



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## User's Guide

# C-20-0403F

# 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-20-0403F

**FEATURES:** 6 Digits, Seven Segmented, with Icons – DVD Player

**APPLICATION:** Character Display (7-Seg)

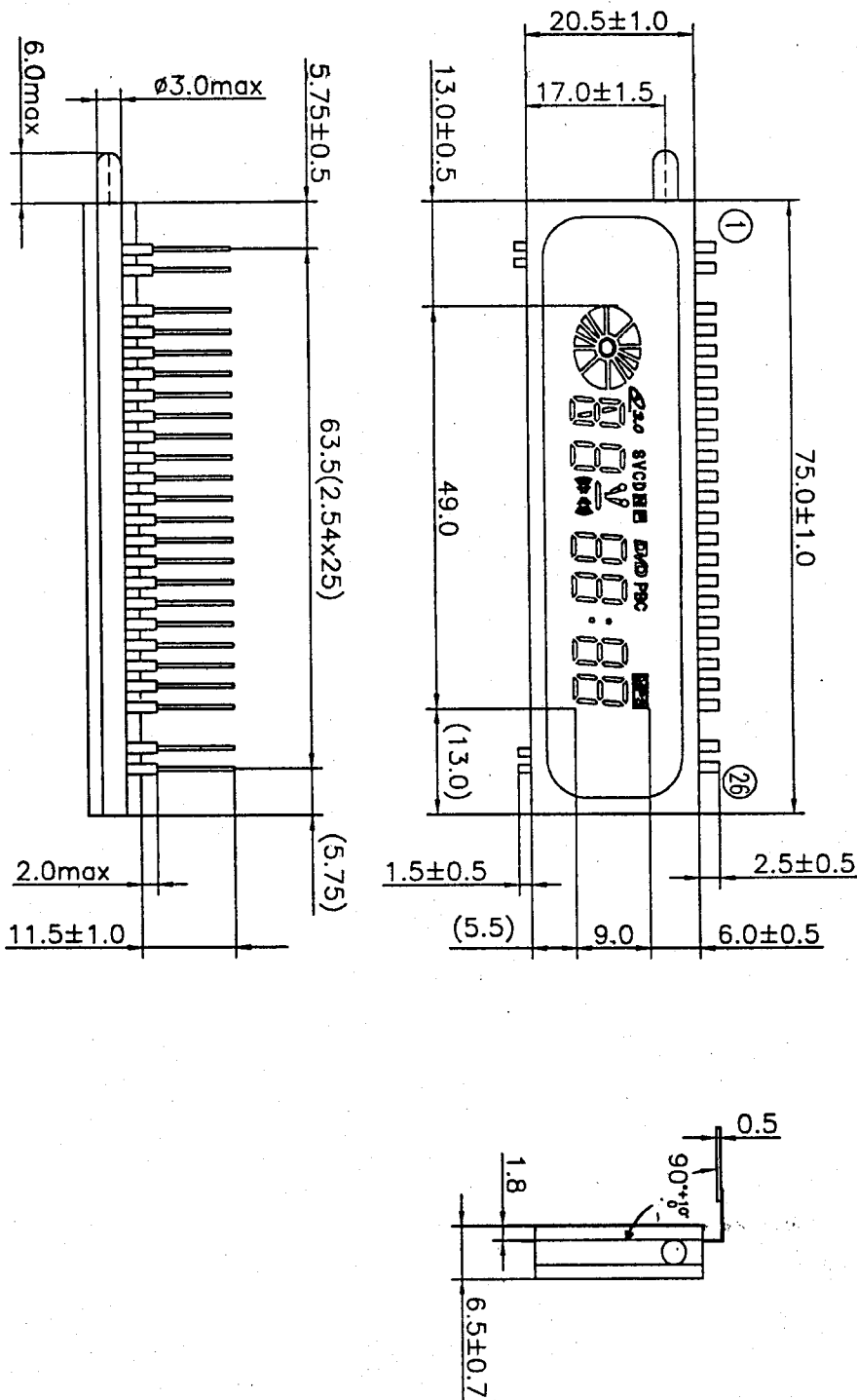
**RATINGS:** Below

<b>Outer Dimensions</b>	Panel Length	P.L.	75.0	mm	
	Panel Height	P.H.	20.5	mm	
	Panel Thickness	P.T.	6.5	mm	
<b>Leads</b>	Lead Pitch	L.P.	2.54	mm	
	Lead Out	-	SIL		
<b>Character Size</b>	Character Height	C.H.	7.0	mm	
	Character Width	C.W.	3.2	mm	
<b>Item</b>	<b>Symbol</b>	<b>Min.</b>	<b>Recommended</b>	<b>Max.</b>	<b>Unit</b>
<b>Filament Voltage</b>	Ef	2.34	2.6	2.86	Vac
<b>Peak Grid Voltage</b>	Ec	-	21.0	25.0	Vp-p
<b>Peak Anode Voltage</b>	Eb	-	21.0	25.0	Vp-p
<b>Cut-off Bias</b>	Ek	-	-	-	-
<b>Duty Cycle</b>	Du	-	1/5	-	-
<b>Pulse Width</b>	Tp	-	100	-	uS
<b>Operating Temperature</b>	Topr	-20	-	+ 70	C
<b>Storage Temperature</b>	Tstg	-40	-	+ 85	C
<b>Color of Illumination</b>	Green / Yellow / Red				

