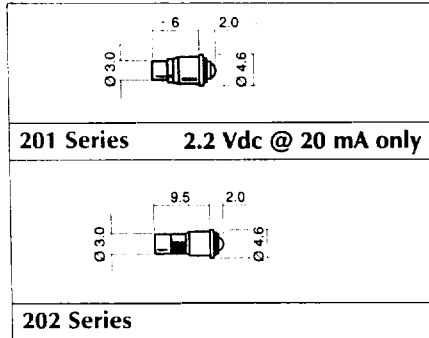




## Incandescent Replacement LEDs - Sunlight Readable

## T1 Single Chip

Designed to allow "fit and forget" replacement of the less reliable filament bulb, both for new equipment and retro-fit applications. Available in single chip and multi-LED Cluster which all provide high intensity, effective illumination of most types of lens assemblies in illuminated push button switches and lamp holders. Incandescent replacements are manufactured in all the popular lamp base styles and can be operated from a wide range of voltage sources. Outstanding reliability, improved optical matching and colour perception translates into tangible customer benefits in terms of savings in maintenance time and replacement costs. Typical applications include process control instrumentation, fighting vehicle and professional audio/visual studio equipment.

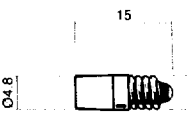
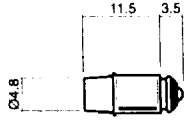
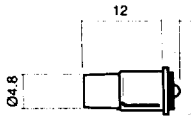
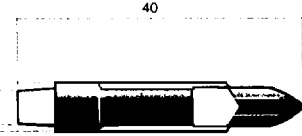
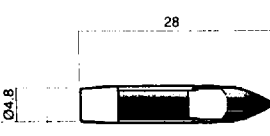

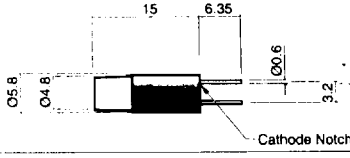
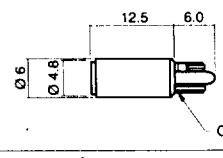
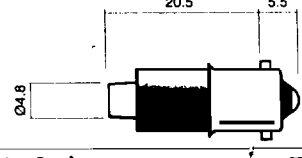


Order Code: **202 - 325 - 22 - 38**

Include in Order Code

Series Options:	LED Options: Code - LED Colour / Intensity at 20 mA	Voltage Options: Code - Voltage / Current
201	301 - RED 660 nm 1000 mcd	04 - 2.2 Vdc @ 20 mA
202	325 - YELLOW 590 nm 2000 mcd	20 - 5/6 Vdc @ 15/20 mA
	324 - GREEN 525 nm 2000 mcd	21 - 12 Vdc @ 17 mA
	934 - BLUE 470 nm 1000 mcd	22 - 24 Vdc @ 14 mA
	998 - WHITE* 400 mcd	23 - 28 Vdc @ 12 mA
		24 - 48 Vdc @ 10 mA

## T1 3/4 Single Chip

		
<b>212 Series</b> <b>LES E5</b>	<b>205 Series</b> <b>MG S5.7s</b>	<b>206 Series</b> <b>MF SX6x</b>
		
<b>208 Series</b> <b>T6.8 SB</b>	<b>209 Series</b> <b>T5.5 SB</b>	<b>211 Series</b> <b>T3 1/4 MES E10</b>
		
<b>204 Series</b> <b>T1 1/2 and T1 3/4 BP</b>	<b>207 Series</b> <b>WB F9</b>	<b>215 Series</b> <b>T3 1/4 BA9s</b>

Drawing scale 1:1  
Dimensions in mm (Typical)  
MTBF 100,000 Hours

Order Code: **211 - 501 - 21 - 38**

Operating / Storage Temperature Range -40 to +80 °C  
Viewing Angle inclusive - 120 Deg.

Include in Order Code

### Series Options:

204	209
205	211
206	212
207	215
208	

All series are centre anode unless indicated

### LED Options:

Code	LED Colour / Intensity at 20 mA
501	RED 660 nm 3000 mcd
521	YELLOW 590 nm 2500 mcd
532	GREEN 525 nm 2000 mcd
930	BLUE 470 nm 1000 mcd
997	WHITE* 400 mcd

Intensity figures are for discrete LEDs

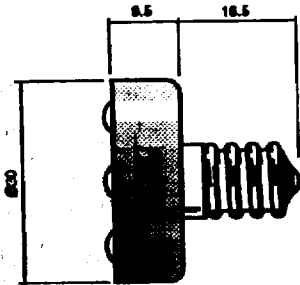
### Voltage Options:

