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User's Guide

C-20-0503F VFD

(Vacuum Fluorescent Character Display Module)

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October 18, 2006



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Vacuum Fluorescent Display Specification

PART NUMBER: C20-0503F

FEATURES: 7 Digits, 7-Seg, with fixed segments – Audio

APPLICATION: DVD

RATINGS: Below

Outer Dimensions	Panel Length	P.L.	75.0	mm	
	Panel Height	P.H.	20.5	mm	
	Panel Thickness	P.T.	6.5	mm	
Leads	Lead Pitch	L.P.	2.0	mm	
	Lead Out	-	SIL		
Character Size	Character Height	C.H.	5.8	mm	
	Character Width	C.W.	2.9	mm	
Item	Symbol	Min.	Recommended	Max.	Unit
Filament Voltage	Ef	2.34	2.60	2.86	Vac
Peak Grid Voltage	ec	-	21.0	25.0	Vp-p
Peak Anode Voltage	eb	-	21.0	25.0	Vp-p
Cut-off Bias	Ek	-	-	-	-
Duty Cycle	Du	-	1/6	-	-
Pulse Width	tp	-	100	-	uS
Operating Temperature	Topr	-40	-	+ 80	C
Storage Temperature	Tstg	-55	-	+ 85	C
Color of Illumination	Green, Red, Yellow				