Electrical Characteristics

Item	Symbol	Test Condition	Min.	Typical	Max.	Unit
<b>Filament Current</b>	lf -	Ef = 2.6 Vac eb = ec = 0	99.0 -	110.0 -	121.0 -	mAac -
<b>Anode Current</b>	ib/1~3G	Ef = 2.6 Vac eb = 21.0 Vp-p ec = 21.0 Vp-p Du = 1/5 tp = 100 uS	-	5.5	11.0	mAp-p
	ib/4G		-	9.0	18.0	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
<b>Grid Current</b>	ic/1~3G		-	5.5	11.0	mAp-p
	ic/4G		-	9.0	18.0	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
<b>Luminance</b>	L(G)		350 (102)	700 (204)	-	cd/m <sup>2</sup> (fL)
	L(Y)		60 (17)	120 (34)		cd/m <sup>2</sup> (fL)
	L(R)		34 (10)	68 (20)		cd/m <sup>2</sup> (fL)
<b>Luminance Ratio</b>	Lmin/Lmax		50	-	-	%
<b>Grid Cut-off Voltage</b>	Ecco	Ef = 2.6 Vac Eb = 21.0 Vdc	-5.5	-	-	Vdc
<b>Anode Cut-off Voltage</b>	Ebco	Ef = 2.6 Vac ec = 21.0 Vp-p Du = 1/5 tp = 100 uS	-5.5	-	-	Vdc

: (OUTER DIMENSION)



(PIN CONNECTION)

(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
(CONNECTION)	F2	F2	NP	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	G	G	3G	4G	NP	F1	F1

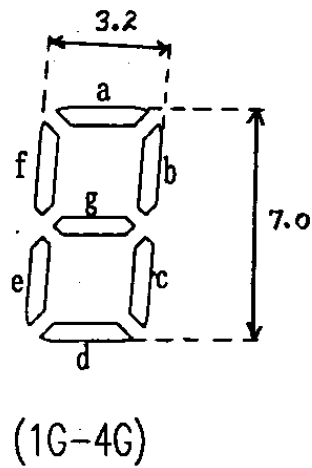
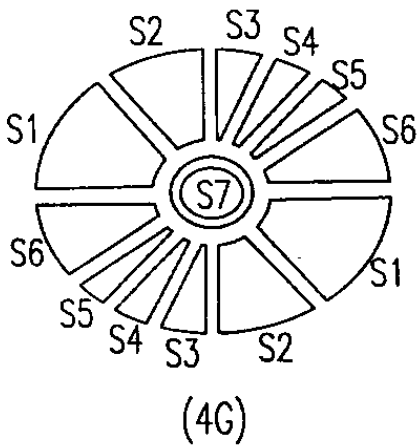
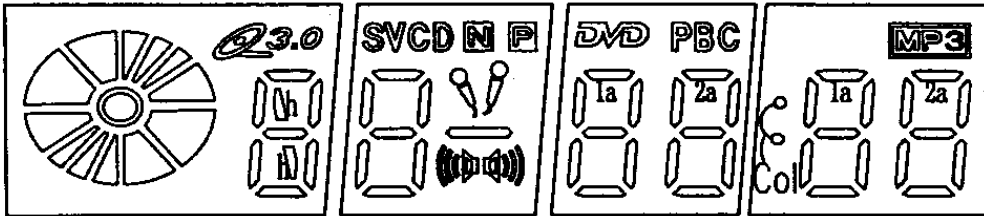
F: (Filament) P: (Anode) G: (Grid) NP: (No connection)

4G


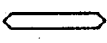


3G

2G

1G



(x=0.627,y=0.371) S3 S6 **Q3.0** **MP3**  
 (x=0.527,y=0.465) S1 S4 **SVCD** **DVD**  
 (x=0.250,y=0.440)

	4G	3G	2G	1G
P1	S1	V	1a	1a
P2	S2	CD	1b	1b
P3	S3	P	1f	1f
P4	S4		1g	1g
P5	S5		1c	1c
P6	S6		1e	1e
P7	S7		1d	1d
P8	<i>Q3.0</i>	S	PBC	MP3
P9	a	a	2a	2a
P10	b	b	2b	2b
P11	f	f	2f	2f
P12	g	g	2g	2g
P13	c	c	2c	2c
P14	e	e	2e	2e
P15	d	d	2d	2d
P16	h	N	DVD	Col