panel Length	P.L.	160.0	mm	
	Panel Height	P.H.	33.0	mm	
	Panel Thickness	P.T.	8.0	mm	
Leads	Lead Pitch	L.P.	2.5	mm	
	Lead Out	-	SIL		
Character Size	Character Height	C.H.	7.2	mm	
	Character Width	C.W.	5.0	mm	
Item	Symbol	Min.	Recommended	Max.	Unit
Filament Voltage	Ef	5.22	5.8	6.38	Vac
Peak Grid Voltage	ec	-	33.0	40.0	Vp-p
Peak Anode Voltage	eb	-	33.0	40.0	Vp-p
Cut-off Bias	Ek	-	-	-	-
Duty Cycle	Du	-	1/ 20	-	-
Pulse Width	tp	-	80	-	uS
Operating Temperature	Topr	-20	-	+ 70	C
Storage Temperature	Tstg	-55	-	+ 80	C
Color of Illumination	Green / Red / Yellow				

* Life = 10,000hrs to half brightness

Electrical Characteristics

Item	Symbol	Test Condition	Min.	Typical	Max.	Unit
Filament Current	If -	Ef = 5.8 Vac eb = ec = 0	162.0 -	180.0 -	198.0 -	mAac -
Anode Current	ib/2~12G ib/14~16G ib/13G ib/1G -	Ef = 5.8 Vac eb = 33.0 Vp-p ec = 33.0 Vp-p Du = 1/20 tp = 80 uS	-	6.5	13.0	mA _{p-p}
			-	24.0	41.0	mA _{p-p}
			-	38.0	65.0	mA _{p-p}
			-	72.0	122.0	mA _{p-p}
			-	-	-	mA _{p-p}
Grid Current	Ic/2~12G ic/14~16G ic/13G ic/1G -		-	6.0	12.0	mA _{p-p}
			-	30.0	51.0	mA _{p-p}
			-	48.0	82.0	mA _{p-p}
			-	62.0	107.0	mA _{p-p}
			-	-	-	mA _{p-p}
Luminance	L(G) L(R) L(Y)		350 (102)	700 (204)	-	cd/m ² (fL)
			35 (10)	70 (20)		cd/m ² (fL)
			60 (17.5)	120 (35)		cd/m ² (fL)
Luminance Ratio	Lmin/Lmax		50	-	-	%
Grid Cut-off Voltage	Ecco	Ef = 5.0 Vac Eb = 33.0 Vdc	-6.1	-	-	Vdc
Anode Cut-off Voltage	Ebco	Ef = 5.0 Vac Ec = 33.0 Vp-p Du = 1/1620 tp = 80 uS	-6.1	-	-	Vdc

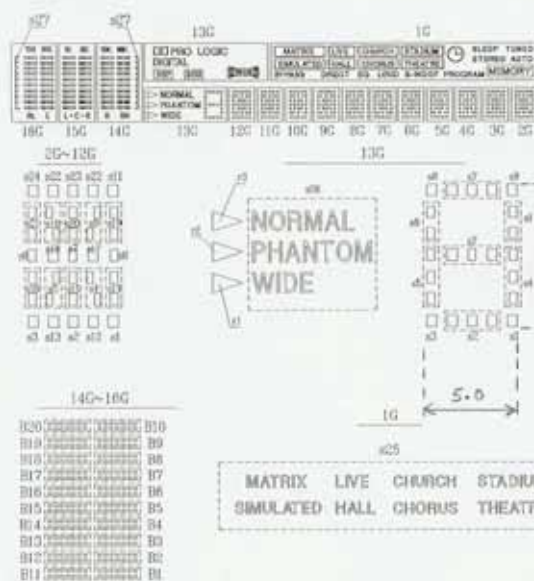
Drive Mode: Dynamic state



PINOUT CONNECTIONS

[illegible]

Fi	Gi	Pi	Npi	Nci
Filament	Grid	Anode	No Pin	No Connection



	IC	20	21	230	240	250	260
P1	(STEADY)	s1	e1		A	L	RL
P2	(SIGNAL)	s2	e2	BB	-C-		L
P3	(LINE)	s3	e3	e27	A		e27
P4	(MATHS)	s3	e26	B1	B1	B1	B1
P5	TUNED	s3	s7	B11	B11	B11	B11
P6	BLIND	s14	s4	B2	B2	B2	B2
P7	AUTO	s4	s2	B12	B12	B12	B12
P8	STEREO	s15	s3	B3	B3	B3	B3
P9		s5	s5	B13	B13	B13	B13
P10	s25	s16	s7	B4	B4	B4	B4
P11	(THEATRE)	s8	s8	B14	B14	B14	B14
P12	(JOURNAL)	s18	s5	B5	B5	B5	B5
P13	(TALK)	s7	s8	B15	B15	B15	B15
P14	(TELETYPE)	s17	DBB	B6	B6	B6	B6
P15	s21	DBB	B16	B16	B16	B16	B16
P16		s22	DBB	B7	B7	B7	B7
P17	s10	DIGITAL	B17	B17	B17	B17	B17
P18	SECURITY	s20	PRO LOGIC	B8	B8	B8	B8
P19	PROGRAM	s29	DB	B18	B18	B18	B18
P20	S-SHOW	s19		B9	B9	B9	B9
P21	LOCK	s24		B19	B19	B19	B19
P22	END	s22		B10	B10	B10	B10
P23	WRITE	s23		B20	B20	B20	B20
P24	SHOWN	s11		DBK DBK DBK DBK	DBK DBK DBK DBK	DBK DBK DBK DBK	DBK DBK DBK DBK