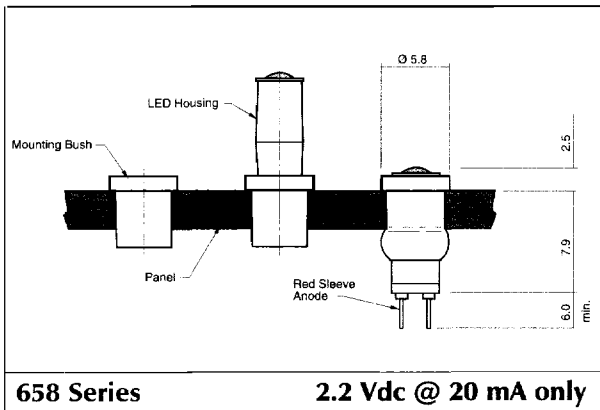


High Performance Panel Indicators

The ultimate range of indicators which are available in a wide range of mounting diameters and combine features such as ingress protection and sunlight readability with outstanding orders of operational performance and reliability. Other options include limiting resistors, test facility, protection circuitry, burn - in and flame retardant flying lead terminations. High Performance Panel Indicator Lamps have been specifically designed for installation in all categories of climatic and hazardous environments and meet all the criteria expected of product capable of providing high intensity indication for long duration in the most demanding professional and military related applications. Many devices are approved by the Ministry of Defence and Railway Industries.

Push-Fit Indicator

Ø 5mm Mounting



658 - 391 - 04 Order Code

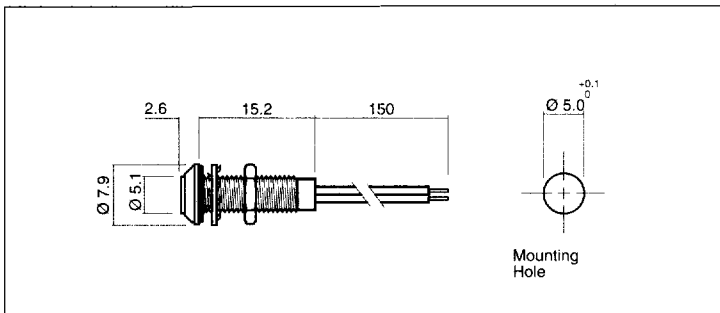
LED Options:

Code - LED Colour / Intensity at 20 mA

391 - RED 700 nm	1.0 mcd
392 - ORANGE 610 nm	4.0 mcd
393 - YELLOW 585 nm	3.0 mcd
394 - GREEN 565 nm	4.0 mcd

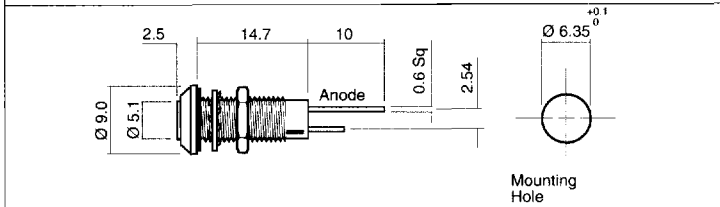
Mounting Hole Ø 5mm Use Assembly Tool No. 927 - 000 - 00

Ø 5 and Ø 6.35mm Mounting

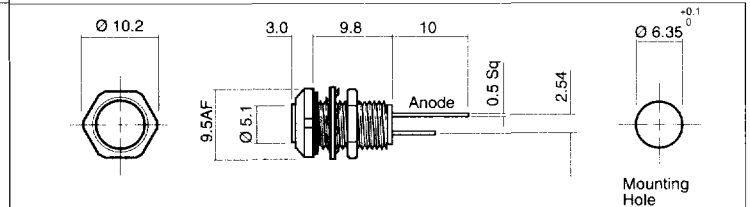


603 Series

- Flying Leads Terminations
- Sealing to IP67
- Lamp Test Facility
- Robust Terminations accept Push-on Connectors
- Sunlight Readable Options



611 Series



662 Series

2.2 Vdc @ 20 mA only

Drawing scale 1:1
Dimensions in mm (Typical)
MTBF 90,000 Hours

Operating Temperature Range -40 to +85 °C
Storage Temperature Range -50 to +100 °C

Order Code: **611 - 303 - 20**

Series Options:

603
611
662

LED Options:

