DEVELOPMENT SAMPLE DATA

This information is derived from development samples made available for evaluation. It does not form part of our data handbook system and does not necessarily imply that the device will go into production M31-131W

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# MONITOR TUBE

The M31-131W is a 31 cm-diagonal rectangular television tube with integral protection primarily intended for use as a monitor or display tube.

QUICK REF	ERENCE DATA
Deflection angle	90 <sup>0</sup>
Focusing	electrostatic
Resolution	900 line
Overall length	max. 310 mm

# SCREEN

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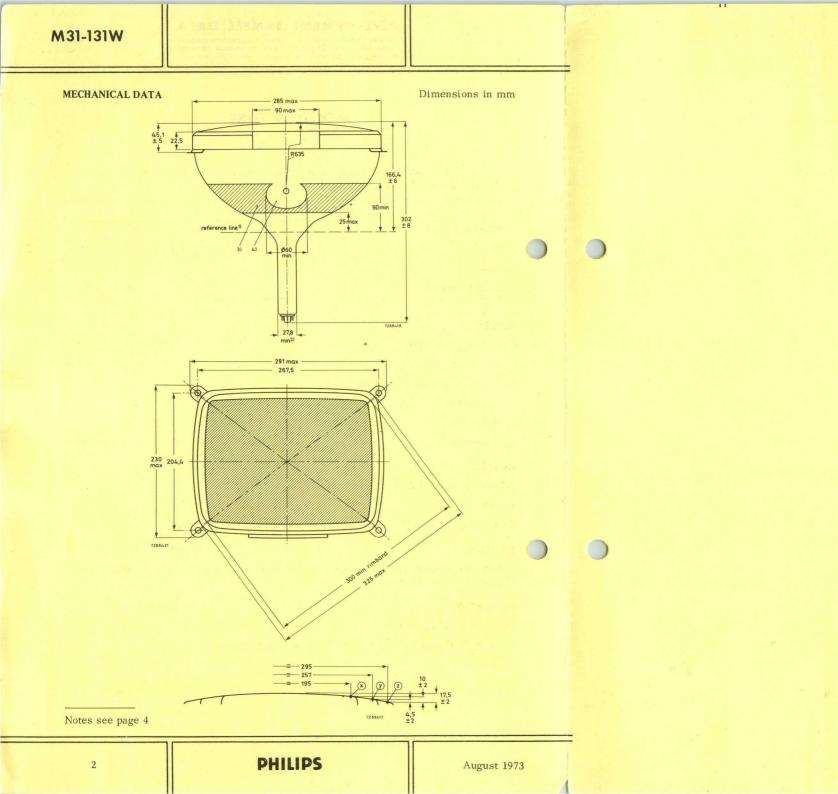
4	Metal backed phosphor			
Tab	Luminescence		white	
er,	Light transmission of face glass	approx.	50	%
Sinde	Useful diagonal	min.	295	mm
Blue Binder,	Useful width	min.	257	mm
BI	Useful height	min.	195	mm
	HEATING			
	Indirect by a.c. or d.c.; parallel supply			
	Heater voltage	Vf	6,3	V
	Heater current	If	300	mA
	FOCUSING	electros	tatic	

For focusing voltage providing optimum focus at a beam current of 100  $\mu A$  see under "Typical operating conditions".

DEFLECTION	magnetic
Diagonal deflection angle	90 <sup>0</sup>
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For a deflection coil please contact the local tube supplier.

