



# User's Guide

# D0220MD-48-4001F

# VFD- **RoHS Compliant**

(Vacuum Fluorescent Display Module)

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For product support, contact

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# Vacuum Fluorescent Display Specification

**PART NUMBER:** D0220MD-48-4001F

**FEATURES:** 2 Row x 20 Digits, 5x7 Dot Matrix with Carrot – All

**APPLICATION:** Character Display (*Dot Matrix*)

**RATINGS:** Below

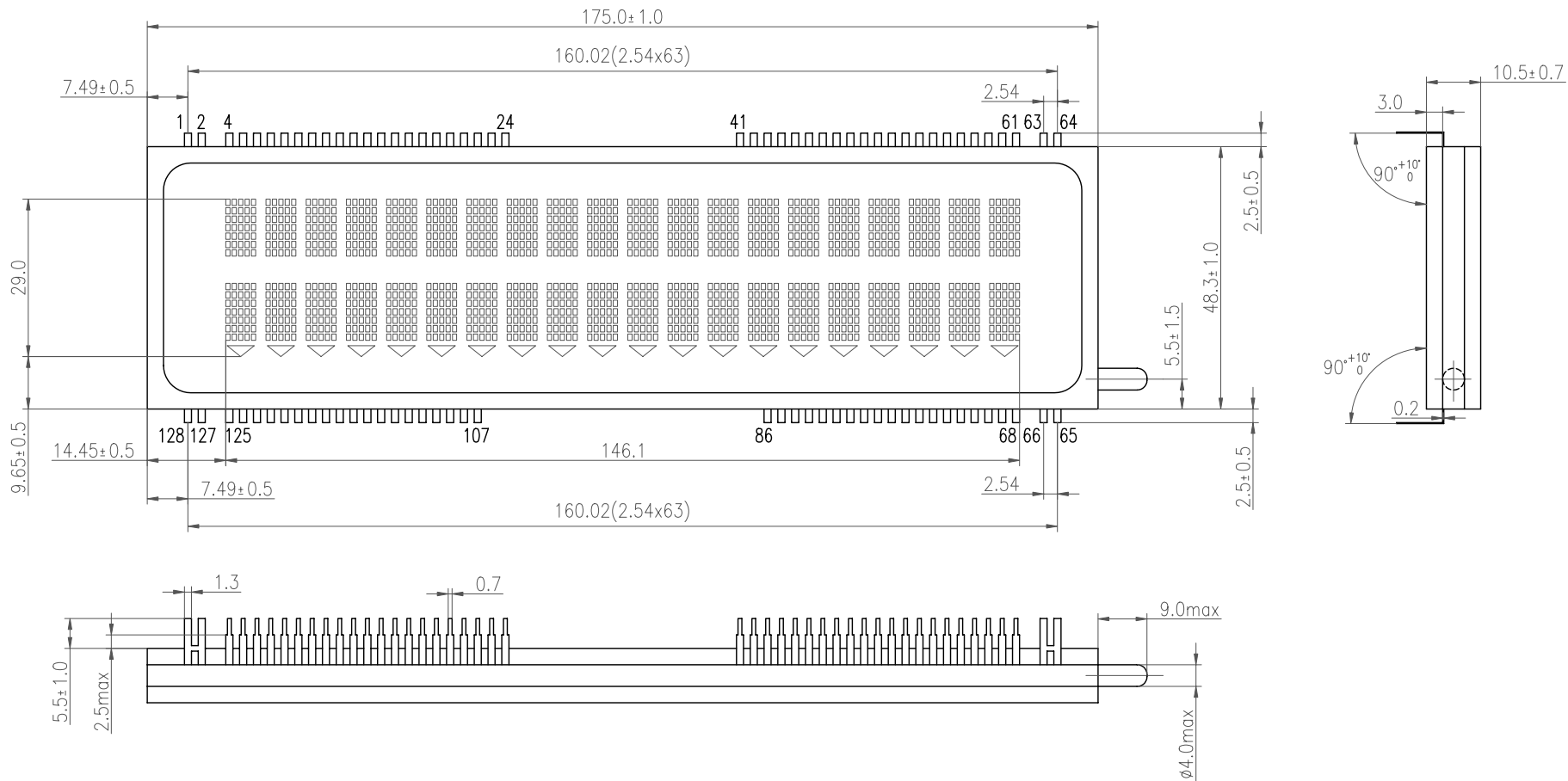
<b>Outer Dimensions</b>	Panel Length	P.L.	175.0	mm	
	Panel Height	P.H.	48.3	mm	
	Panel Thickness	P.T.	10.5	mm	
<b>Leads</b>	Lead Pitch	L.P.	2.54	mm	
	Lead Out	-	SIL		
<b>Character Size</b>	Character Height	C.H.	10.5	mm	
	Character Width	C.W.	5.5	mm	
<b>Item</b>	<b>Symbol</b>	<b>Min.</b>	<b>Recommended</b>	<b>Max.</b>	<b>Unit</b>
<b>Filament Voltage</b>	Ef	6.4	7.1	7.8	Vac
<b>Peak Grid Voltage</b>	ec	-	52.0	58.0	Vp-p
<b>Peak Anode Voltage</b>	eb	-	52.0	58.0	Vp-p
-	-	-	-	-	-
<b>Duty Cycle</b>	Du	-	1/43	-	-
<b>Pulse Width</b>	tp	-	100	-	uS
<b>Operating Temperature</b>	Topr	-20	-	+ 70	C
<b>Storage Temperature</b>	Tstg	-55	-	+ 85	C
<b>Color of Illumination</b>	Green				

