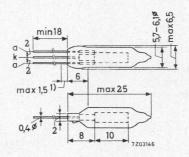
# SWITCHING AND LIGHT DIODE

Long-life cold-cathode neon-filled subminiature switching and light diode with a large and stable difference between ignition and maintaining voltage intended for touch control applications e.g. in variable capacitance diode controlled radio or television tuners. The tube is shock and vibration resistant.

QUICK REFE	RENCE DATA		
Ignition voltage	$V_{ign}$	172	V
Maintaining voltage	$V_{\mathbf{m}}$	107	V
Cathode current	$I_k$	3	mA

DIMENSIONS AND CONNECTIONS

Dimensions in mm



#### MOUNTING

The tube may be soldered directly into the circuit, but heat conducted to the glass to metal seals should be kept to a minimum by using a thermal shunt. The leads may be dip-soldered to a minimum of 5 mm from the seals at a solder temperature of  $240\,^{\circ}\mathrm{C}$  during max. 10 s. Care should be taken not to bend the leads closer than 1,5 mm to the seals.



<sup>1)</sup> This part of the leads is not tinned.

#### CHARACTERISTICS AND OPERATING CONDITIONS

Valid over life and full temperature range unless otherwise stated. The electrical characteristics are independent of ambient illumination.

# Non conduction

Anode voltage below which ignition will not occur	v		161	V
will not occur	Vignmin.		101	V
Insulation resistance	rins	>	300	MΩ
Ignition				
Anode voltage to ensure ignition	$v_{ign_{max}}$		183	V
Ignition delay at $V_{ign} + 10 V$	T <sub>delay</sub>	<	50	ms
at V <sub>ign</sub> + 20 V	T <sub>delay</sub>	<	20	ms
Typical max. individual variation of ignition voltage during life,				
within the V <sub>ign</sub> limits given above	$\Delta V_{ign}$	<	5	V
Conduction				
Cathode current, average during any				
conduction period	$I_k$	>	2, 2	mA
average (T <sub>av</sub> = max. 1 s)	Ik	<	4,5	mA
Maintaining voltage at I <sub>k</sub> = 3 mA	$v_{m}$	≥	103	V
Wantaning voltage at 1k = 5 mm	' m	≤	111	V
Typical max. individual variation			12	v
of maintaining voltage during life,	$\Delta V_{\mathbf{m}}$	<	+2 -4	V
within the V <sub>m</sub> limits given above			-4	V
Extinction				

V<sub>ext</sub>



Extinction voltage

100

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

Cathode current, average for				
continuous conduction	Ik	min.	2,2	mA
average (T <sub>av</sub> = max. 1 s)	$I_{\mathbf{k}}$	max.	4,5	mA
Anode voltage, negative peak	-v <sub>ap</sub>	max.	200	V
Bulb temperature		min.	-55	°C
	<sup>t</sup> bulb	max.	+70	°C

#### SHOCK AND VIBRATION RESISTANCE

These conditions are solely used to assess the mechanical quality of the tube. The tube must not be continuously operated under these conditions.

### Shock resistance 500 g

Forces as applied by NRL impact machine for electronic devices caused by 5 blows of the hammer lifted over an angle of  $30^{\circ}$  in each of 4 positions of the tube.

# Vibration resistance 2, 5 g(peak)

Vibrational forces for a period of 32 hours at a frequency of 50 Hz in each of 3 directions.

