

## User's Guide

# C-40-0701A

# VFD

(Vacuum Fluorescent Character Display Module)

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# Vacuum Fluorescent Display Specification

**PART NUMBER:** C-40-0701A

**FEATURES:** 5 Digits, Custom Seven Segmented, with Icons – Microwave oven

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

**RATINGS:** Below

<b>Outer Dimensions</b>	Panel Length	P.L.	86.0	mm	
	Panel Height	P.H.	40.0	mm	
	Panel Thickness	P.T.	8.5	mm	
<b>Leads</b>	Lead Pitch	L.P.	2.54	mm	
	Lead Out	-	SIL		
<b>Character Size</b>	Character Height	C.H.	-	mm	
	Character Width	C.W.	-	mm	
<b>Item</b>	<b>Symbol</b>	<b>Min.</b>	<b>Recommended</b>	<b>Max.</b>	<b>Unit</b>
<b>Filament Voltage</b>	Ef	2.8	3.10	3.4	Vac
<b>Peak Grid Voltage</b>	Ec	-	28.0	31.0	Vp-p
<b>Peak Anode Voltage</b>	Eb	-	28.0	31.0	Vp-p
<b>Cut-off Bias</b>	Ek	-	-	-	-
<b>Duty Cycle</b>	Du	-	1/7.79	-	-
<b>Pulse Width</b>	Tp	-	920	-	uS
<b>Operating Temperature</b>	Topr	-40	-	+ 80	C
<b>Storage Temperature</b>	Tstg	-55	-	+ 85	C
<b>Color of Illumination</b>	Green / Red				

