

**AS/NZS 3832:1988 AUSTRALIAN STANDARDS LOAD CHART****TYPICAL COLD-CATHODE TUBE LOADING CHART**

## Iron-core Neon Transformers

Type	ELECTRIC METRES (See Note 1)											
SECONDARY VOLTAGE	NEON tube diameter mm						ARGON MIX (See note 3) tube diameter mm					
V	25	20	15	12	10	8	25	20	15	12	10	8
15000	31.2	25.6	19.8	16.3	13.8	11.4	35.7	32.0	27.7	24.8	22.6	20.2
12000	25.0	20.5	15.9	13.0	11.0	9.1	28.6	25.6	22.2	19.8	18.1	16.2
10000	20.8	17.1	13.2	10.9	9.2	7.6	23.8	21.3	18.5	16.5	15.1	13.5
9000	18.8	15.4	11.9	9.8	8.3	6.8	21.5	19.2	16.6	14.9	13.6	12.2
8000	16.7	13.7	10.6	8.7	7.4	6.1	19.1	17.1	14.8	13.2	12.1	10.8
7500	15.5	12.9	10.0	8.7	7.0	5.7	17.9	16.0	13.9	12.4	11.3	10.2
7000	14.6	12.0	9.3	7.6	6.5	5.3	16.7	14.9	12.9	11.6	10.6	9.5
6000	12.5	10.3	8.0	6.5	5.6	4.6	14.3	12.8	11.1	9.9	9.1	8.1
5000	10.4	8.6	6.6	5.5	4.6	3.8	11.9	10.7	9.3	8.3	7.6	6.8
4000	8.4	6.9	5.3	4.4	3.7	3.1	9.6	8.6	7.4	6.6	6.1	5.4
3000	6.3	5.2	4.0	3.3	2.8	2.3	7.2	6.4	5.6	5.0	4.6	4.1
2500	5.2	4.3	3.3	2.6	2.3	1.9	6.0	5.4	4.7	4.2	3.8	3.4
2000	4.2	3.5	2.7	2.2	1.9	1.6	4.8	4.3	3.7	3.3	3.1	2.7
1500	3.2	2.6	2.0	1.7	1.4	1.2	3.6	3.2	2.8	2.5	2.3	2.1
1000	2.1	1.8	1.4	1.1	1.0	0.8	2.4	2.2	1.9	1.7	1.6	1.4
Recommended gas pressure mm/Hg	6.0	7.5	10.0	12.5	15.0	18.5	5.0	6.5	8.5	10.5	12.5	16.0

NOTE: THIS CHART SHOULD BE USED AS A GUIDE ONLY.

1

The load length in electric metres is the length of cold-cathode tubing plus 0.5m for each pair of electrodes, e.g. if a sign is composed of four letters, each letter comprising one linear metre of tubing and one pair of electrodes then the total load in electric metres = 0.5 4 electrode pairs = 6 electric m.

2

For exposed and extremely cold areas, reduce the length by 20%.

3

Argon mix = 75% argon and 25% neon.

To ensure maximum reliability, transformers must be correctly calibrated to the manufacturers specifications before and after installation.

## Electronic Neon Transformers

## Maximum Load Length Chart

Type	ELECTRIC METRES (See Notes )											
SECONDARY VOLTAGE	NEON / CLEAR tube diameter mm						MERCURY / ARGON MIX tube diameter mm					
V	20	15	12	10	9	8	20	15	12	10	9	8
12000	18.6	13.7	10.6	7.6	6.4	5.5	20.4	16.7	12.8	9.1	7.6	6.4
10000	16.7	12.2	9.1	6.4	5.5	4.9	18.9	14.3	10.3	7.9	6.1	5.5
7500	11.9	9.1	7.0	5.2	4.3	3.7	13.7	11.0	8.2	6.1	4.9	4.3
Recommended gas pressure mm/Hg	7.5	9.0	11.0	13.0	15.0	17.0	7.5	9.0	11.0	13.0	15.0	17.0

Note: for each pair of Electrodes used deduct 300mm of tube length from the above chart.

Do not exceed maximum tube length prescribed in the "Maximum Load Length" metre chart.

Maximum length in metres may vary according to HV wire leads length and environment. Metreage for mercury filled tubes are based on operation in temperatures above 4°C (40°F). Deduct 25% of tube metre for operation below 4°C (40°F).

**Installation**

1. can be installed on either a metallic or non-metallic surface, free airflow should be ensured to provide adequate ventilation.
2. The overall length of the GTO leads should be under 2m, and always keep a minimum of 25mm between each wire and any metallic surface.
3. When using more than one power supply to illuminate a sign, keep at least 75mm between power supplies, never cross HV leads or cross HV leads with supply leads. It is preferable to make the HV output wire leads as short end as equal in length as possible.
4. Installation shall be in conformity with local codes.