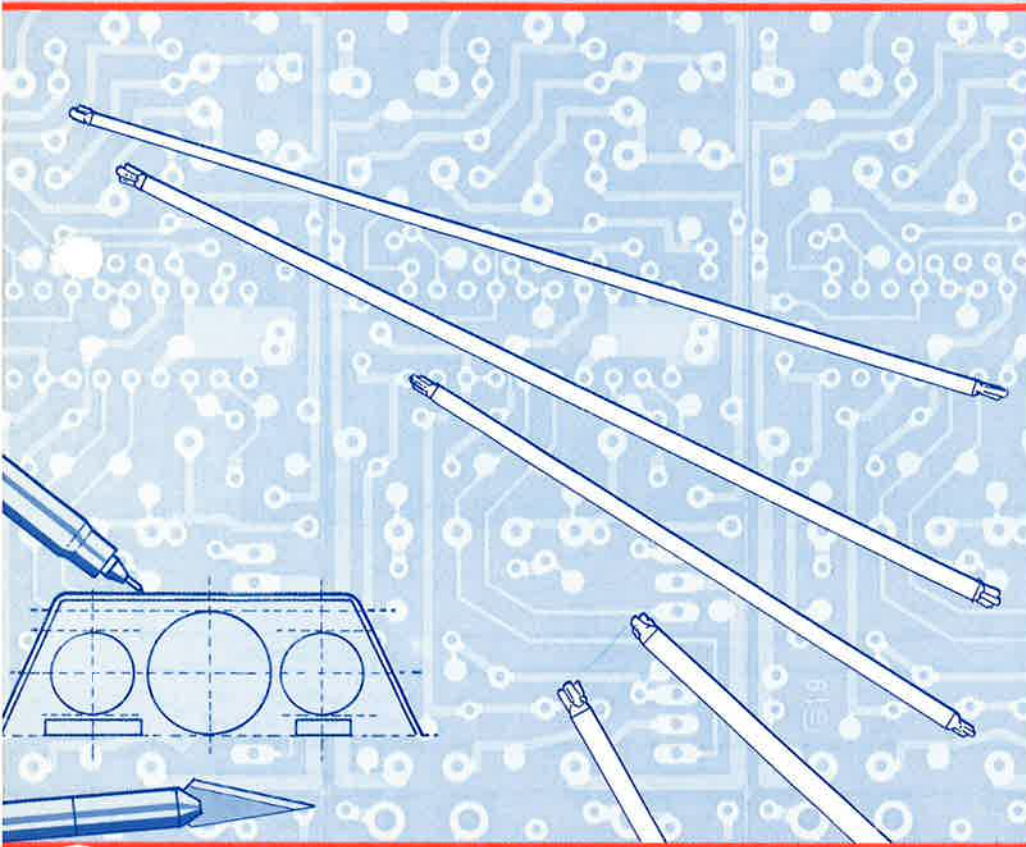
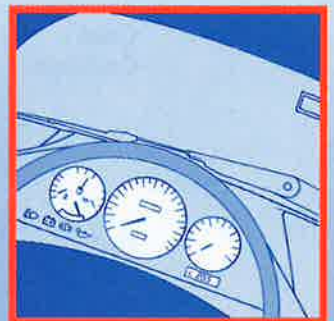


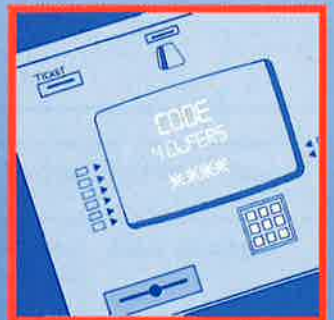
Fluorescent Lamps



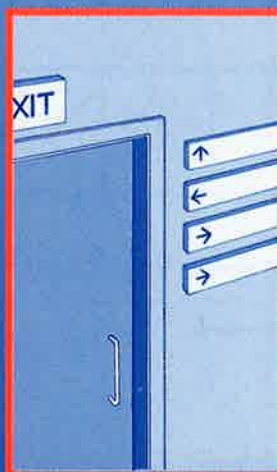
Backlighting LCD



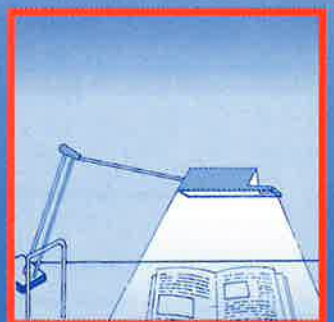
Instrument Panels



Display Units



Emergency Lighting



General Lighting

Miniature
Fluorescent
Lamps

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MINIATURE FLUORESCENT LAMPS

PRELIMINARY INFORMATION

Space, energy consumption and thermal constraints have always limited designers of all types of equipment and machinery, particularly where illumination is required.

Now, with their range of Miniature Fluorescent Lamps, Sylvania has removed these limitations, giving designers the chance to use an interesting new lamp type for exciting new applications.

The range will give designers and engineers the chance to use their compact size and low energy requirements to incorporate illumination in many previously impossible locations. These highly efficient Miniature Fluorescent Lamps, in a range of lengths and a variety of colors, will be available in 7 mm diameter, either in hot cathode form for very high efficiency or cold cathode for low power consumption and battery operation. Initially the 5 mm version will be available in cold cathode format only.

	Lenght* in / (mm)	Current ma	Voltage volts	Power watts	Luminous Flux lm	Efficiency lm / watt
Cold Cathode	4 (100)	6	188	1	15	15
	8 (200)	6	270	1.5	44	29
	12 (305)	6	350	2.0	70	35
	16 (400)	6	430	2.5	100	40
	20 (500)	6	612	3.0	130	44
Hot Cathode	4 (100)	100	21	4	95	24
	8 (200)	100	47	6	310	52
	12 (300)	100	70	8	500	63
	16 (400)	100	94	10	680	68
	20 (500)	100	115	13	860	66

* Other lengths, minimum order 5000 pcs.

		HOT CATHODE	COLD CATHODE
LIGHT OUTPUT	Surface brightness	45,000 cd / m ²	7 mm: 6,800 cd / m ² 5 mm: 10,300 cd / m ²
PHYSICAL DATA	Tube Diameter	7 mm nominal	5 or 7 mm nominal
	End Lenght (dark space)	25 mm each end	< 15 mm each end
	Operating temperature	0°- 85° C	0°- 85° C
	Current consumption	heating 115 MA. at 7V	6 MA. (max. 10 MA.)*
	Hours @ 3hrs. cycle *	10,000 Hrs	20,000 Hrs
	* to 50% failures.		
	Termination Options	Uninsulated flying leads Wedge base Crimped on insulated leads with or without terminations	
APERTURE		To agreed specification, 60° recommended	

A range of 5 mm diameter cold cathode lamps are under development and samples should be available early in 1991.

* 5 mm & 7 mm have similar cathode current requirements.

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GTE SYLVANIA LIMITED

Special Products Group
Otley Road, Charlestown Shipley
West Yorkshire BD17 7SN, United Kingdom
Tel.: 00.44.(0).274.59.59.21
Telefax: 00.44.(0).274.58.06.32

GTE SYLVANIA N.V.

Special Products Group
Industriepark B-3300 Tienen, Belgium
Tel.: 00.32.(0).16. 80 03 69
Telefax: 00.32.(0).16. 81 89 45

GTE SYLVANIA GmbH

Special Products Group
Graf Zeppelinstrasse 9-11, Postfach 1740
D-8520 Erlangen 23, Germany
Tel.: 00.49.(0).9131.996.242
Telefax: 00.49.(0).9131.996.418