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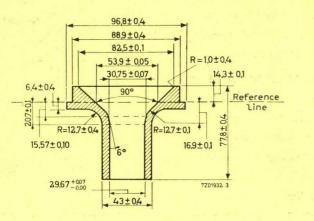
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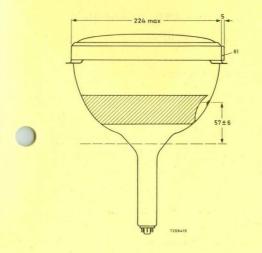
# **REFERENCE LINE GAUGE**

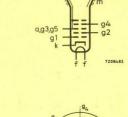
Dimensions in mm

MECHANICAL DATA (continued)

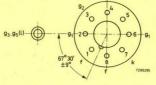
Dimensions in mm

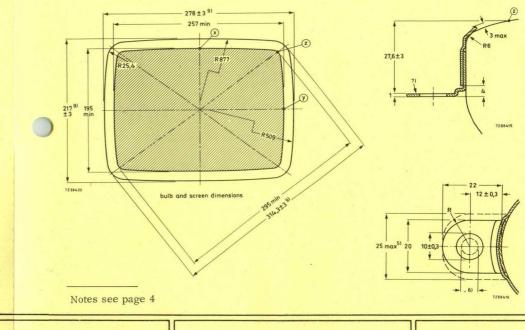






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## MECHANICAL DATA (continued)

Mounting position: any Base Cavity contact Accessories Socket

Neo eightar (B8H), IEC67-I-31a CT8, IEC 67-III-2

-laustan contrast compositor

2422 501 06001 type 55563A

Final accelerator contact connector

## PICTURE CENTRING MAGNET

Field intensity perpendicular to the tube axis adjustable from 0 to 800 A/m (0 to 10 Oe). Adjustment of the centring magnet should not cause a general reduction in brightness or shading the raster.

#### NOTES TO OUTLINE DRAWING

- 1) The reference line is determined by the plane of the upper edge of the flange of the reference line gauge with the gauge resting on the cone.
- 2) The maximum dimension is determined by the reference line gauge.
- 3) This tube has a external conductive coating (m), which must be earthed. The capacitance of this coating to the final accelerator is used for smoothing the EHT. The tube marking and warning labels are on the side of the cone opposite the final accelerator contact, and this side should not be used for making contact to the conductive coating.
- 4) This area must be kept clean.
- 5) Minimum space to be reserved for mounting lugs.
- 6) The mounting screws in the cabinet must be situated within a circle with a diameter of 6 mm drawn around the true geometrical position (corners of a rectangle of 267,5 mm x 204,4 mm).
- 7) The maximum displacement of any lug with respect to the plane through the other three lugs is 2 mm.
- 8) The metal rimband must be earthed. For this purpose the overlap of the band is provided with holes.
- 9) The bulge of the spliceline seal may increase the indicated maximum values for envelope width, diagonal, and height by not more than 6,4 mm, but at any point around the seal the bulge will not protrude more than 3,2 mm beyond the envelope surface.

## CAPACITANCES

Final accelerator to external conductive coating	$C_{g_3,g_5(\ell)/m}$ 1200	pF
Final accelerator to metal band	$C_{g3,g5(\ell)/m'}$ 150	pF
Cathode to all other elements	C <sub>k</sub> 5	pF
Control grid to all other elements	C <sub>g1</sub> 7	pF
TYPICAL OPERATING CONDITIONS		
Final accelerator voltage	$V_{g_3, g_5(\ell)}$ 16	kV
Focusing electrode voltage	$V_{g_4}$ 0 to 400	V
First accelerator voltage	Vg2 600	V
Grid no. 1 voltage for extinction of focused raster	$V_{g_1}$ -32 to -85	v

# RESOLUTION <sup>1</sup>)

Resolution at screen centre measured with the shrinking raster method (non-interlaced raster), under typical operating conditions, and at a beam current of 50  $\mu A$ : 900 lines

## LIMITING VALUES (Absolute max. rating system)

Final accelerator voltage	$V_{g_3,g_5(\ell)}$	max. min.	18 10	kV kV
Focusing electrode voltage, positive negative	$v_{g_4} - v_{g_4}$	max. max.	1000 500	V V
First accelerator voltage	vg2	max. min.	800 300	V V
Grid no. 1 voltage, negative positive positive peak	$v_{g_1} \\ v_{g_1} \\ v_{g_{1_p}}$	max. max. max.	150 0 2	V V V
Cathode to heater voltage, positive positive peak negative negative peak	V <sub>kf</sub> V <sub>kfp</sub> -V <sub>kf</sub> -V <sub>kf</sub>	max. max. max. max.	250 300 135 180	V 2) V V V

 If necessary, the picture quality can be improved by using a beam centring magnet. This magnet, catalogue number 3322 142 11401, can be supplied on request.