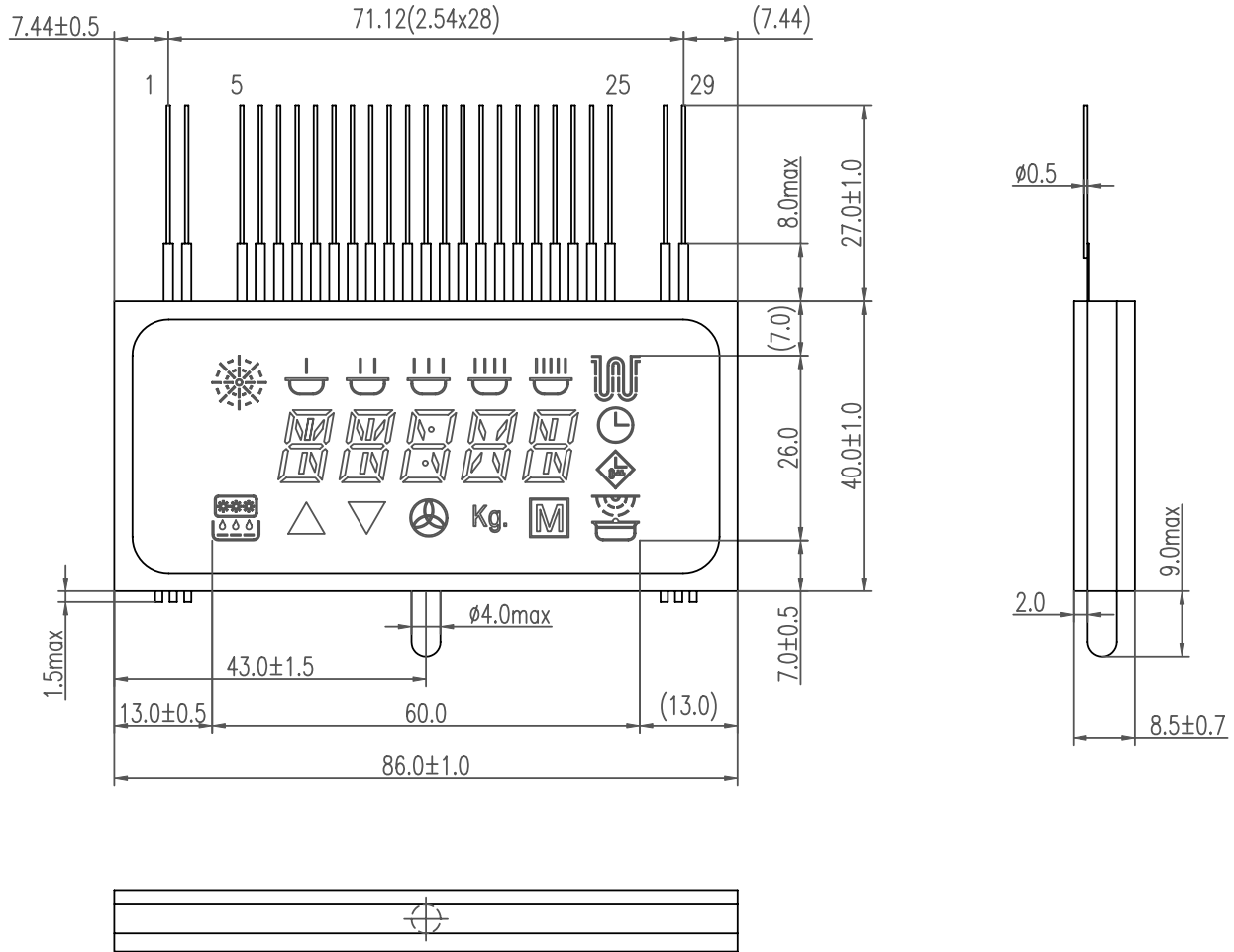
**Electrical Characteristics**

Item	Symbol	Test Condition	Min.	Typical	Max.	Unit
<b>Filament Current</b>	If -	Ef = 3.1 Vac eb = ec = 0	185.0 -	208.0 -	230.0 -	mAac -
<b>Anode Current</b>	ib/1G,4G	Ef = 3.1 Vac eb = 28.0 Vp-p ec = 28.0 Vp-p Du = 1/7.79 tp = 920 uS	-	10.0	20.0	mA <sub>p-p</sub>
	ib/2G		-	-	-	mA <sub>p-p</sub>
	ib/3G		-	-	-	mA <sub>p-p</sub>
	-		-	-	-	mA <sub>p-p</sub>
	-		-	-	-	mA <sub>p-p</sub>
<b>Grid Current</b>	ic/1G, 4G		-	10.0	20.0	mA <sub>p-p</sub>
	ic/2G		-	-	-	mA <sub>p-p</sub>
	ic/3G		-	-	-	mA <sub>p-p</sub>
	-		-	-	-	mA <sub>p-p</sub>
	-		-	-	-	mA <sub>p-p</sub>
<b>Luminance</b>	L(G)		350 (102)	700 (204)	-	cd/m <sup>2</sup> (fL)
	L(R)		35 (10.2)	70 (20.4)	-	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 = 3.1 Vac Eb = 28.0 Vdc	-4.5	-	-	Vdc
<b>Anode Cut-off Voltage</b>	Ebco	Ef = 3.1 Vac ec = 28.0 Vp-p Du = 1/7.79 tp = 920 uS	-3.0	-	-	Vdc

**Drive Mode: Dynamic state**

编号 Mark:

附图 1: 外形图 Outline Drawing (Unit:mm)



