

A comprehensive range of lamps designed for use with Tranlamp illuminated products. Selection depends on required voltage, power limitations, lamp life, brightness, cost, cap size and indicator colour.

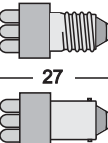
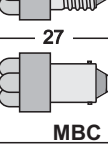
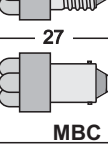
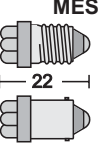
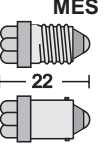
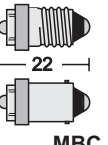
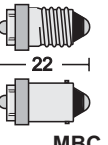
Filament

The standard for indicator switch products unless otherwise specified. Use with any lens colour. *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 (DC-reduce to 60% of AC)	Typical Brightness (Lumens)	Dimensions mm
			MES	MBC	LES			
● Standard for transformer indicator	6	0.36	60	-	-	6V0.36 LES	10,000	MES 28
	6	0.9 Flash	50	6V0.9 Flash	-	-	-	10.3
	6	1.8	300	6V1.8	6V1.8 MBC	-	4,000 *	Weight: 2 g
	6.5	2.0	300	-	6.5V2.0 MBC	-	4,000	MBC 30 max
	12	1.2	100	12V1.2	12V1.2 MBC	-	5,000	10.3
	24	1.2	50	24V1.2	24V1.2 MBC	-	5,000	Weight: 2 g
	24	2.8	120	24V2.8	24V2.8 MBC	-	3,000	LES 16
	28	1.1	40	-	-	28V1.1 LES	4,000	5.25
	28	1.0	40	28V1.0	28V1.0 MBC	-	3,000	Weight: 0.5 g
	50	2.5	50	50V2.5	50V2.5 MBC	-	5,000	
	60	1.2	20	60V1.2	60V1.2 MBC	-	3,000	
	60	3.0	50	60V3.0	60V3.0 MBC	-	3,000	
	130	2.6	20	130V2.6	130V2.6 MBC	-	3,000	
	Lamp lives given here are typical only. Actual lives depend on environmental conditions such as shock, vibration, temperature and voltage fluctuations.						+	

LED Clusters

Long life, bright lamps at lower currents. The leds are configured as standard in parallel circuits. This means that the functionality of the lamp is maintained in the event of a diode failure although there is obviously some reduction in light emission. Where the lowest possible current is required a series circuit is used. The 5 colours are usually used with the matching colour lenses, but amber and green can be used with clear and white lenses respectively for colour variation.

Type	Supply		Current mA			Product Code Make-up ☆					Dimensions mm		Typical Brightness			
	AC/DC	Volts	AGR	B	W	Type	Colour	Supply V	Current	Cap						
All these LED lamps are covered by Patent No 2098714	LED7 Wide light spread for indicator lamps	AC	4.5	60	80	80	LED7	A	4.5AC	Enter mA from Current table	MES MBC	LED7		Led clusters are designed to give a brightness similar to filament bulbs. We manufacture 7 or 4 led clusters. The more leds in the cluster, then the better the light spread through lenses.		
			24	40	40	40		G	24AC							
			24	20	-	-		R	24AC							
			110	14	-	8		B	110AC							
			4.5*	80	-	-		W	4.5DC							
			12	40	-	60			12DC							
		DC	24	20	20	20		24DC	LED4	A	4.5AC	Enter mA from Current table	MES MBC	LED4		Normal configurations of multi-led clusters use parallel connected circuits of leds. If one led fails the lamp operates at reduced brightness through the healthy circuit/s. Continuity of operation and visibility of a failure is a considerable aid to maintenance. However, some applications demand minimum current. eg IRMUs & IRUs. In these instances a single series circuit is used.
			24	40	40	40	G	24AC								
			24	20	-	-	R	24AC								
			110	15	-	15	B	110AC								
			4.5*	40	40	-	W	4.5DC								
			12	20	-	-		12DC								
	LED4 for indicator lamps	AC	4.5	40	40	40	LED4	A	4.5AC	Enter mA from Current table	MES MBC	LED4		Normal configurations of multi-led clusters use parallel connected circuits of leds. If one led fails the lamp operates at reduced brightness through the healthy circuit/s. Continuity of operation and visibility of a failure is a considerable aid to maintenance. However, some applications demand minimum current. eg IRMUs & IRUs. In these instances a single series circuit is used.		
			24	40	40	40		G	24AC							
			24	20	-	-		R	24AC							
			110	15	-	15		B	110AC							
			4.5*	40	40	-		W	4.5DC							
			12	20	-	-			12DC							
		DC	24	20	20	20		24DC	LEDM4	A	4.5AC	Enter mA from Current table	MES MBC	LEDM4		LEDM1 for indicator lamps
			24	40	40	40	G	24AC								
			24	20	-	-	R	24AC								
			110	8	8	8	B	110AC								
			4.5*	40	40	-	W	4.5DC								
			12	20	-	-		12DC								
	LEDM4 for illuminated actuating assemblies	AC	4.5	40		40	LEDM4	A	4.5AC	Enter mA from Current table	MES MBC	LEDM4		LEDM1 and LEDM1F NEW		
			24	40	40	40		G	24AC							
			110	8	8	8		R	110AC							
			24	40		40		B	24DC							
			24	20				W	24DC							
DC		24	40		40	LEDM1	A	4.5AC	X	MES MBC	LEDM1 and LEDM1F		LEDM1 is a range of single led lamps chosen for their brightness and 120° wide field of vision.			
		24	40		40		G	24AC								
		110					R	110AC								
		24	30	30	30		B	24DC								
		4.5	30	30	30		W	4.5								
LEDM1F for indicator lamps flashing at a nominal 2Hz	AC & DC	4.5	30	30	30	LEDM1F	A	4.5	X	MES MBC	LEDM1 and LEDM1F		A flashing version, the LEDM1F is available and suitable for both ac and dc voltages. Flashing rating nominally - 2Hz.			
							G									
							R									
							B									
							W									

