Model	HNV-12SS62	Rev.① 19-Mar-2012
Application	DVD	
Color of Illumination #6)	GREEN (G. :x=0.250,y=0.439)	

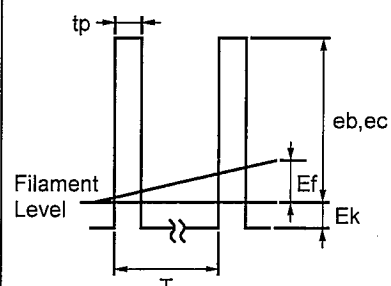
ABSOLUTE MAXIMUM RATINGS #4)

Item	Symbol	Min.	Max.	Unit	Condition
Filament Voltage #2)	Ef	2.64	3.96	Vdc	eb,ec = Typ.
Anode Voltage	eb	—	36.0	Vp-p	Ef=Typ.
Grid Voltage	ec	—	36.0	Vp-p	
Operating Temperature	Topr	-40	+85	℃	—

RECOMMENDED OPERATING CONDITION #5)

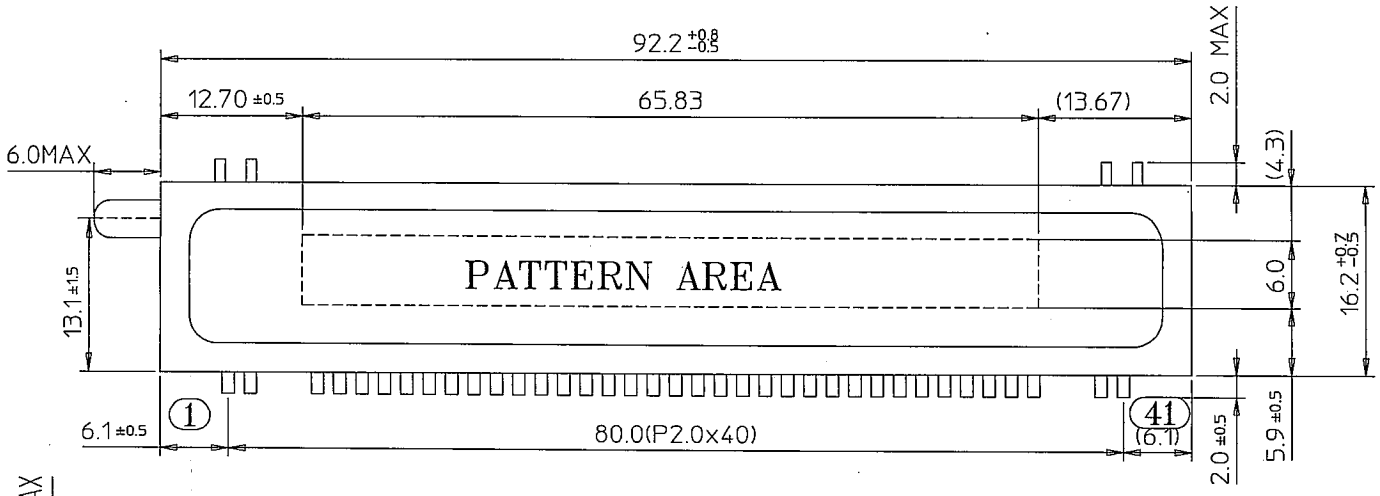
Item	Symbol	Min.	Typ.	Max.	Unit
Filament Voltage #2)	Ef	2.97	3.30	3.63	Vdc
Peak Anode Voltage	eb	27.0	30.0	33.0	Vp-p
Peak Grid Voltage	ec	27.0	30.0	33.0	Vp-p
Cut-Off Bias Voltage	Ek	2.0	—	—	Vdc
Duty Factor	Du	—	1/13	—	—
Pulse Width	tp	—	100	—	μs
Operating Temperature	Topr	-20	—	+70	℃
Storage Temperature	Tstg	-55	—	+85	℃