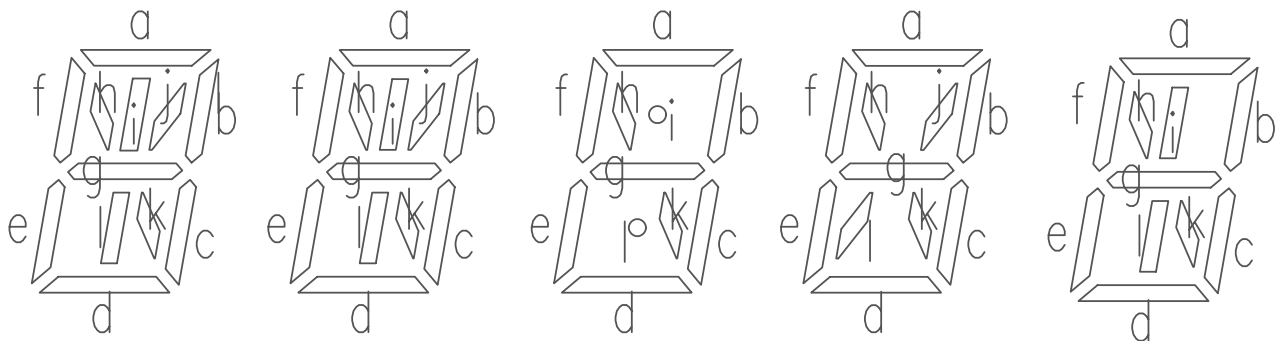
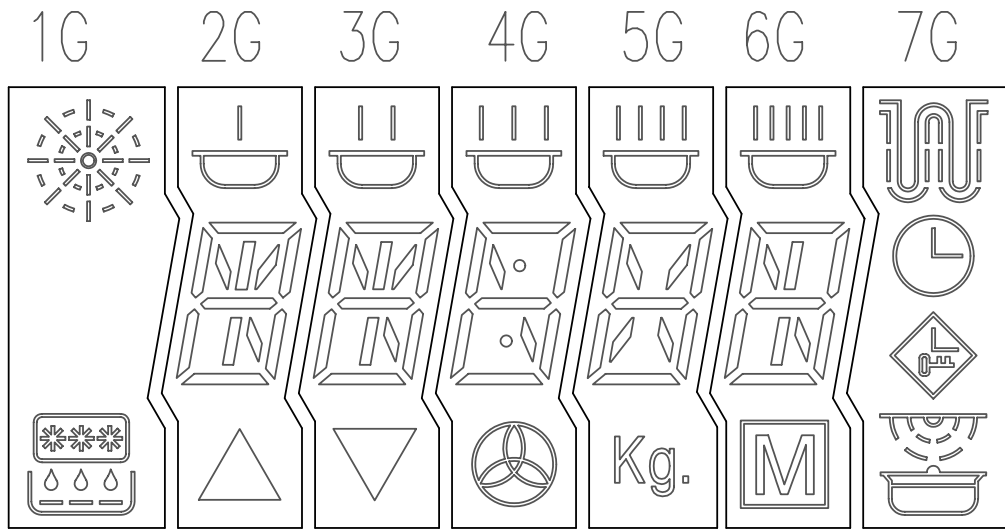
管脚连接 : (Pin Connection)

端子序号 (Pin No)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
连接 (Connection)	F	F	Np	NP	1G	P14	P13	P12	2G	P11	P10	3G	P9	P8	4G	P7	P6	P5	5G	P4
端子序号 (Pin No)	21	22	23	24	25	26	27	28	29											
连接 (Connection)	P3	6G	P2	P1	7G	NP	NP	F	F											

注: F: 灯丝 (Filament) P: 阳极 (Anode) G: 栅极 (Grid) NP: 无引脚 (No Pin)

附图2: 显示内容及栅极分割

Display Pattern And Grid Assignment






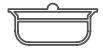

















显示颜色: (color of illumination)

红色 (Red): (x=0.627,y=0.371)



绿色 (Green): (x=0.250,y=0.440) others

附图3: 阳极连接 Anode Connection

	1G	2G	3G	4G	5G	6G	7G
P1	—	a	a	a	a	a	
P2	—	b	b	b	b	b	
P3	—	c	c	c	c	c	—
P4	—	d	d	d	d	d	
P5	—	e	e	e	e	e	
P6	—	f	f	f	f	f	
P7	•						—
P8		g	g	g	g	g	—
P9		h	h	h	h	h	—
P10		i	i	i	—	i	—
P11		j	j	—	j	—	—
P12	—	k	k	k	k	k	
P13		l	l	l	l	l	—
P14					Kg.		—

注:具体应用时可将1G和7G合并为同一栅极