



# Indicators

Product Catalogue



This range of panel mounting LED indicators consists of many different bezel styles, types of LED's and colours. The range has developed to meet the different needs of panel design including IP66 and IP67 environmentally sealed versions for use where a front panel seal is needed.

The vandal resistant LED indicators are designed to complement the vandal resistant switches (see the Switch Section), they have similar profiles with stainless steel bodies, sealing to IP66 & 68 and are built to withstand harsh environments.

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## SYMBOLS



L Wire Leads 200mm long Standard

Solid wires W LED fitted A LED not fitted Ø 🗍 Panel hole size

Panel thickness



# Indicators Vandal Resistant LED Indicators

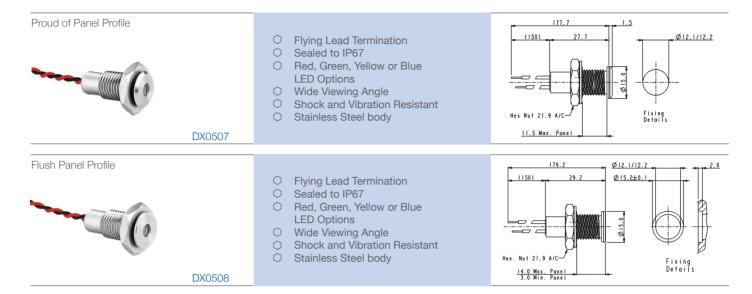


Proud of Panel Profile	<ul> <li>Solder Tag/2.8mm Tag Termination</li> <li>Sealed to IP67</li> <li>Red, Green, Yellow or Blue LED Options</li> <li>Wide Viewing Angle</li> <li>Shock and Vibration Resistant</li> <li>Stainless Steel body</li> </ul>	39.7 Hex. Nut 21.9 A/C II.5 Max. Panel
Flush Panel Profile	<ul> <li>Solder Tag/2.8mm Tag Termination</li> <li>Sealed to IP67</li> <li>Red, Green, Yellow or Blue LED Options</li> <li>Wide Viewing Angle</li> <li>Shock and Vibration Resistant</li> <li>Stainless Steel body</li> </ul>	41.2 Ø12.1/12.2 Ø15.2±0.1 Hes. Nut 21.9 A/C Hes. Nut 21.9 A/C Hes. Nut 21.9 A/C Hes. Nut 21.9 A/C Hes. Nut 21.9 A/C

Specifications	DX0505/Col/Voltage	DX0506/Col/Voltage
Terminations: Forward Voltage:	Solder Tab/2.8mm Tab Red 1.85V, Green 2.2V, Yellow 2.0V, Blue 3.8V	Solder Tab/2.8mm Tab Red 1.85V, Green 2.2V, Yellow 2.0V, Blue 3.8V
Cont. Forward Current: (max)	Red 30mA, Green 25mA, Yellow 30mA, Blue 25mA	Red 30mA, Green 25mA, Yellow 30mA, Blue 25mA
Power Dissipation:	Red 100mW, Green 105mW, Yellow 125mW, Blue 120mW	Red 100mW, Green 105mW, Yellow 125mW, Blue 120mW
Reverse Current: (@Vr = 5V)	Red 10µA max., Green 10µA max., Yellow 10µA max., Blue 50µA max.	Red 10µA max., Green 10µA max., Yellow 10µA max., Blue 50µA max.
LED Luminous Intensity:	Red 2000mcd, Green 100mcd, Yellow 400mcd, Blue 1600mcd (typ)	Red 2000mcd, Green 100mcd, Yellow 400mcd, Blue 1600mcd (typ)
Operating Temp. Range:	-40°C to +80°C	-40°C to +80°C
Storage Temperature:	-40°C to +85°C	-40°C to +85°C
Sealing (Front of panel):	Protection Classification IP67 to EN60529:1992+A2:2013	Protection Classification IP67 to EN60529:1992+A2:2013
Materials Body: Lens: O Ring (external): (internal):	Stainless Steel Polycarbonate UL94V-0 Nitrile Silicone	Stainless Steel Polycarbonate UL94V-0 Nitrile Silicone
Tightening Torque	0.5Nm - 0.9Nm (4.4lbf.in 8.0lbf.in.)	0.5Nm - 0.9Nm (4.4lbf.in 8.0lbf.in.)
Thread Size:	M12 x 1.25-6g	M12 x 1.25-6g
LED Colours:	/RD (Red), /GN (Green), /YL (Yellow) /BL (Blue), with colour coded insulator	/RD (Red), /GN (Green), /YL (Yellow) /BL (Blue), with colour coded insulator
LED Voltage:	/12 (12V DC), /24 (24V DC) or /00 (no ballast resistor)	/12 (12V DC), /24 (24V DC) or /00 (no ballast resistor)
RoHS	Compliant	Compliant