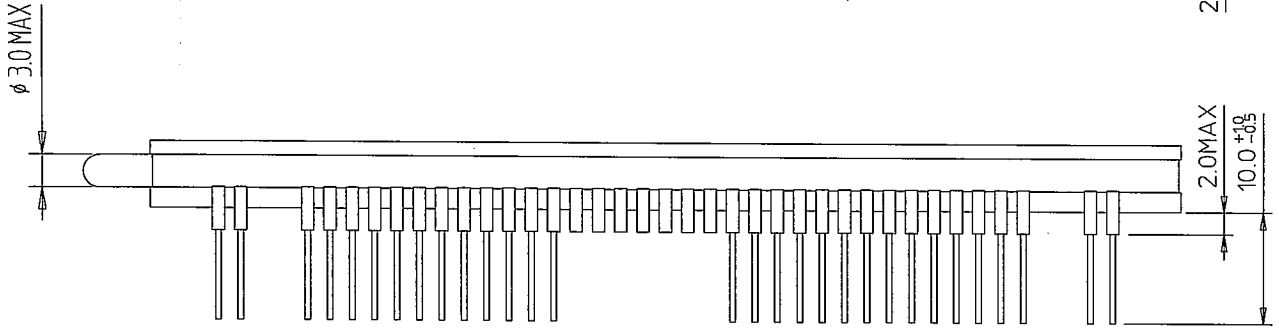
ELECTRICAL CHARACTERISTICS

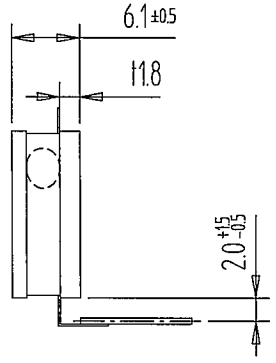
Item	Test Condition	Symbol		Min.	Typ.	Max.	Unit
Filament Current	Ef= 3.3 Vdc ,eb=ec=0	If		90	100	110	mAdc
Anode Current #1)	Ef= 3.3 Vdc eb= 30.0 Vp-p ec= 30.0 Vp-p	ib	1G~12G	—	5.0	10.0	mAp-p
Grid Current #1)	Duty= 1/13 tp= 100 μs tb= 0 μs	ic	1G~12G	—	6.0	12.0	mAp-p
Brightness		GREEN		102	204	—	ft-L
Brightness Ratio Between Digits	(All Segs are lit)	L(Max.) / L(Min.)		—	—	2	
Grid Cut-Off Voltage #3)	Ef= 3.3 Vdc, Eb= 30.0 Vdc, Ec=Vary	Ecco		(-2.0)	—	—	Vdc
Anode Cut-Off Voltage #3)	Ef= 3.3 Vdc, Du= 1/13 ec= 30.0 Vp-p, Eb= Vary	Ebco		(-2.0)	—	—	Vdc

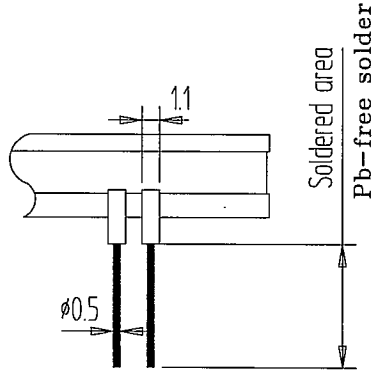
#1. Unless otherwise specified, the anode and the grid current should be measured for each grid when all anodes turn on.
#2. DC driving voltage.
#3. The cut-off voltage measurement should be grounded at negative(-) side of the filament terminal.
#4. Absolute Maximum Ratings : The value should not be exceeded in any conditions.
If a user don't keep this condition, then VFD may be permanently damaged.
#5. Recommended Operating Condition : Quality can be assured within this condition.
Typical rating is the most optimized value on the life time
#6. All phosphor is Cd-free phosphor.

OUTER DIMENSIONS









LEAD DETAILS

PIN CONNECTION

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17 – 23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
CONNECTION	F−	F−	NP	NP	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NX	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NP	NP	F+	F+

◉ Notes ◉
1) F+,F− : Filament pin
2) nG : Grid pin
3) Pn : Anode pin
4) NP : No pin
5) NX : No extended pin