2) During a warm-up period not exceeding 15 s the heater may be 410 V negative with respect to the cathode.

# PHILIPS

August 1973

# M31-131W

# MONITOR TUBE

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The M31-131W is a 31 cm-diagonal rectangular television tube with integral protection primarily intended for use as a monitor or display tube.

	ICK REFERENCE DATA			
Deflection angle			90 <sup>0</sup>	
Focusing		elect	rostatic	
Resolution			900	lines
Overall length		$\leq$	310	mm

# SCREEN

Metal backed phosphor				
Luminescence		V	white	
Light transmission of face glass	app	prox.	50	%
Useful diagonal		2	295	mm
Useful width		$\geq$	257	mm
Useful height		≥	195	mm

# HEATING

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Indirect by a.c. or d.c.; parallel suppl	У			
Heater voltage	· · · · · · · · · · · · · · · · · · ·	Vf	6,3	٦V
Heater current		$I_{f}$	300	mA
FOCUSING		electr	ostatic	

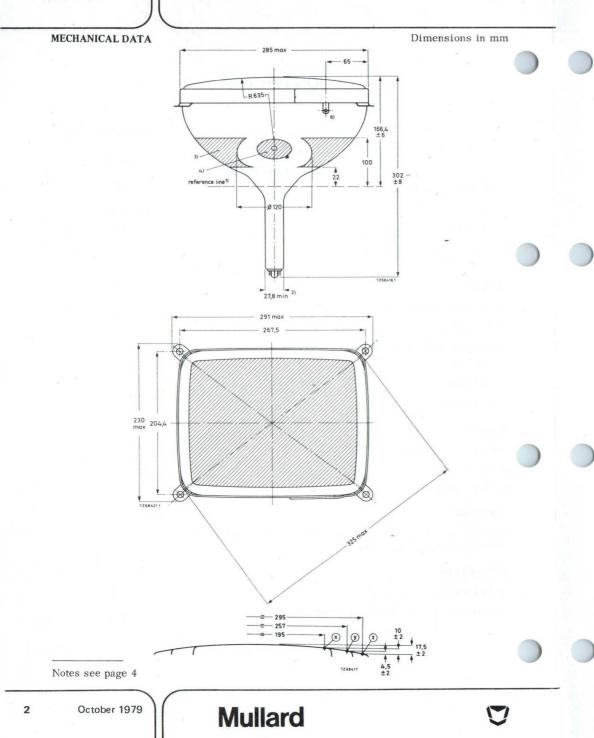
For focusing voltage providing optimum focus at a beam current of 100  $\mu A$  see under "Typical operating conditions"

