

## User's Guide

# C-20-0403F

# VFD

(Vacuum Fluorescent Character Display Module)

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# Vacuum Fluorescent Display Specification

**PART NUMBER:** C-20-0403F

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

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

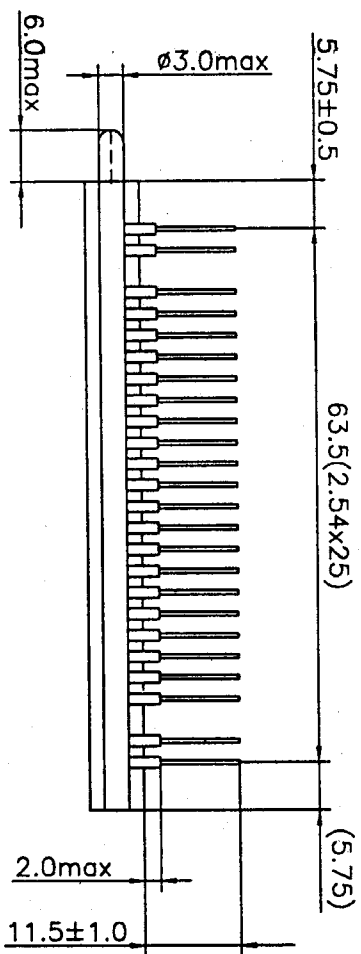
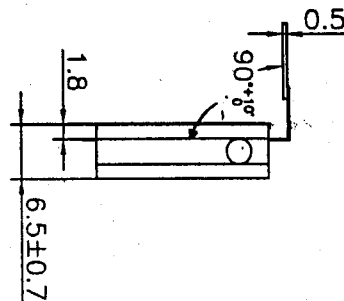
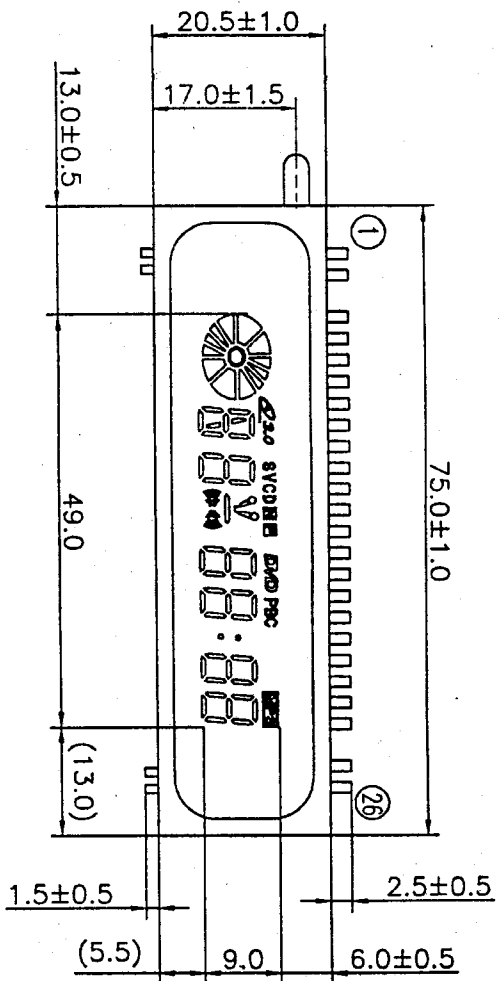
**RATINGS:** Below

<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 ib/4G - - -	Ef = 2.6 Vac eb = 21.0 Vp-p ec = 21.0 Vp-p Du = 1/5 tp = 100 uS	- - - - -	5.5 9.0 - - -	11.0 18.0 - - -	mA <sub>p-p</sub> mA <sub>p-p</sub> mA <sub>p-p</sub> mA <sub>p-p</sub> mA <sub>p-p</sub>
<b>Grid Current</b>	ic/1~3G ic/4G - - -		- - - - -	5.5 9.0 - - -	11.0 18.0 - - -	mA <sub>p-p</sub> mA <sub>p-p</sub> mA <sub>p-p</sub> mA <sub>p-p</sub> mA <sub>p-p</sub>
<b>Luminance</b>	L(G) L(Y) L(R)		350 (102) 60 (17) 34 (10)	700 (204) 120 (34) 68 (20)	- - - -	cd/m <sup>2</sup> (fL) cd/m <sup>2</sup> (fL) 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	1G	2G	3G	4G	NP	F1	F1

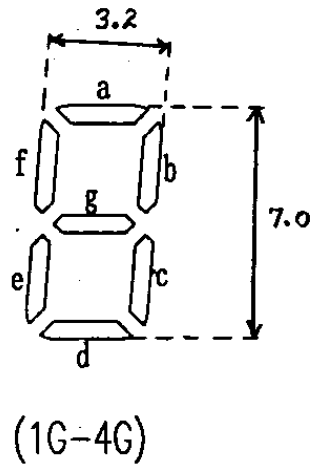
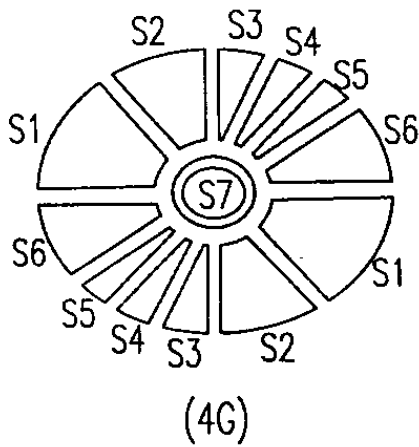
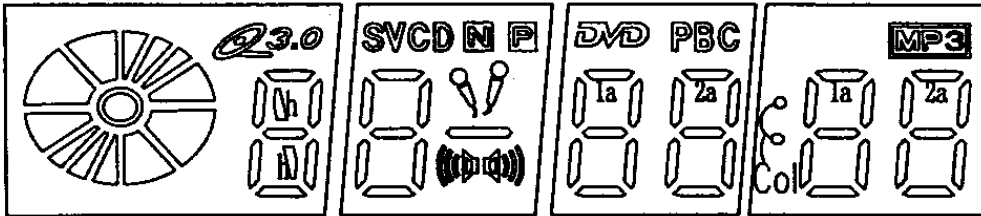
F<sub>i</sub> (Filament) P<sub>i</sub> (Anode) G<sub>i</sub> (Grid) NP<sub>i</sub> (No connection)

4G

3G

2G


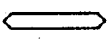






1G



(x=0.627,y=0.371) S3 S6

(x=0.527,y=0.465) S1 S4

(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		S	PBC	
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			CoI