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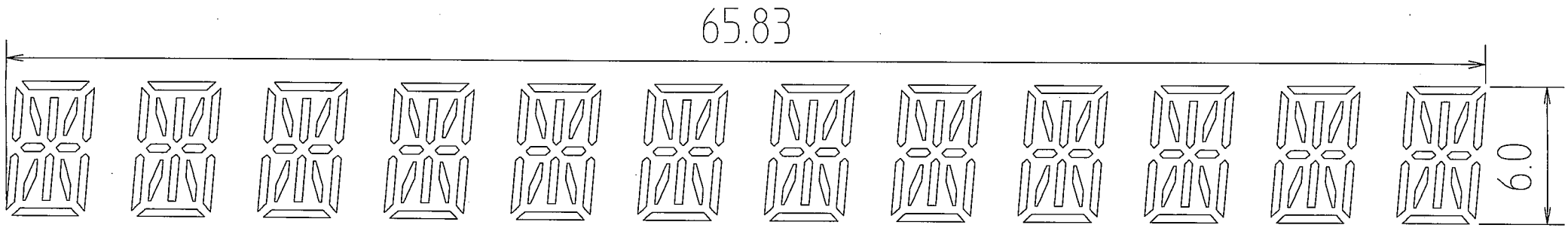
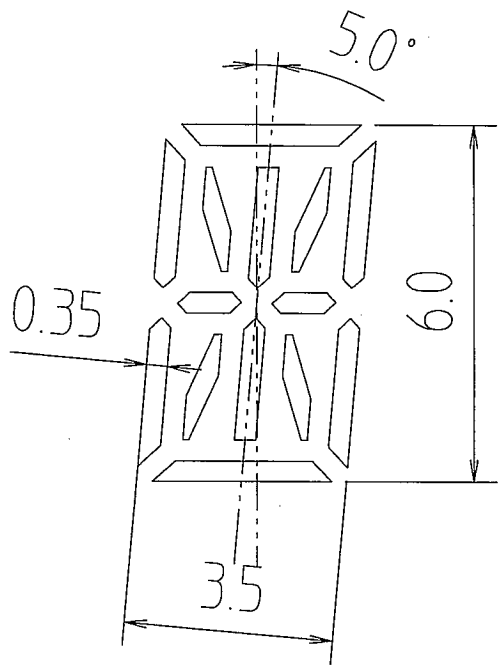
PATTERN DETAILS





◎ Color of Illumination ◎

- Green (G. x=0.250,y=0.439) ---- All Patterns

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PATTERN DETAILS
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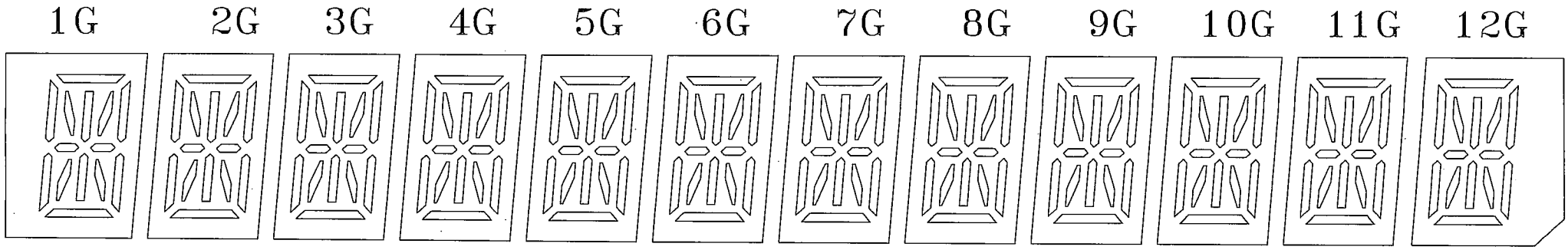
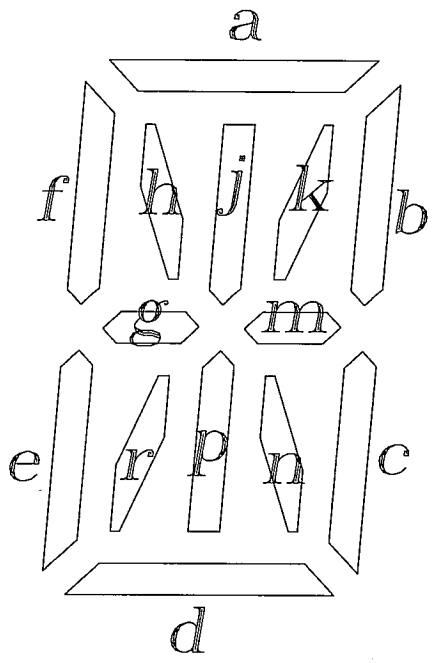
GRID ASSIGNMENT





(1G–12G)

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ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G
P1	a	a	a	a	a	a	a	a	a	a	a	a
P2	f	f	f	f	f	f	f	f	f	f	f	f
P3	h	h	h	h	h	h	h	h	h	h	h	h
P4	j	j	j	j	j	j	j	j	j	j	j	j
P5	k	k	k	k	k	k	k	k	k	k	k	k
P6	b	b	b	b	b	b	b	b	b	b	b	b
P7	g	g	g	g	g	g	g	g	g	g	g	g
P8	m	m	m	m	m	m	m	m	m	m	m	m
P9	e	e	e	e	e	e	e	e	e	e	e	e
P10	r	r	r	r	r	r	r	r	r	r	r	r
P11	p	p	p	p	p	p	p	p	p	p	p	p
P12	n	n	n	n	n	n	n	n	n	n	n	n
P13	c	c	c	c	c	c	c	c	c	c	c	c
P14	d	d	d	d	d	d	d	d	d	d	d	d

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ANODE CONNECTION
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