

# Dieter's Nixie Tube Data Archive

This file is a part of Dieter's Nixie- and display tubes data archive

If you have more datasheets, articles, books, pictures or other information about Nixie tubes or other display devices please let me know.

Thank you!

Document in this file	Philips datasheet – ZM1050
Display devices in this document	Z550M, ZM1050

# ZM1050 INDICATOR TUBE

Cold cathode numerical indicator tube for top viewing.

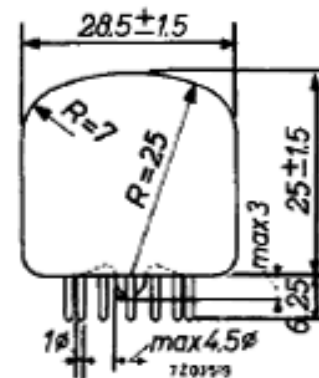
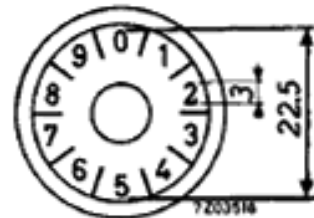
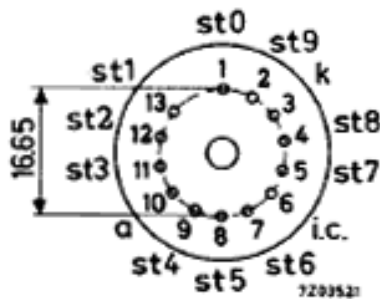
Formely Z550M

QUICK REFERENCE DATA			
Numeral height			3 mm
Supply voltage	$V_{ba}$	90	V a. c.
Cathode current	$I_k$	3	mA

## DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: B13B



## GENERAL

The 3 mm high numerals are displayed in radial form.

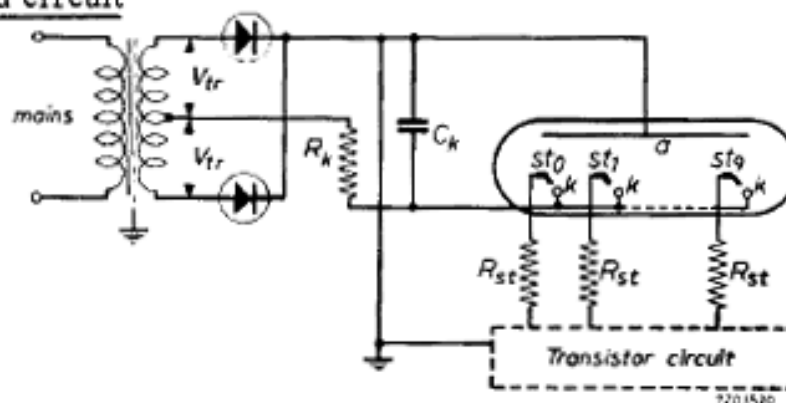
The tube is primarily intended for use in circuits with transistor control.

## PRINCIPLE OF OPERATION

The pulsating d. c. supply voltage (preferably half sine waves) causes one of the ten pure molybdenum cathode positions to glow. This position will be determined by the voltage level of corresponding starter being a few volts above the level of the remaining starters.

## CHARACTERISTICS AND OPERATING CONDITIONS

### Recommended circuit



Transformer secondary voltage

Cathode resistor

Starter series resistor

Shunting capacitor

Starter selecting voltage

Starter current

Maintaining voltage

Recommended cathode current

$V_{tr}$ 1)	110	V	$\pm 10\%$
$R_k$	10	$k\Omega$	$\pm 5\%$
$R_{st}$ 2)	330	$k\Omega$	100 $k\Omega$ min 470 $k\Omega$ max
$C_k$ 1)	33	nF	
$V_{st-st}$	5	V	30 V max
$I_{st}$	50	$\mu A$	
$V_m$	84	V	
$I_k$	3	mA	2 mA min 4 mA max

1) The rectified a. c. voltage should be free from spikes.

A shunting capacitor  $C_k$  of 33 nF serves this purpose.

2) This resistor should be mounted close to the tube socket.