Code	Voltage / Current
04	2.2 Vdc @ 20 mA
20	5/6 Vdc @ 15/20 mA
21	12 Vdc @ 20 mA
22	24 Vdc @ 20 mA
23	28 Vdc @ 17 mA
24	48 Vdc @ 10 mA



**Incandescent Replacement LEDs**

**Multi - LED Cluster**



**226 - 750 - 23** Order Code

**LED Options:**  
Code - LED Colour / Intensity at 70 mA

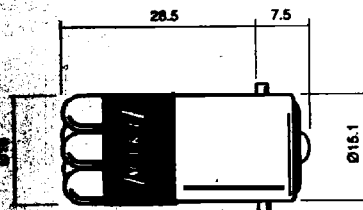
**Voltage Options:**  
Code - Voltage / Current

- 750 - RED 655 nm      600 mcd
- 751 - ORANGE 621 nm    1250 mcd
- 752 - YELLOW 594 nm    620 mcd

- 22 - 24 Vdc @ 25 mA
- 23 - 28 Vdc @ 17 mA
- 48 - 60 Vdc @ 14 mA

**226 Series**

**E12**



**225 - 521 - 23** Order Code

**LED Options:**  
Code - LED Colour / Intensity at 20 mA

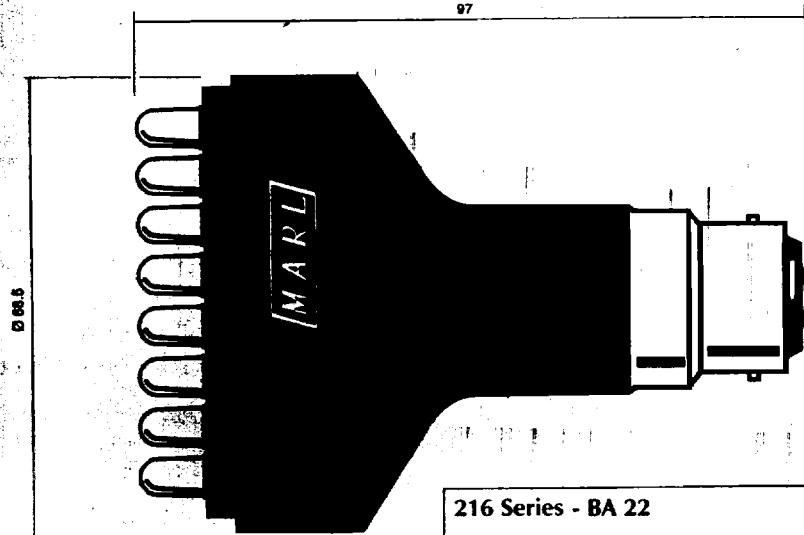
**Voltage Options:**  
Code - Voltage / Current

- 501 - RED 660 nm      3000 mcd
- 521 - YELLOW 590 nm    2500 mcd
- 532 - GREEN 525 nm    2000 mcd
- 930 - BLUE 470 nm      1000 mcd
- 997 - WHITE\*          400 mcd

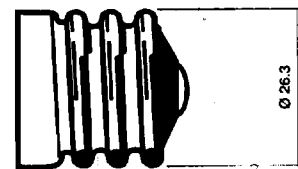
- 22 - 24 Vdc @ 25 mA
- 23 - 28 Vdc @ 17 mA
- 48 - 60 Vdc @ 14 mA

**225 Series**

**BA 15d**



**20 LED Multi-Cluster**



**216 Series - BA 22**

**217 Series - E27**  
**218 Series - E28**

Drawing scale 1:1  
Dimensions in mm (Typical)  
MTBF 80,000 Hours

Operating / Storage Temperature Range -10 to +40 °C  
Viewing Angle inclusive - 120 Deg.

**Order Code: 216 - 501 - 75 - 65**

Include in Order Code

**Series Options:**

- 216
- 217
- 218

All Series where applicable use common anode

**LED Options:**

Code - LED Colour / Intensity at 10 mA

- 501 - RED 660 nm      3000 mcd
- 521 - YELLOW 590 nm    2500 mcd
- 532 - GREEN 525 nm    2000 mcd
- 930 - BLUE 470 nm      1000 mcd
- 997 - WHITE\*          400 mcd

**Voltage Options:**

Code - Voltage / Current

- 22 - 24 Vdc @ 25 mA
- 24 - 48 Vdc @ 25 mA
- 25 - 110 Vdc @ 23 mA
- 75 - 110 Vac @ 23 mA
- 76 - 240 Vac @ 25 mA

\*Typical emission colour: x = 0.29, y = 0.30. Colour temperature 8000k