# Vandal Resistant LED Indicators





#### DX0507/Col/Voltage DX0508/Col/Voltage Specifications Terminations: Flying Leads Flying Leads Forward Voltage: Red 1.85V, Green 2.2V, Yellow 2.0V, Red 1.85V, Green 2.2V, Yellow 2.0V, Blue 3.8V Blue 3.8V Cont. Forward Current: Red 30mA, Green 25mA, Red 30mA, Green 25mA, Yellow 30mA, Blue 25mA Yellow 30mA, Blue 25mA (max) Red 100mW, Green 105mW, Red 100mW, Green 105mW, Power Dissipation: Yellow 125mW, Blue 120mW Yellow 125mW, Blue 120mW Reverse Current: Red 10µA max., Green 10µA max., Red 10µA max., Green 10µA max., Yellow 10µA max., Blue 50µA max. Yellow 10µA max., Blue 50µA max. (@Vr = 5V) LED Luminous Intensity: Red 2000mcd, Green 100mcd, Red 2000mcd, Green 100mcd, Yellow 400mcd, Blue 1600mcd (typ) Yellow 400mcd, Blue 1600mcd (typ) Operating Temp. Range: -40°C to +80°C -40°C to +80°C Storage Temperature: -40°C to +85°C -40°C to +85°C Sealing (Front of panel): Protection Classification IP67 to Protection Classification IP67 to EN60529:1992+A2:2013 EN60529:1992+A2:2013 Materials Body: Stainless Steel Stainless Steel Polycarbonate UL94V-0 Polycarbonate UL94V-0 Lens: O Ring (external): Nitrile Nitrile Silicone Silicone (internal): **Tightening Torque** 0.5Nm - 0.9Nm (4.4lbf.in. - 8.0lbf.in.) 0.5Nm - 0.9Nm (4.4lbf.in. - 8.0lbf.in.) Thread Size: M12 x 1.25-6g M12 x 1.25-6g LED Colours: /RD (Red), /GN (Green), /YL (Yellow) /RD (Red), /GN (Green), /YL (Yellow) /BL (Blue), with colour coded /BL (Blue), with colour coded insulator insulator /12 (12V DC), /24 (24V DC) or /12 (12V DC), /24 (24V DC) or LED Voltage: /00 (no ballast resistor) /00 (no ballast resistor) RoHS Compliant Compliant

# Indicators 5mm LED Indicators



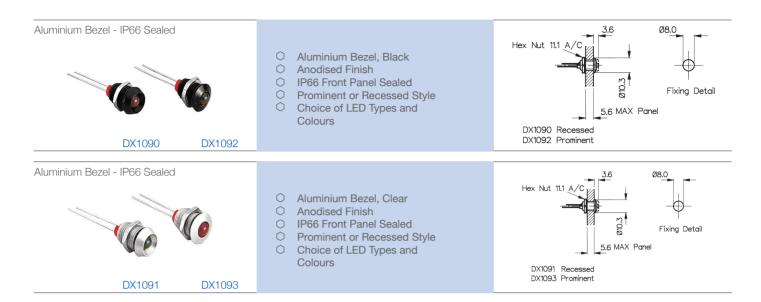


Specifications	DX0998 Colour/Options	DX1120, DX1121/Colour/Options
Bezel Material:	Brass, Chrome Plated	Glass Filled Nylon
Style:	Recessed (DX0998)	Recessed (DX1120) Prominent (DX1121)
Operating Temp. Range:	Dependent on LED used	Dependent on LED used
Storage Temperature:	Dependent on LED used	Dependent on LED used
LED Colours:	/RD (Red), /GN (Green), /YL (Yellow), /BL (Blue), /TR (Tri Colour), /D1 (Dual Colour - Red/Green), /D2 (Dual Colour - Red/Amber), /D3 (Dual Colour - Green/Amber)	/RD (Red), /GN (Green), /YL (Yellow), /BL (Blue), /TR (Tri Colour), /D1 (Dual Colour - Red/Green), /D2 (Dual Colour - Red/Amber), /D3 (Dual Colour - Green/Amber)
LED Options:	/02 (Flashing, Green or Red only)	/02 (Flashing, Green or Red only)
Thread Size:	0.312" x 32TPI	0.312" x 32TPI
RoHS	Compliant	Compliant

