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User's Guide

C-20-0902

VFD

(Vacuum Fluorescent Character Display Module)

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October 31, 2006



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Vacuum Fluorescent Display Specification

PART NUMBER: C-20-0902

FEATURES: 8 Digits, Custom Alphanumeric, with Icons – AUDIO

APPLICATION: Character Display (Custom *Alpha*)

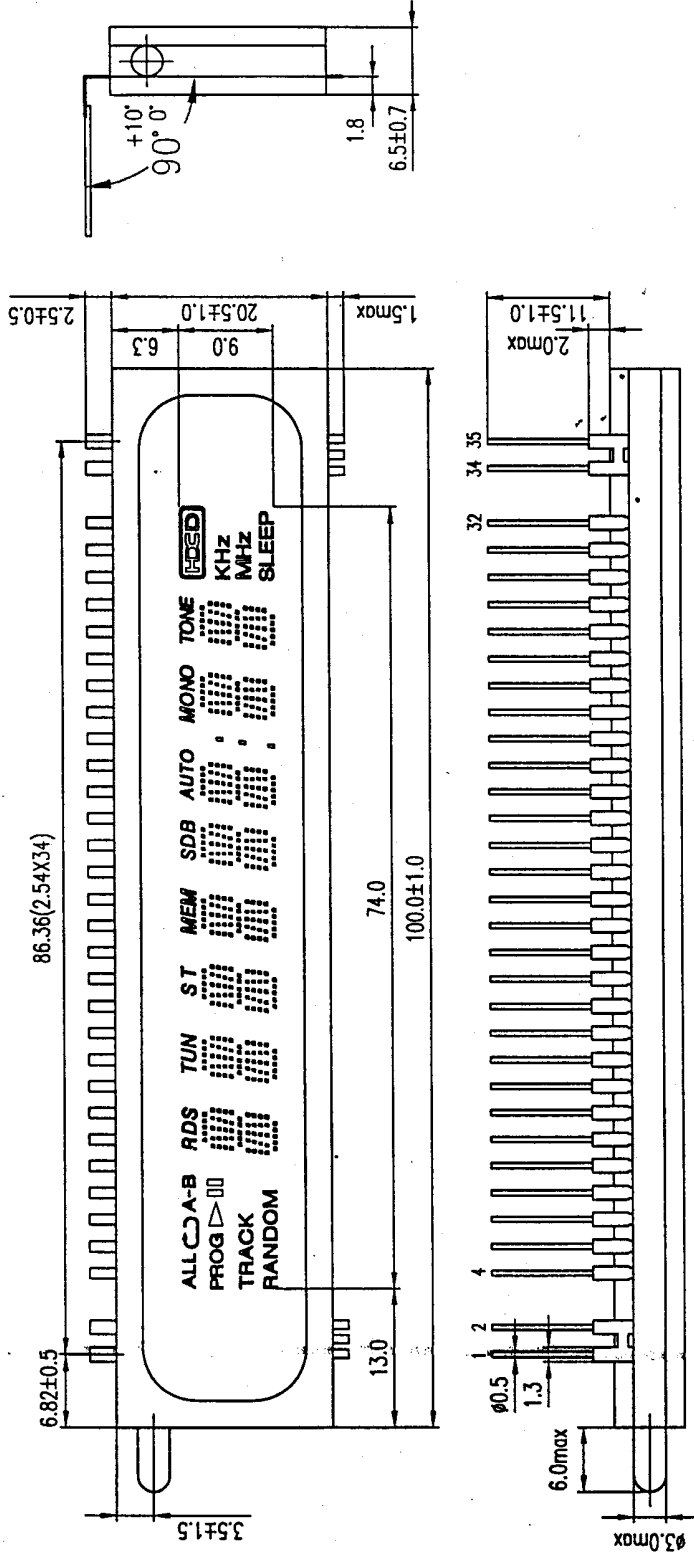
RATINGS: Below

Outer Dimensions	Panel Length	P.L.	100.0	mm	
	Panel Height	P.H.	20.5	mm	
	Panel Thickness	P.T.	6.5	mm	
Leads	Lead Pitch	L.P.	2.54	mm	
	Lead Out	-	SIL		
Character Size	Character Height	C.H.	15.5	mm	
	Character Width	C.W.	5.2	mm	
Item	Symbol	Min.	Recommended	Max.	Unit
Filament Voltage	Ef	3.3	3.7	4.0	Vac
Peak Grid Voltage	ec	-	26.0	31.0	Vp-p
Peak Anode Voltage	eb	-	26.0	31.0	Vp-p
Cut-off Bias	Ek	-	-	-	-
Duty Cycle	Du	-	1/ 10	-	-
Pulse Width	tp	-	100	-	uS
Operating Temperature	Topr	-20	-	+ 70	C
Storage Temperature	Tstg	-55	-	+ 85	C
Color of Illumination	Green / Red				