**Electrical  
Characteristics**

Item	Symbol	Test Condition	Min.	Typical	Max.	Unit
Filament Current	lf	Ef = 7.1 Vac	247.5	275.0	302.5	mAac
	-	eb = ec = 0	-	-	-	-
Anode Current	ib/1~20G	Ef = 7.1 Vac eb = 52.0 Vp-p ec = 52.0 Vp-p Du = 1/43 tp = 100uS	-	13.0	26.0	mAp-p
	lb/21~40G		-	14.0	28.0	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
Grid Current	ic/1~20G		-	11.5	23.0	mAp-p
	lc/21~40G		-	13.0	26.0	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
Luminance	L(G)		350	700	-	cd/m <sup>2</sup>
	-		(102)	(204)	-	fL
Luminance Ratio	Lmin/Lmax		50	-	-	%
Grid Cut-off Voltage	Ecco	Ef = 7.1 Vac Eb = 52.0 Vdc	-9.0	-	-	Vdc
Anode Cut-off Voltage	Ebco	Ef = 7.1 Vac ec = 52.0 Vp-p Du = 1/50	-6.0	-	-	Vdc

1: Outline Drawing

外形图



管脚连接 Pin Connection

Pin	端子序号	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	27	28	29	30	31	32
Connection	连接	F	F	NP	NC	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	14G	15G	16G	17G	18G	19G	20G	NP	NP	NP	NP	NP	NP	NP	NP
Pin	端子序号	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Connection	连接	NP	NP	NP	NP	NP	NP	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	NC	NP	F	F
Pin	端子序号	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
Connection	连接	F	F	NP	P21	P22	P23	P24	P25	P26	P27	P28	P29	P30	P31	P32	P33	P34	P35	P36	40G	39G	NC	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Pin	端子序号	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
Connection	连接	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	38G	37G	36G	35G	34G	33G	32G	31G	30G	29G	28G	27G	26G	25G	24G	23G	22G	21G	NC	NP	F	F

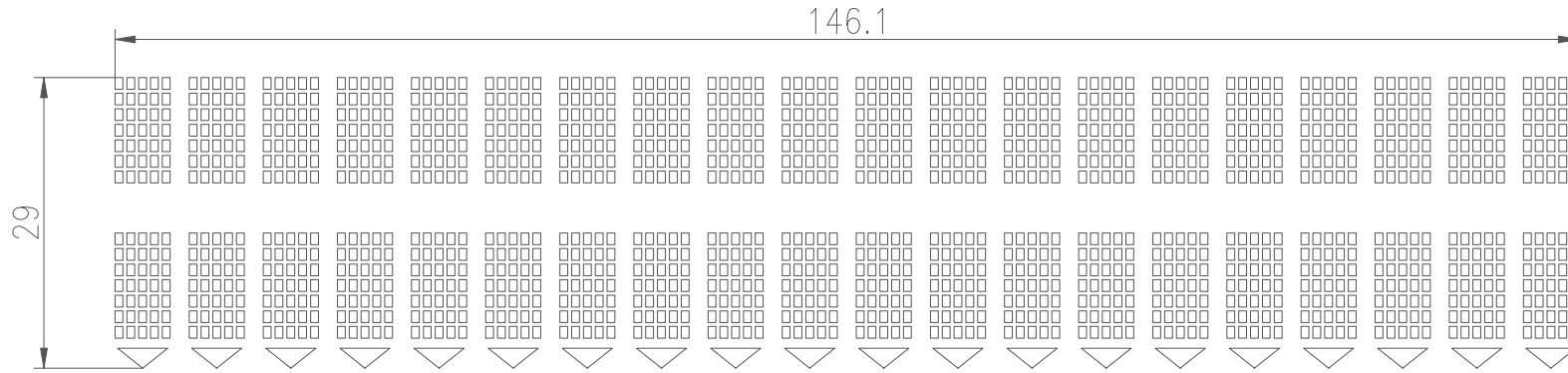
注：F: 灯丝    NC: 空脚    G: 栅极    P: 阳极    NP: 无引出脚

Filament    No Connect    Grid    Anode    No Pin    - 3 -

## 2: Display pattern

D0220MD-48-4001F

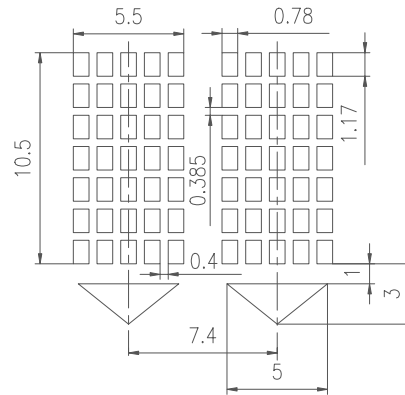
显示面



显示颜色

绿色 (全部)

a11 a12 a13 a14 a15  
 a21 a22 a23 a24 a25  
 a31 a32 a33 a34 a35  
 a41 a42 a43 a44 a45  
 a51 a52 a53 a54 a55  
 a61 a62 a63 a64 a65  
 a71 a72 a73 a74 a75



栅网分割

(1G~40G)