Code - LED Colour / Intensity at 20 mA

303 - RED 650 nm	100 mcd
309 - YELLOW 585 nm	100 mcd
312 - GREEN 563 nm	160 mcd

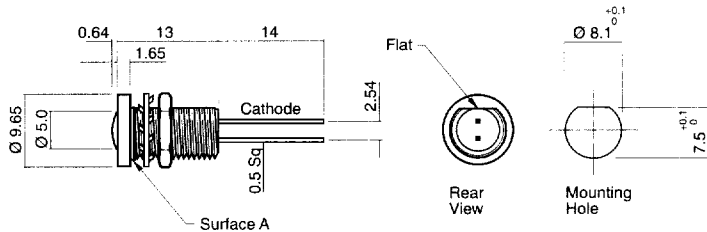
Voltage Options:

Code - Voltage / Current

04 - 2.2 Vdc @ 20 mA
20 - 5/6 Vdc @ 15/20 mA
21 - 12 Vdc @ 20 mA
22 - 24 Vdc @ 17 mA

Ø 8.1mm Mounting

Replacement for JANTX Range



Surface 'A' Anodising removed for earthing to panel

667 Series

2.2 Vdc @ 20 mA only

667 - 927 - 04 Order Code

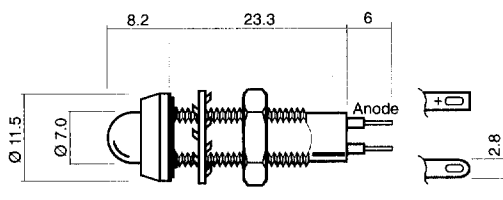
LED Options:

Code - LED Colour / Intensity at 20 mA

926 - RED 650 nm	13 mcd
927 - YELLOW 585 nm	13 mcd
928 - GREEN 563 nm	20 mcd

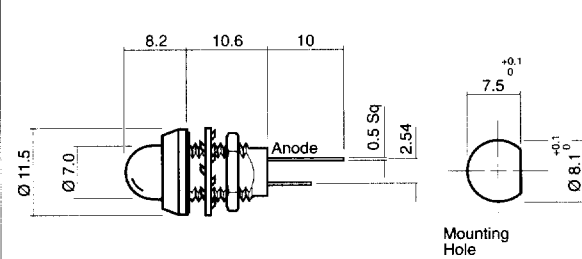
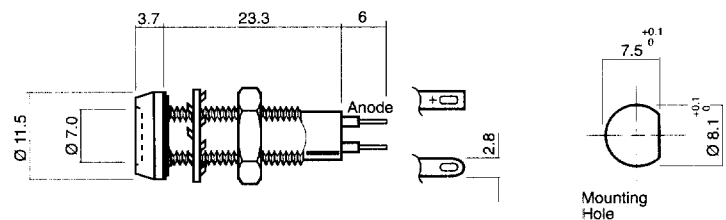
Sunlight Readable Range

Ø 8.1 and Ø 12.7mm Mounting



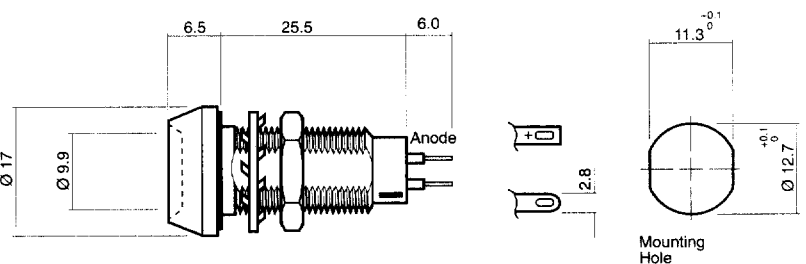
676 Series

677 Series



643 Series

2.2 Vdc @ 20 mA only



692 Series

Drawing scale 1:1
Dimensions in mm (Typical)
MTBF 90,000 Hours

Operating Temperature Range -40 to +85 °C
Storage Temperature Range -50 to +100 °C
Accessories page 8 / Flying Leads
and Lamp Test Facility page 9

Order Code: **677 - 501 - 21**

Series Options:

676
677
643
692

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

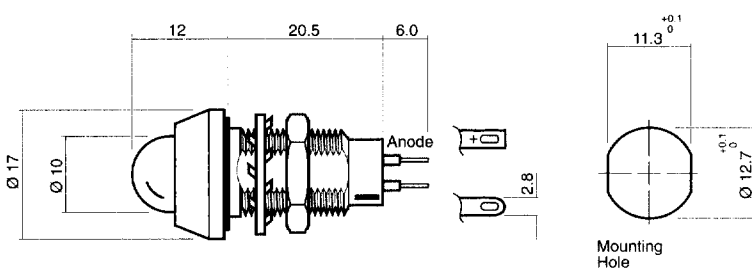
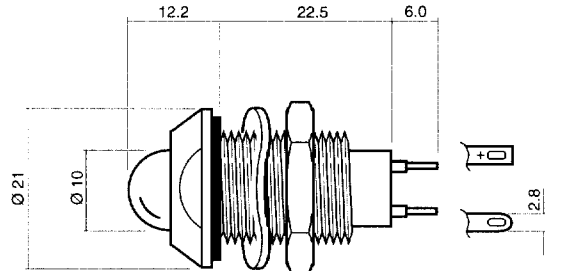
Intensity figures are for discrete LEDs

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

Ø 12.7 and Ø 16mm Mounting

 <p>651 Series</p>	 <p>678 Series</p> <p>Mounting Hole Ø 16 ^{+0.2}/₀ Use Assembly Tool No. 934 - 000 - 00</p>
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Drawing scale 1:1 Dimensions in mm (Typical)
MTBF 90,000 Hours

Order Code: **651 - 105 - 20**

Operating Temperature Range -40 to +85 °C
Storage Temperature Range -50 to +100 °C

Series Options:

651
678

LED Options:

Code - LED Colour / Intensity at 20 mA

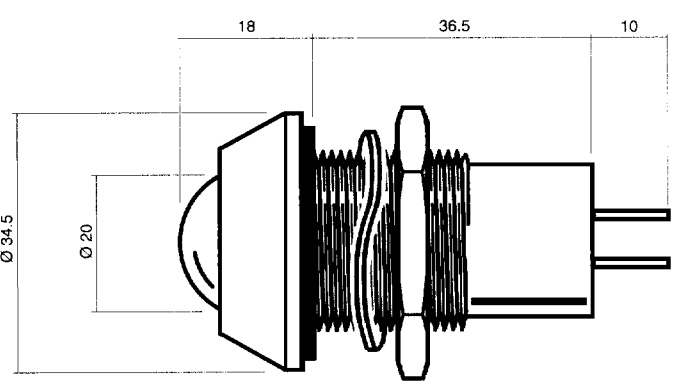
102 - HIGH RED 660 nm	200 mcd
105 - RED 635 nm	40 mcd
111 - YELLOW 590 nm	40 mcd
114 - GREEN 565 nm	40 mcd

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

Ø 25.4mm Mounting

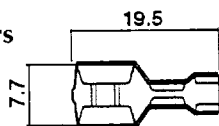
 <p>672 Series</p> <p>Mounting Hole Ø25.4 ^{+0.2}/₀ Flat Spade Terminations: 6.35mm</p>	<p>672 - 290 - 75 Order Code</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">LED Options:</td> <td style="width: 50%;">Voltage Options:</td> </tr> <tr> <td>Code - LED Colour / Intensity at 20 mA</td> <td>Code - Voltage / Current</td> </tr> <tr> <td>289 - HIGH RED 660 nm</td> <td>365 cd/m²</td> </tr> <tr> <td>290 - RED 635 nm</td> <td>180 cd/m²</td> </tr> <tr> <td>291 - YELLOW 585 nm</td> <td>160 cd/m²</td> </tr> <tr> <td>292 - GREEN 565 nm</td> <td>155 cd/m²</td> </tr> <tr> <td>21 - 12 Vac/dc @ 40 mA</td> <td></td> </tr> <tr> <td>22 - 24 Vac/dc @ 20 mA</td> <td></td> </tr> <tr> <td>75 - 110 Vac/dc @ 20 mA</td> <td></td> </tr> <tr> <td>76 - 240 Vac @ 25 mA</td> <td></td> </tr> </table> <p>Drawing scale 1:1 Dimensions in mm (Typical) MTBF 80,000 Hours</p> <p>Operating Temperature Range -40 to +85 °C Storage Temperature Range -50 to +100 °C</p>	LED Options:	Voltage Options:	Code - LED Colour / Intensity at 20 mA	Code - Voltage / Current	289 - HIGH RED 660 nm	365 cd/m ²	290 - RED 635 nm	180 cd/m ²	291 - YELLOW 585 nm	160 cd/m ²	292 - GREEN 565 nm	155 cd/m ²	21 - 12 Vac/dc @ 40 mA		22 - 24 Vac/dc @ 20 mA		75 - 110 Vac/dc @ 20 mA		76 - 240 Vac @ 25 mA	
LED Options:	Voltage Options:																				
Code - LED Colour / Intensity at 20 mA	Code - Voltage / Current																				
289 - HIGH RED 660 nm	365 cd/m ²																				
290 - RED 635 nm	180 cd/m ²																				
291 - YELLOW 585 nm	160 cd/m ²																				
292 - GREEN 565 nm	155 cd/m ²																				
21 - 12 Vac/dc @ 40 mA																					
22 - 24 Vac/dc @ 20 mA																					
75 - 110 Vac/dc @ 20 mA																					
76 - 240 Vac @ 25 mA																					