* Blue and White clusters are not available at 4.5Vdc.

Other AC/DC voltages for any of the above can be considered on application.

Colour Key:- A=Amber, G=Green, R=Red, B=Blue, W=White

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Example 1: LED7A 4.5AC 60mA MES = Amber 7 LED cluster with Miniature Edison Screw cap supplied from 4.5VAC.

Example 2: LED4R 24DC 20mA MBC = Red 4 LED cluster (20mA option) with Miniature Bayonet Cap supplied from 24VDC.

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.
LES = Lilliput Edison Screw (E5). Available only for 6V and 28V Filament.

☆ Use product codes given here to order lamps independently from indicator assemblies

Lamps

Neons/Fluorescent Optoled7



Product Data Sheet 201/2 Issue 2

Neon, Fluorescent

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

Current Rating		Product Code ★						Dimensions mm	
All 1.8mA		For Tranilamp "N" type indicators bodies only . Use with Direct Voltage Indicator Body Type LMU. Data Sheet 205.						MES	
Colour		Type		Supply 110V (AC only)		Supply 240V (AC or DC)		MBC	
Orange	Neon	NB2 MES	NB2 MBC	NB2R 110 MES	NB2R 110 MBC	NB2R 240 MES	NB2R 240 MBC	10	
Green	Fluor'	NG2 MES	NG2 MBC	NG2R 110 MES	NG2R 110 MBC	NG2R 240 MES	NG2R 240 MBC	10	
Blue	Fluor'	NW2 MES	NW2 MBC	NW2R 110 MES	NW2R 110 MBC	NW2R 240 MES	NW2R 240 MBC	10	
Typical Life		10,000 hours on AC Supply - 6,000 hours on DC Supply				Typical Brightness		All 0.27 lumens	

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Optoled7

Design Registration No 2051734

This Cluster lamp has been designed as a replacement for control panel pigmy lamps and on control panels where very high brightness, low power consumption and long life are desirable.

Standard features:

● Long Life

More than 100,000 hours, even in environments of high shock, high vibration and large temperature variations. This leads to considerably reduced maintenance costs.

● Very bright

By using 7 ultra-bright LED's the total brightness is typically 2,000 mcd (25 lumens). The arrangement of LED's ensures the optimum diffusion of light through a lens, minimising light concentrations.

● Supply Voltages

Available in standard supply volts of 24V, 110V, 230V ac at 50/60 Hz and 24V, 110V dc. Other voltages can be considered, if requested. Overvoltage tolerance of +20% is standard.

● Low Current

Less than 25mA per lamp (total for 7 LED's)

● Flame Resistant

The plastic body is to flame retardent standard UL94V0.

● Low Operating Temperature

Body temperature operates much lower than filament.

● Colour Options

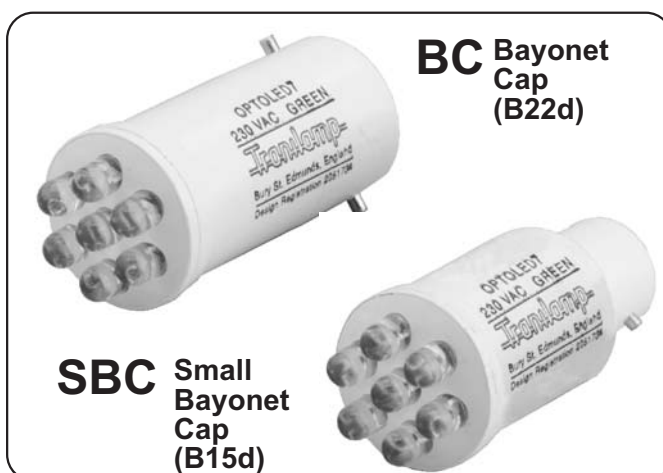
LED colours available are amber, green, red, blue & white.

Product Code Make-up

Type	Colour /	Supply V /	Cap
OPTOLED7	A	24AC	BC
	G	24DC	SBC
	R	110AC	
	B	110DC	
	W	230AC	
	A = Amber G = Green R = Red B = Blue W = White	Above voltages are available for all colours. Frequency: 50/60Hz	BC=Bayonet Cap(B22d) SBC = Small Bayonet Cap (B15d)

Examples

1. OPTOLED7A /110AC/BC 2. OPTOLED7W/24DC/SBC



Dimensions mm	BC	SBC
Weights BC - 11g SBC - 16g	Bayonet Cap (B22d)	Small Bayonet Cap (B15d)