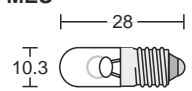
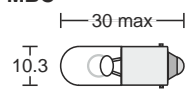


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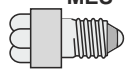
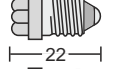
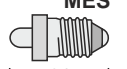
Filament

Transformer indicators with 6V lamps are run at reduced voltage, giving up to 400% extra life

Volts AC or DC	Watts	MA	Product Code		Typical Life (hours) - AC volts (for DC reduce by 40%)	Typical Brightness (Lumen)	Dimensions
			MES	MBC			
6	1.2 Flash	50	6V1.2 Flash	-	-	-	MES
6	1.8	300	6V1.8	6V1.8 MBC	4,000	11	 Weight: 2 g
12	1.2	100	12V1.2	12V1.2 MBC	5,000	5	
24	1.2	50	24V1.2	24V1.2 MBC	5,000	4	 Weight: 2 g
24	2.8	120	24V2.8	-	3,000	12	
28	1.0	40	28V1.0	28V1.0 MBC	3,000	12	Lamp lives given here are typical only. Actual lives depend on environmental conditions such as shock, vibration, temperature and voltage fluctuations.
50	2.5	50	50V2.5	-	5,000	9	
60	1.2	20	60V1.2	60V1.2 MBC	3,000	2.2	
130	2.6	20	130V2.6	130V2.6 MBC	3,000	3	

LED Clusters

Long life, bright lamps at lower currents. The LED's are configured where possible in parallel circuits. This means that the functionality of the lamp is maintained in the event of a diode failure. Where the lowest possible current is required the LED's are put in series.

Type	Voltage		Current mA			Product Code Make-up					Dimensions	Typical Brightness	
	AC/DC	Volts	AGR	B	W	Type	Colour	Voltage	Current	Cap			
LED7 Wide light spread for indicator lamps	AC	4.5	60	80	80	LED7	A G R B W	4.5AC	20mA	MES or MBC	 LED7 MES Weight: 3 g	LED clusters are designed to give a brightness similar to filament bulbs. We manufacture 7 or 4 LED clusters. The more LED's in the cluster, then the better the light spread through lenses.	
		24	40	40	40			24AC					
		110	8	8	8			110AC					
	DC	*	4.5	80	-			-					4.5DC
		24	40	40	40			24DC					
		24	20	20	20			24DC					
LED4 For indicator lamps	AC	4.5	40	40	40	LED4	A G R B W	4.5AC	20mA	MES or MBC	 LED4 MES Weight: 3 g	Normal configurations of multi-LED clusters use parallel connected circuits of LED's. If one LED fails the lamp still functions through a healthy circuit. Continuity of operation and visibility of a failure is a considerable aid to maintenance. However, some applications demand minimum current, eg IRMU's. In these instances a single series circuit may be used.	
		24	40	40	40			24AC					
		110	8	8	8			110AC					
	DC	4.5	40	40	80			4.5DC					
		24	40	40	40			24DC					
		24	20	20	20			24DC					
LEDM4 For illuminated actuating assemblies	AC	4.5	40	40	40	LEDM4	A G R B W	4.5AC	20mA	MES or MBC	 LEDM4 MES Weight: 2 g	LEDM1 is a range of single LED lamps chosen for their brightness and field of vision.	
		24	40	40	40			24AC					
		110	8	8	8			110AC					
	DC	24	40	40	40			24DC					
		24	20	20	20			24DC					
LEDM1 For indicator lamps	AC	4.5	20	20	20	LEDM1	A G R B W	4.5AC	20mA	MES or MBC	 LEDM1 MES Weight: 2 g		
		24	20	20	20			24AC					
		110	8	8	8			110AC					
	DC	24	20	20	20			24DC					

* Blue and White clusters are not available at 4.5VDC for the LED7.

Other AC/DC voltages on application. Colour Key:- A=Amber, G=Green, R=Red, B=Blue, W=White

Example 1: LED7A 4.5AC MES = LED7 Amber cluster 4.5VAC with E10 Miniature Edison Screw cap.
 Example 2: LED4R 24DC 20mA MBC = LED4 Red cluster 24VDC (20mA option) with BA9s Miniature Bayonet Cap.
 Example 3: LEDM1W 24AC MBC = LEDM1 White single LED 24VAC with BA9s Miniature Bayonet Cap.

Lamp Cap Types: MES = Miniature Edison Screw - E10. Supplied as standard unless otherwise specified.
 MBC = Miniature Bayonet Cap - BA9s. Available for most lamp types. Specify if required.

Alarms Lamps

Audible Alarms Neon/Fluorescent Optoled7



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Audible Alarms Typical sound output 88 dB @ 10 cm.

AKMJ	AKMY	AK	HOUSING WITH ALARM	PANEL HOLE DIAMETER	6V AC/DC UNIT - FOR USE WITH TRANSFORMER LAMP HOLDER TO 550V AC or INTERNAL RESISTOR HOLDER TO 110V DC e.g. AKMJ/TMU240/4 AKFY/IRMU24/4
			MES	MBC	
			AKMJ	19 mm	
			AKMY	19 mm	
			AKFJ	22.5 mm	
			AKFY	22.5 mm	
Voltages up to 110V DC or 550V AC			AKDY	30.5 mm	

Neon, Fluorescent A very low current alternative, if low brightness is acceptable. Neon's can be used with opal, clear, red and amber lenses; fluorescent's only their own colour lenses.

Current Rating All 1.8mA		Product Code				Dimensions mm	
Colour	Type	For Tranilamp 'N' type indicators bodies only Data Sheet 206		For direct connection to Supply (internal resistor fitted). For 'LMU' type Indicator bodies, Data Sheets 205 & 209		MES	MBC
				Supply 240V (AC or DC)			
Orange	Neon	NB2 MES	NB2 MBC	NB2R 240 MES	NB2R 240 MBC	 T 10 30	 T 10 30
Green	Fluorescent	NG2 MES	NG2 MBC	NG2R 240 MES	NG2R 240 MBC		
Blue	Fluorescent	NW2 MES	NW2 MBC	NW2R 240 MES	NW2R 240 MBC		
Typical Life 10,000 hours on AC Supply - 6,000 hours on DC Supply		Typical Brightness All 0.27 lumen				Weight: 3 g	

Optoled7 Designed as a replacement for pigmy lamps on control panels where low power consumption and long life are desirable.

By using 7 ultra-bright LED's the total brightness is typically 2,000 mcd (25 lumen). The arrangement of LED's ensures the optimum diffusion of light through a lens, minimising light concentrations. Available in 24V, 110V, 230V AC at 50/60Hz and 24V, 110V DC. Less than 25mA per lamp. The plastic body is to flame retardant to UL94V0.

Type	Colour	Voltage	Cap
OPTOLED7	A	24AC	BC
	G	24DC	SBC
	R	110AC	
	B	110DC	
	W	230AC	

A=Amber, G=Green, R=Red, B=Blue, W=White

- Examples 1. OPTOLED7A 110AC BC
2. OPTOLED7W 24DC SBC



BC
Bayonet Cap - B22d

Weight
11g

SBC
Small Bayonet Cap - B15d

Weight
16g