C20-0503F

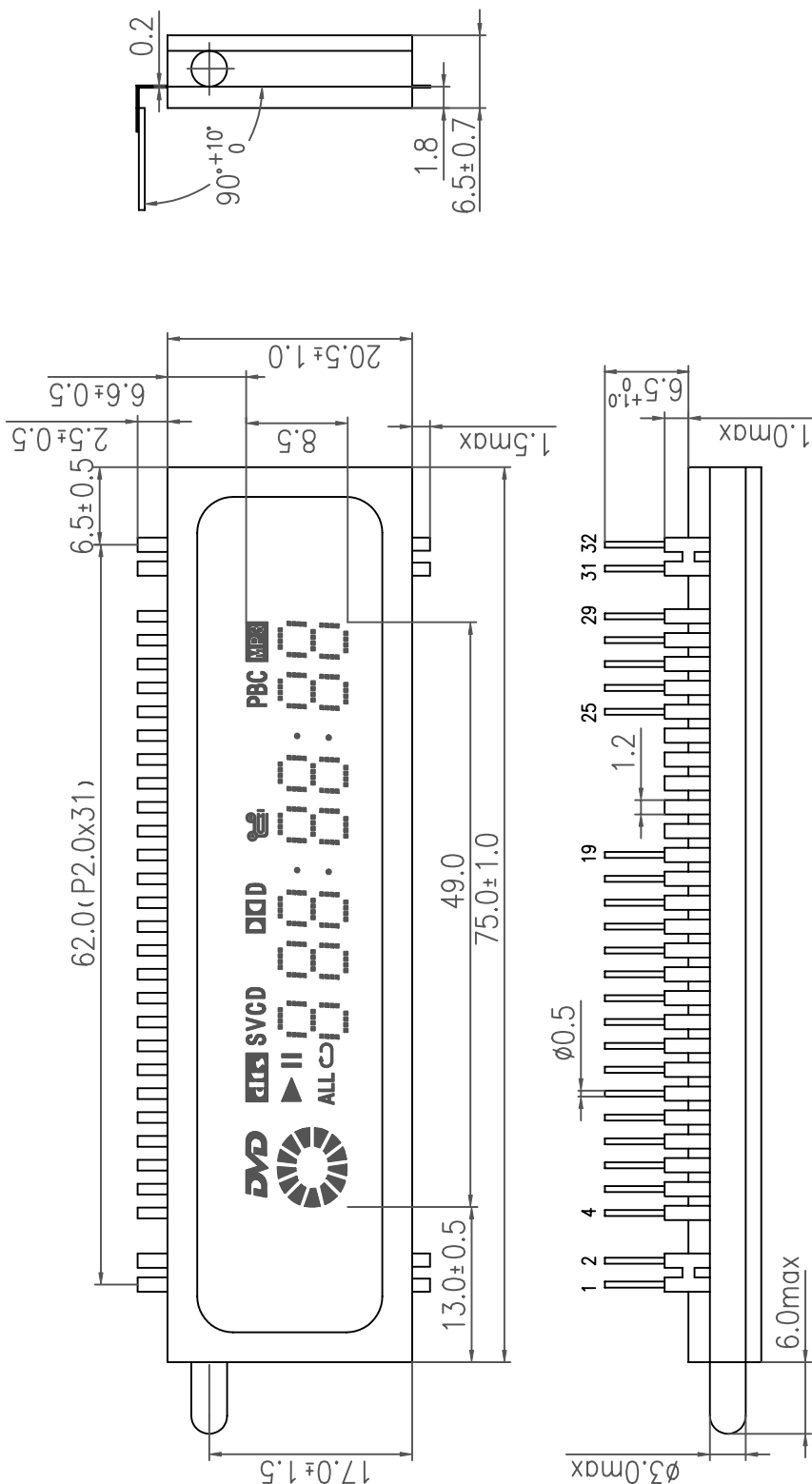
Electrical Characteristics

Item	Symbol	Test Condition	Min.	Typical	Max.	Unit
Filament Current	If -	Ef = 2.6 Vac eb = ec = 0	100.8 -	112.0 -	123.2 -	mAac -
Anode Current	ib/1G, 3G, 4G ib/2G, 5G - - -	Ef = 2.6 Vac eb = 21.0 Vp-p ec = 21.0 Vp-p Du = 1/6 tp = 100 uS	-	4.5	9.0	mA _{p-p}
			-	5.0	10.0	mA _{p-p}
			-	-	-	mA _{p-p}
			-	-	-	mA _{p-p}
			-	-	-	mA _{p-p}
Grid Current	ic/1G, 5G ic/2G, 3G, 4G - - -		-	4.5	9.0	mA _{p-p}
			-	5.0	11.0	mA _{p-p}
			-	-	-	mA _{p-p}
			-	-	-	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)	120 (34)		cd/m ² (fL)
Luminance Ratio	Lmin/Lmax		50	-	-	%
Grid Cut-off Voltage	Ecco	Ef = 2.6 Vac Eb = 21.0 Vdc	-4.0	-	-	Vdc
Anode Cut-off Voltage	Ebco	Ef = 2.6 Vac ec = 21.0 Vp-p Du = 1/6 tp = 100 uS	-4.0	-	-	Vdc

Drive Mode: Dynamic state

附图 1：外形图

Type NO.: VFD20-0503F



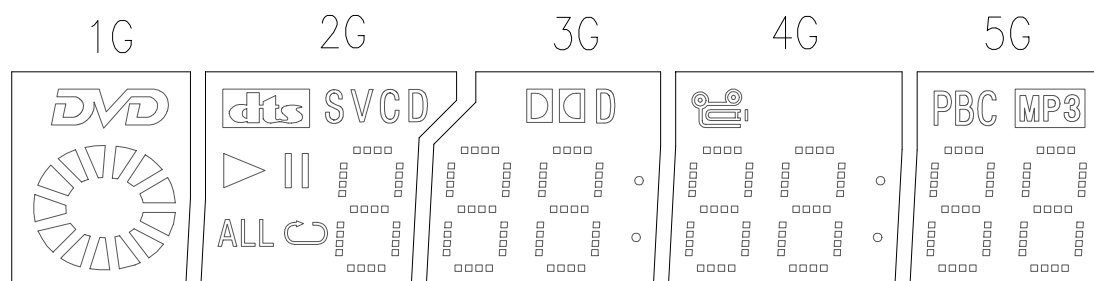
管脚连接

端子序号	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
连接	F	F	NP	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4
端子序号	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
连接	P3	P2	P1	NC	NC	NC	NC	NC	1G	2G	3G	4G	5G	NP	F	F

注： F：灯丝 NC：空脚 G：栅极 P：阳极 NP：无引脚

型号 Type No.:VFD20-0503F

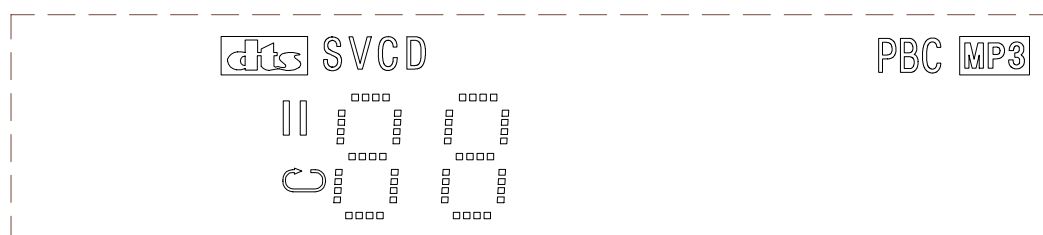
附图2: 显示内容 (Display Pattern)
栅极分割 (Grid Assignment)



显示颜色 (color of illumination):

红色 (Red):

($x=0.627, y=0.371$)



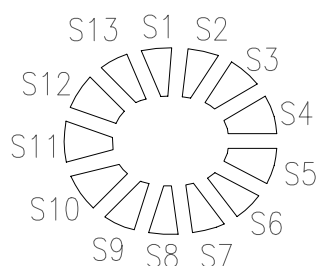
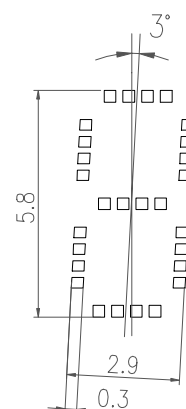
黄色 (Yellow): DVD DDD

($x=0.463, y=0.520$)

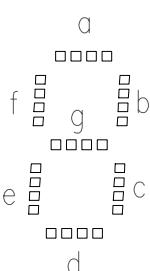
绿色 (Green): 其余 (Others)

($x=0.250, y=0.440$)

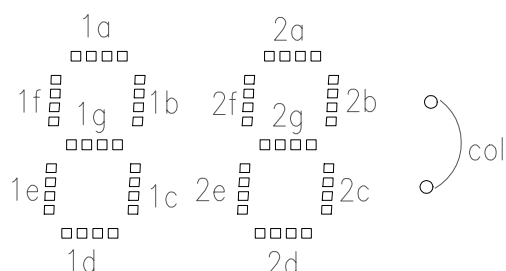
阴体字 (Negative Patterns): DTS MP3



1G

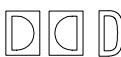


2G



3~5G

附图 4:阳极连接 (Anode Connection)

	1G	2G	3G	4G	5G
P1					PBC
P2	S1	S	1a	1a	
P3	S2	V	1b	1b	1a
P4	S3	CD	1f	1f	1b
P5	S4		1g	1g	1f
P6	S5	II	1c	1c	1g
P7	S6	ALL	1e	1e	1c
P8	S7		1d	1d	1e
P9	S8	—	col	col	1d
P10	S9	a	2a	2a	2a
P11	S10	b	2b	2b	2b
P12	S11	f	2f	2f	2f
P13	S12	g	2g	2g	2g
P14	S13	c	2c	2c	2c
P15	—	e	2e	2e	2e
P16	—	d	2d	2d	2d