

## User's Guide

# D0116LY-29-1603

# **VFD- RoHS Compliant**

(Vacuum Fluorescent Display Module)

---

For product support, contact

**Newhaven Display International**  
**2511 Technology Drive, #101**  
**Elgin, IL 60124**

Tel: (847) 844-8795 Fax: (847) 844-8796

February 26, 2008

# Vacuum Fluorescent Display Specification

**PART NUMBER:** D0116LY-29-1603

**FEATURES:** 16 Digits, Alphanumeric + Comma + Decimal + Apostrophe

**APPLICATION:** Character Display (*Alphanumeric*)

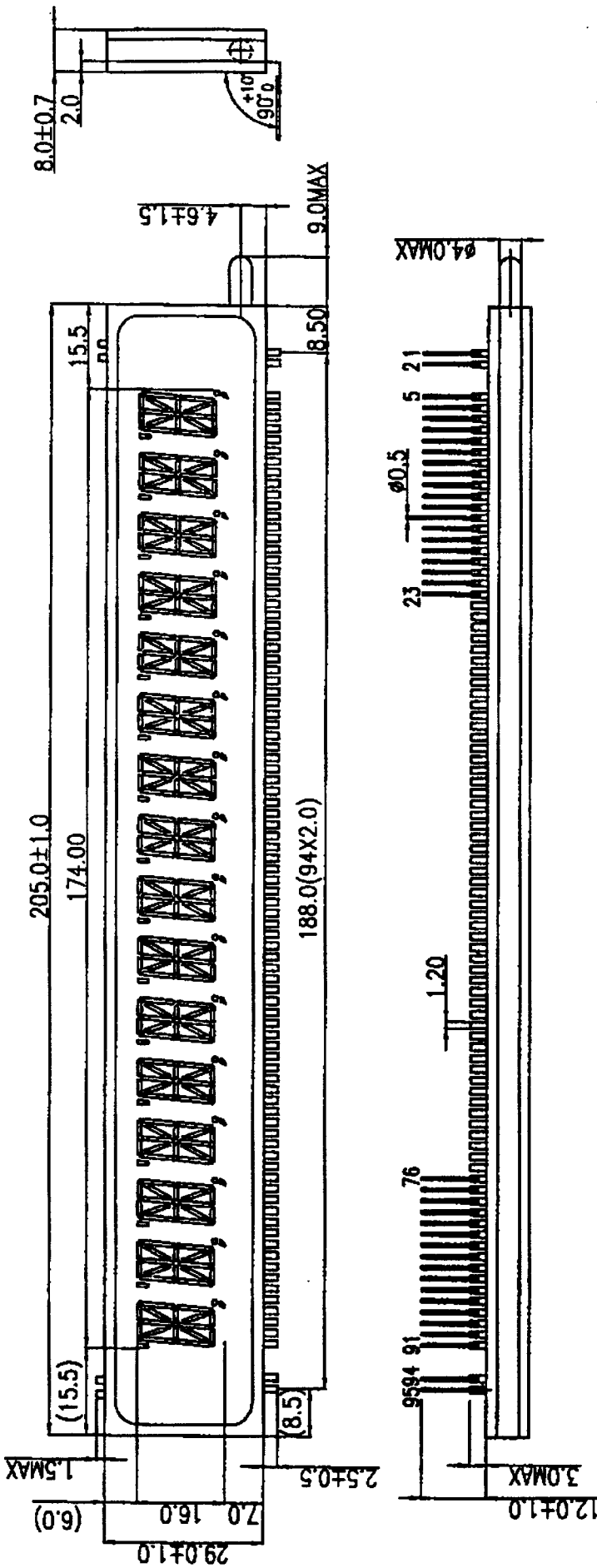
**RATINGS:** Below

<b>Outer Dimensions</b>	Panel Length	P.L.	205.2	mm	
	Panel Height	P.H.	29.0	mm	
	Panel Thickness	P.T.	8.0	mm	
<b>Leads</b>	Lead Pitch	L.P.	2.54	mm	
	Lead Out	-	SIL		
<b>Character Size</b>	Character Height	C.H.	14.0	mm	
	Character Width	C.W.	7.0	mm	
<b>Item</b>	<b>Symbol</b>	<b>Min.</b>	<b>Recommended</b>	<b>Max.</b>	<b>Unit</b>
<b>Filament Voltage</b>	Ef	7.65	8.5	9.35	Vac
<b>Peak Grid Voltage</b>	ec	-	32.0	38.0	Vp-p
<b>Peak Anode Voltage</b>	eb	-	32.0	38.0	Vp-p
-	-	-	-	-	Vdc
<b>Duty Cycle</b>	Du	-	1/ 17	-	-
<b>Pulse Width</b>	tp	-	100	-	uS
<b>Operating Temperature</b>	Topr	-20	-	+ 70	C
<b>Storage Temperature</b>	Tstg	-55	-	+ 80	C
<b>Color of Illumination</b>	Green				