C-20-0902

Electrical Characteristics

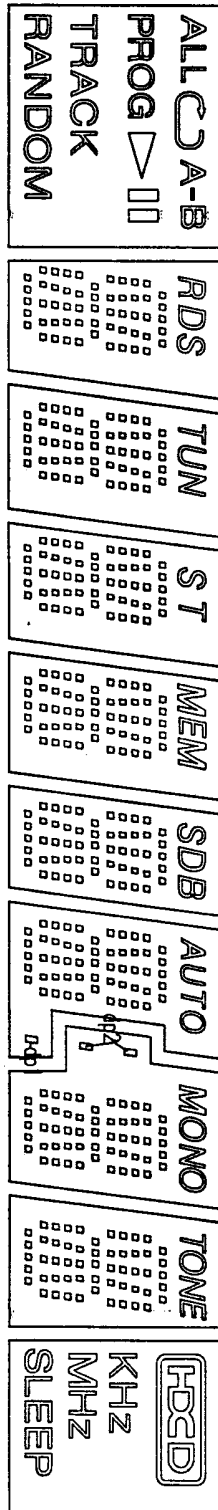
Item	Symbol	Test Condition	Min.	Typical	Max.	Unit
Filament Current	If	Ef = 3.7 Vac eb = ec = 0	99.0	110.0	121.0	mAac
	-		-	-	-	-
Anode Current	ib/2~9G	Ef = 3.7 Vac eb = 26.0 Vp-p ec = 26.0 Vp-p Du = 1/10 tp = 100 uS	-	8.0	16.0	mA _{p-p}
	ib/1G		-	14.0	28.0	mA _{p-p}
	-		-	-	-	mA _{p-p}
	-		-	-	-	mA _{p-p}
	-		-	-	-	mA _{p-p}
Grid Current	ic/2~9G		-	7.0	14.0	mA _{p-p}
	ic/1G		-	12.0	28.0	mA _{p-p}
	-		-	-	-	mA _{p-p}
	-		-	-	-	mA _{p-p}
	-		-	-	-	mA _{p-p}
Luminance	L(G)		350 (102)	700 (204)	-	cd/m ² (fL)
	L(R)		35 (10)	70 (20)		cd/m ² (fL)
	-		-	-		cd/m ² (fL)
	-		-	-		cd/m ² (fL)
Luminance Ratio	Lmin/Lmax		50	-	-	%
Grid Cut-off Voltage	Ecco	Ef = 3.7 Vac Eb = 26.0 Vdc	-5.5	-	-	Vdc
Anode Cut-off Voltage	Ebco	Ef = 3.7 Vac ec = 26.0 Vp-p Du = 1/10 tp = 100 uS	-5.5	-	-	Vdc



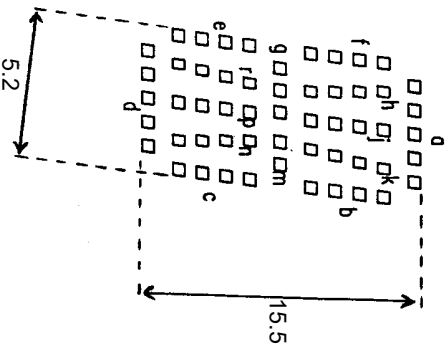
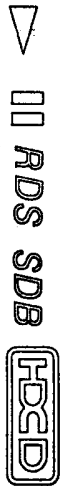
Pinout Connections

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

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



1G 2G 3G 4G 5G 6G 7G 8G 9G 1G





	1G	2G	3G	4G	5G	6G	7G	8G	9G
P1	ALL	RDS	TUN	ST	MEM	SDB	AUTO	MONO	TONE
P2							DP1	DP2	
P3		a	a	a	a	a	a	a	a
P4		b	b	b	b	b	b	b	b
P5	A	f	f	f	f	f	f	f	f
P6		j	j	j	j	j	j	j	j
P7		k	k	k	k	k	k	k	k
P8	PROG	h	h	h	h	h	h	h	h
P9	TRACK	g	g	g	g	g	g	g	g
P10	RANDOM	m	m	m	m	m	m	m	m
P11		d	d	d	d	d	d	d	d
P12		e	e	e	e	e	e	e	e
P13	SLEEP	c	c	c	c	c	c	c	c
P14	MHZ	p	p	p	p	p	p	p	p
P15		n	n	n	n	n	n	n	n
P16	KHZ	r	r	r	r	r	r	r	r