See Page 8 for LED options and specifications\*

# Indicators 5mm LED Indicators





Specifications	DX1090, DX1092/Colour/Options	DX1091, DX1093/Colour/Options
Materials:	Aluminium - Black	Aluminium - Clear
Style:	Recessed (DX1090) Prominent (DX1092)	Recessed (DX1091) Prominent (DX1093)
Operating Temp. Range:	Dependent on LED used	Dependent on LED used
Storage Temperature:	Dependent on LED used	Dependent on LED used
Sealing (Front of panel):	Protection Classification IP66 to EN60529:1992+A2:2013	Protection Classification IP66 to EN60529:1992+A2:2013
Tightening Torque:	0.056 - 0.064Nm (8 - 9ozf.in.)	0.056 - 0.064Nm (8 - 9ozf.in.)
Lead Solder Time:	260°C for 5 seconds max.	260°C for 5 seconds max.
LED Colours:	/RD (Red), /GN (Green), /YL (Yellow), /BL (Blue), /TR (Tri Colour), /D1 (Dual Colour - Red/Green), /D2 (Dual Colour - Red/Amber), /D3 (Dual Colour - Green/Amber)	/RD (Red), /GN (Green), /YL (Yellow), /BL (Blue), /TR (Tri Colour), /D1 (Dual Colour - Red/Green), /D2 (Dual Colour - Red/Amber), /D3 (Dual Colour - Green/Amber)
Thread Size:	0.312" x 32TPI	0.312" x 32TPI
RoHS	Compliant	Compliant

See Page 8 for LED options and specifications

# Amm LED Indicators





Specifications	DX1116, DX1118/Colour	DX1117, DX1119/Colour
Bezel Materials:	Brass, Chrome Plated	Aluminium, Black Anodised
Style:	Recessed (DX1116) Prominent (DX1118)	Recessed (DX1117) Prominent (DX1119)
Operating Temp. Range:	Dependent on LED used	Dependent on LED used
Storage Temperature:	Dependent on LED used	Dependent on LED used
Lead Solder Time:	260°C for 5 seconds max.	260°C for 5 seconds max.
LED Colours:	/RD (Red), /GN (Green), /YL (Yellow), /BL (Blue)	/RD (Red), /GN (Green), /YL (Yellow), /BL (Blue)
RoHS	Compliant	Compliant

See Page 9 for LED specifications\*

# Indicators 5mm LED options



#### 5mm LEDs STANDARD

Specification	Red	Green	Yellow	Blue	
Luminous Intensity @20mA: Forward voltage:	25mcd 2.0V	20mcd 2.0V	20mcd 2.1V	21mcd 3.5V	27 MIN - 8.6 -
Cont. Forward Current (max):	30mA	25mA	30mA	30mA	3 /ANODE (*)
Power Dissipation:	105mW (	max) @20°C A	mbient	120mW	
Reverse Current: Reverse Voltage:	10µA 5V (max)	10µA 5V (max)	10µA 5V (max)	50μΑ 5V (max)	SQUARE SPILLS
Operating Temp:		40°C to +85°C		–20°C to +80°C	
Part No:	/RD	/GN	/YL	/BL	

#### 5mm LEDs FLASHING

Specification	Red	Green
Luminous Intensity @20mA: Forward voltage: Cont. Forward Current (max):	1.2mcd 2.0-15.0V 10-30mA	20mcd 2.0V 25mA
Power Dissipation: Flash Frequency @ 3V supply: Operating Temp:	2.2H	@ 20°C ambient z (typ) ) +70°C
Part No:	/RD/02	/GN/02

#### 5mm LEDs TRI COLOUR

Specification	Red/Green/Amber	
Luminous Intensity @20mA: Forward voltage: Cont. Forward Current (max): Power Dissipation: Reverse Current: Reverse Voltage: Operating Temp: Part No:	2.5mcd 2.4V 30mA (max) 150mW (max) @ 20°C Ambient 100μA 5V (max) -40°C to +70°C /TR	L.5 CATHODE

#### 5mm LEDs DUAL COLOUR

Specifications	Red/Green	Red/Amber	Green/Amber	
Luminous Intensity: Forward voltage: Cont. Forward Current: Power Dissipation: Reverse Current: Reverse Voltage: Operating Temp: Part No:	4.5/5mcd 2.2V 30mA/30mA 100mW/100mW 100mA 5V (max) /D1	4.5/4mcd 2.2V 30mA/20mA 100mW/60mW 100mA 5V (max) -40°C to +85°C /D2	4/5mcd 2.2V 30mA/20mA 100mW/60mW 100mA 5V (max) /D3	
	, 2 .	,	, 20	GŘEEN   YELLÓW   GŘEEN   1 2 1 2 1 2 1 2