**Electrical  
Characteristics**

Item	Symbol	Test Condition	Min.	Typical	Max.	Unit
<b>Filament Current</b>	If	Ef = 8.5 Vac	144.0	160.0	176.0	MAac
	-	eb = ec = 0	-	-	-	-
<b>Anode Current</b>	ib/1~16G	Ef = 8.5 Vac eb = 32.0 Vp-p ec = 32.0 Vp-p Du = 1/17 tp = 100 uS	-	13.0	26.0	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
<b>Grid Current</b>	ic/1~16G		-	15.0	30.0	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
	-		-	-	-	mAp-p
<b>Luminance</b>	L(G)		350	700	-	cd/m <sup>2</sup>
	-		(102)	(204)	-	fL
<b>Luminance Ratio</b>	Lmin/Lmax		50	-	-	%
<b>Grid Cut-off Voltage</b>	Ecco	Ef = 8.5 Vac Eb = 32.0 Vdc	-6.0	-	-	Vdc
<b>Anode Cut-off Voltage</b>	Ebco	Ef = 8.5 Vac ec = 32.0 Vp-p Du = 1/17 tp = 100 uS	-6.0	-	-	Vdc

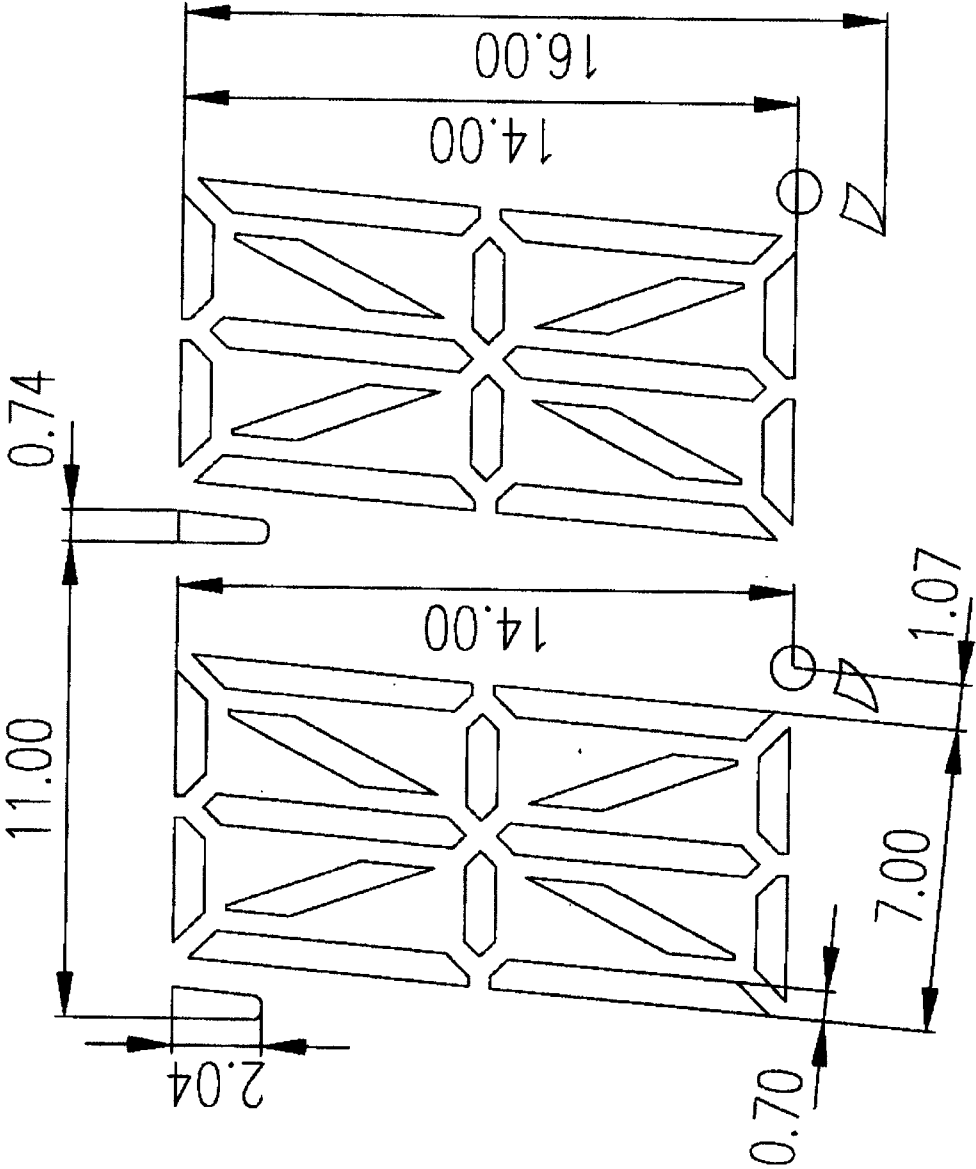
\* Drive Mode is Dynamic State



PINOUT CONNECTIONS

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
Connect	F1	F1	Np	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	
Pin No.		24~75		76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
Connect		Nc		1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	14G	15G	16G	Np	Np	F2	F2

F1: Filament  
 Gi: Grid  
 Pi: Anode  
 Np: No Pin  
 Nci: No Connection



	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	14G	15G	16G
P1	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp
P2	Dot	Dot	Dot	Dot	Dot	Dot	Dot	Dot	Dot	Dot	Dot	Dot	Dot	Dot	Dot	Dot
P3	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
P4	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d
P5	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
P6	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
P7	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
P8	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e
P9	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
P10	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
P11	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
P12	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f
P13	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
P14	k	k	k	k	k	k	k	k	k	k	k	k	k	k	k	k
P15	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h
P16	j	j	j	j	j	j	j	j	j	j	j	j	j	j	j	j
P17	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u
P18	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
P19	Com	Com	Com	Com	Com	Com	Com	Com	Com	Com	Com	Com	Com	Com	Com	Com