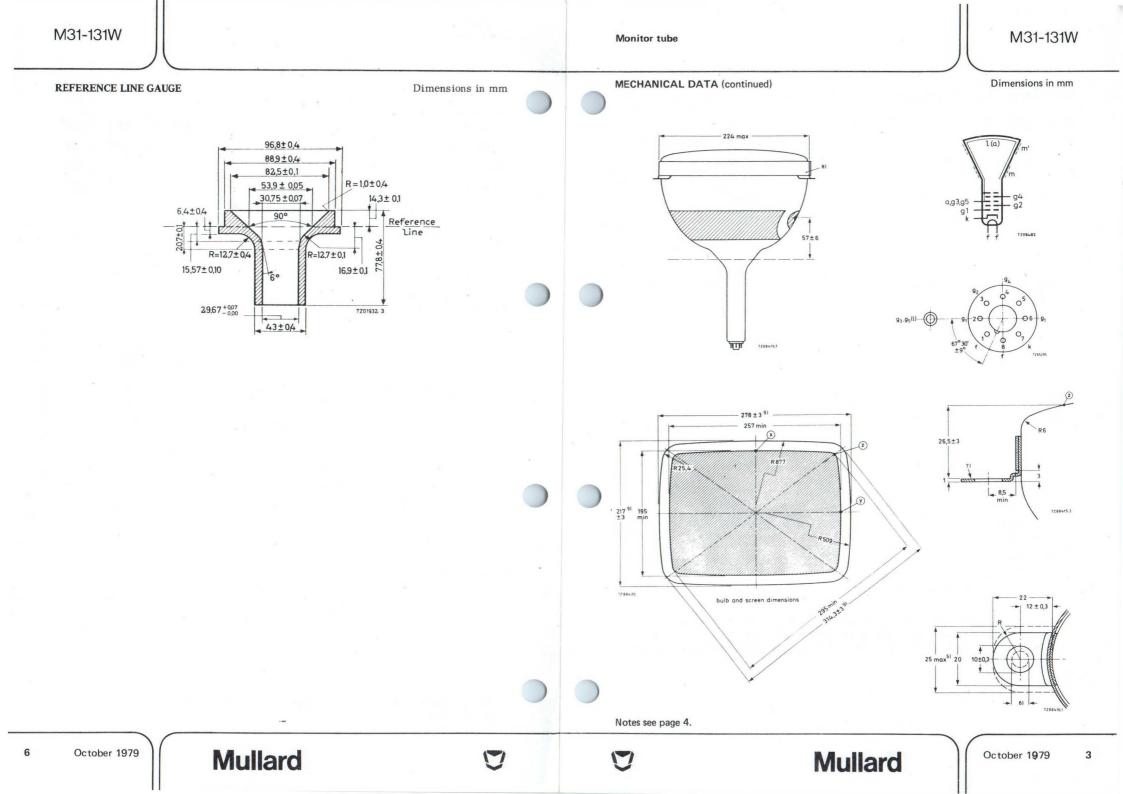
# DEFLECTIONmagneticDiagonal deflection angle9000Deflection coil AT1071/03 is recommended.

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# M31-131W





# M31-131W

Monitor tube

#### CAPACITANCES

#### District and a structure for

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max.

kV

Final accelerator to external conductive coating	Cg3, g5(l)/m 1200	pF
Final accelerator to metal band	$C_{g_3}, g_5(\ell)/m$ 150	pF
Cathode to all other elements	C <sub>k</sub> 5	pF
Control grid to all other elements	Cg1 7	pF
TYPICAL OPERATING CONDITIONS		
Final accelerator voltage	$V_{g3}, g_5(\ell)$ 16	kV
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Grid 1 voltage for extinction of focused raster	V <sub>g1</sub> -32 to -85	V

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#### LIMITING VALUES (Absolute max. rating system)

	Final accelerator voltage	$v_{g_3}, g_5(\ell)$	min.	10	kV
	Focusing electrode voltage, positive	Vg4	max.	1000	V
	negative	-Vg4	max.	500	V
)			max.	800	V
	First accelerator voltage	Vg2	min.	300	V
	Grid voltage, negative	-Vg1	max.	150	V
	positive	Vg1	max.	0	V
	positive peak	vglp	max.	2	V
	Cathode to heater voltage, positive	Vkf	max.	250	V
	positive peal		max.	300	V
	negative	-Vkf	max.	135	V 1)
	negative pea		max.	180	V

1) During a warm-up period not exceeding 15 s the heater may be 410-V negative with respect to the cathode.

MECHANICAL DATA	(continued)
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Mounting position : any

Base

Cavity contact

Accessories

Socket

2422 501 06001

type 55563A

CT8, IEC 67-III-2

Neo eightar (B8H), IEC 67-I-31a

Final accelerator contact connector

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