High Performance Panel Indicators

Accessories

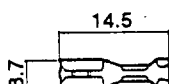
Push-on Connectors

926 - 000 - 00



Brass Tin plated, Vinyl Insulation 6.35mm insulated push-on terminal to suit wire sizes from 0.25mm² to 1.65mm² cross sectional area. For use with 672 Series.

925 - 000 - 00



Brass Tin plated 2.8mm non-insulated push-on terminal to suit wire sizes from 0.25mm² to 1.65mm² cross sectional area. For use with 676, 677, 692, 651 and 678 Series.

High Performance Panel Indicators

Technical Information

Flying Leads Terminations

Order code Suffix	Supply Voltage	Wire Colour	Wire Length	No./Diameter of Conductors	Diameter over Insulation	Comments
15	Up to 24 VDC	Red anode Black cathode	15 cm			Available on all High Performance Panel Indicators. 15cm length standard on 603 Series to Def Stan 61-12 part 18.
15	110 AC 240 AC	Brown live Blue Neutral	15 cm	19/0.15 mm	1.2 mm	
19	Up to 24 VDC	Red anode Black cathode	100 cm			
19	110 AC 240 AC	Brown live Blue neutral	100 cm			

Example: Add order code suffix to lamp part number
e.g. 676 - 501 - 21 - 07

Lamp Test Facility

Order code Suffix	Termination	Circuit	Comments
07	15 cm of flying leads colours as shown	<p>Test Positive</p>	Available in the following Series: 651 672 676 677 678 692
11	100 cm of flying leads colours as shown		
08	15 cm of flying leads colours as shown	<p>Test Negative</p>	
12	100 cm of flying leads colours as shown		

Installation Details and Material Specification

Series	Maximum Power Dissipation mW	Maximum Reverse Voltage V	Minimum Mounting Centres mm	Min/Max Panel Thickness mm	Mounting Torque Nm	IP Rating	Body	Lens	Termination	Panel Seal	Lockwasher	Nut	Encapsulation
658	70	4	6.5	1.6 to 3.2	-	67		Epoxy	Nickel Plated Iron Steel		PTFE Mounting Bush		
603	425	3(2-20 mA) 75 (volt)	10.00	1.5 to 8.0	0.35	67	Bright Nickel Plated Brass		Flying Leads				
611	500	3(2-20 mA) 75 (volt)	11.00	1.5 to 7.0	0.6	67		Poly-carbonate	Tinned Phosphor Bronze Tags	Flouro-elastomer			
643	75	3	14.5	1.5 to 5.0	0.6	67							
667	75	3	14.5	1.5 to 5.0	0.6	-		Epoxy	Tin Plated Steel			Nickel Plated Brass	
662	75	3	11	1.5 to 5.0	0.6	67					Zinc Plated Steel		
676	700	3(2-20 mA) 1000 (volt)	14.5	1.5 to 13.0	0.6	67	Black Anodised Aluminium	Poly-carbonate					Alumina Filled Epoxy
677	700	3(2-20 mA) 1000 (volt)	14.5	1.5 to 13.0	0.6	67							
692	1000	3(2-20 mA) 1000 (volt)	19.5	1.5 to 8.0	1.0	67			Nickel Plated Brass Flat Tags	Flouro-elastomer			
651	1000	3(2-20 mA) 1000 (volt)	19.5	1.5 to 8.0	1.0	67						Black Anodised Aluminium	
678	1700	3(2-20 mA) 1000 (volt)	25	1.5 to 8.0	1.0	67		Epoxy					
672	2500	1000 (volt)	41.0	2.0 to 10.0	1.2	67			Tinned 6.35mm Flat Tags		Steel	Aluminium	