



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

D0104MT-24-0503

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 12, 2008

Vacuum Fluorescent Display Specification

PART NUMBER: D0104MT-24-0503

FEATURES: 4 Digits, 7-Segmented, Clock

APPLICATION: Character Display (7-Segmented)

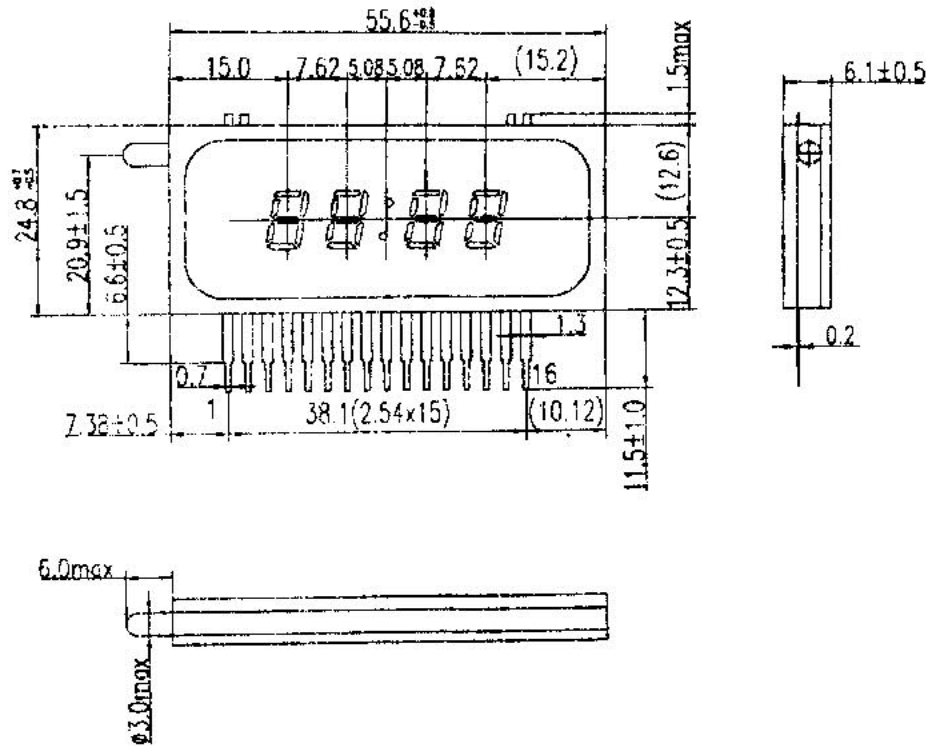
RATINGS: Below

Outer Dimensions	Panel Length	P.L.	55.6	mm	
	Panel Height	P.H.	24.8	mm	
	Panel Thickness	P.T.	6.1	mm	
Leads	Lead Pitch	L.P.	2.54	mm	
	Lead Out	-	SIL		
Character Size	Character Height	C.H.	7.6	mm	
	Character Width	C.W.	5.4	mm	
Item	Symbol	Min.	Recommended	Max.	Unit
Filament Voltage	Ef	1.53	1.7	1.87	Vdc
Peak Grid Voltage	ec	-	24.0	35.0	Vp-p
Peak Anode Voltage	eb	-	24.0	35.0	Vp-p
Cut-off Bias	Ek	-	-	-	Vdc
Duty Cycle	Du	-	1/ 7.5	-	-
Pulse Width	tp	-	80	-	uS
Operating Temperature	Topr	-20	-	+ 70	C
Storage Temperature	Tstg	-55	-	+ 80	C
Color of Illumination	Green				

**Electrical
Characteristics**

Item	Symbol	Test Condition	Min.	Typical	Max.	Unit
Filament Current	if	Ef = 1.7 Vdc	70.0	78.0	86.0	mA
	-	eb = ec = 0	-	-	-	-
Anode Current	ib/1G,2G,4G, 5G	Ef = 1.7 Vdc	-	1.8	3.6	mA _{p-p}
	ib/3G	eb = 24.0 Vp-p	-	-	-	mA _{p-p}
	-	ec = 24.0 Vp-p	-	-	-	mA _{p-p}
	-	Du = 1/7.5	-	-	-	mA _{p-p}
	-	tp = 80 uS	-	-	-	mA _{p-p}
		Ek = 2Vdc				
Grid Current	ic/1G,2G4G, 5G		-	1.8	3.6	mA _{p-p}
	ic/3G		-	1.5	3.0	mA _{p-p}
	-		-	-	-	mA _{p-p}
	-		-	-	-	mA _{p-p}
	-		-	-	-	mA _{p-p}
Luminance	L(G)		686	1440	-	cd/m ²
	-		(200)	(420)		fL
Luminance Ratio	Lmin/Lmax		50	-	-	%
Grid Cut-off Voltage	Ecco	Ef = 1.7 Vdc Eb = 24.0 Vdc	(-2.0)	-	-	Vdc
Anode Cut-off Voltage	Ebco	Ef = 1.7 Vdc ec = 24.0 Vp-p Du = 1/7.5 tp = 80 uS	(-20)	-	-	Vdc

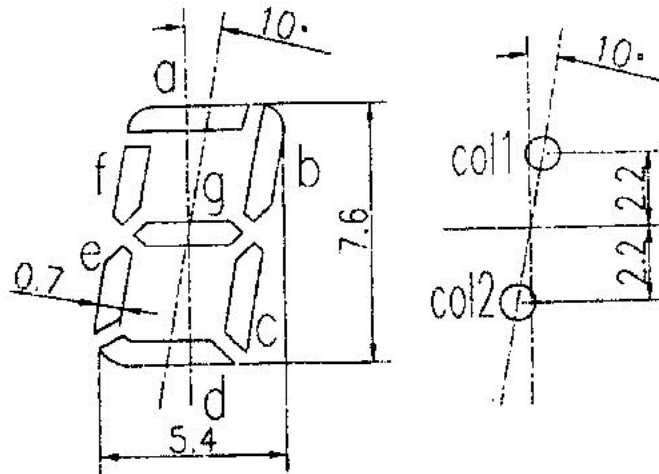
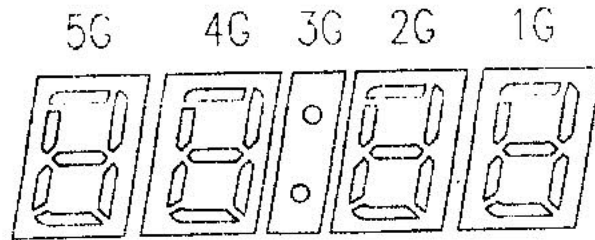
Outline Drawing (Unit:mm)



Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Connect	F(-)	g	f	G5	e	d	G4	c	G3	b	G2	a	col2	G1	col1	F(+)

D0104MT-24-0503

Display Pattern And Grid Assignment



(color of illumination)

(Green):(x=0.250,y=0.440)