# Indicators 4mm LED Options



#### 4mm LEDs Standard

Specifications	Red	Green	Yellow	Blue	
Luminous Intensity @10mA: Forward voltage: Cont. Forward Current (max): Power Dissipation (max) @ 20°C Ambient: Reverse Current: Reverse Voltage: Part No:	2.5mcd 2.0V 30mA 100mW 10µA 5V (max) /RD	2.5mcd 2.1V 30mA 100mW 10μA 5V (max) /GN	2.5mcd 2.0V 20mA 85mW 10μA 5V (max) /YL	50mcd 3.8V 30mA 120mW 50μA 5V (max) /BL	ANODE CATHODE

#### Part No Breakdown

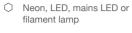
DXxxxx	/ xx /	XX	
Bezel Type	LED Colour RD = Red GN = Green YL = Yellow BL = Blue D1 = Dual Colour - 5mm (Red/ Green) D2 = Dual Colour - 5mm (Red/ Amber) D3 = Dual Colour - 5mm (Green/ Amber) TR = Tri Colour - 5mm (Red/ Green/Amber)	LED Options Blank = Standard 02 = Flashing - 5mm (Red or Green only)	

Example: DX1092/RD/02 = Black Aluminum IP66 Prominent Bezel, with Red flashing LED



#### **Key Features**

#### **Colours and voltages:**



- $\bigcirc$ Bezel sizes from 6.7 to 16.3mm diameter
- $\bigcirc$ Red, amber, green, blue and clear lenses
- Red, yellow, green, blue and white LEDs
- O Wide choice of styles



NEON

DC Red, Yellow, Green, Blue, White 2.0/2.2V Resistors for Green, Blue, White 110-230V AC operation. other voltages available.

DC LED

77



AC MAINS LED

Available with Red, Amber, Green, Clear or Blue lenses 6V, 12/14V, 24/28V.

FILAMENT

Terminal	Туре	Sealed	Illumination	Colour	Voltage	Options
K 2.8 ⊫ L E	(K) 0566 A	6.0 2.0 max p. 340	N	Neon & Filament <b>R</b> Red	1 LED No Resistor 2	C Chrome Bezel Finish
K 2.8 🎾 L 📴	(K) 0566 B	<ul> <li>Ø 6.0</li> <li>Ø 2.0 max</li> <li>Ø p. 340</li> </ul>	N	A Amber Green	125V Neon <b>3</b> 250V Neon	
K 2.8 🎾 L 📑	(K) 0566 C	6.0	N	B Blue (Special Order) Clear	4 6VDC LED 5 12VDC LED	
<b>C</b> 6.3	(C) 0145 AA	5.8 5.8 3.0max p. 340	N -⊕- L <del>∛</del> M <del>∛</del> F -⊗-	LED R	6 24VDC LED 7 12/14V Filament	
L E W E	(L) 1041 00	6.3 6.3 6.3max 0 p. 340	N -⊕- L <del>≹</del> F -⊗-	Red Y Yellow	8 24/ 28V Filament 9	
L   - W   -	(L) 1045 00	6.3 () () () () () () () () () ()	N -⊕- L <del>∛</del> M <del>∛</del> F -⊗-	Green B Blue	125/250VAC LED	

10 Indicators and Enclosures



Terminal	Туре	Sealed	Illumination	Colour	Voltage	Options
L E W L	(L) 0245 00	<ul> <li>✓ 7.1</li> <li>∞ ★ 20</li> <li>★ 6.3 max</li> <li>↓ p. 340</li> </ul>	N -⊕- L & M <del>&amp;</del> F -⊗-	Neon & Filament R Red	1 LED No Resistor 2 125V Neon	C Chrome Bezel Finish
LE	L 2950 00	8.0 0.8-1.6 p. 340	N -⊕- L <del>⊉</del> M <del>⊉</del> F -⊗-	Amber G Green	3 250V Neon 4	
L E C 6.3	(L) 0195 BB	8.0 • • • 0.8-3.0 • p. 340	N -⊕- F -⊗-	Blue (Special Order) Clear	6VDC LED 5 12VDC LED	
LE	L 2951 00	8.0 0.8-1.6 p. 340	N -⊕- L <del>∜</del> M <del>∛</del> F -⊗-	LED R	6 24VDC LED 7 12/14V Filament	
L 🕞	H) 0568 A(*)	<ul> <li>Ø 8.0</li> <li>Ø 0.8-3.5</li> <li>Ø p. 340</li> </ul>	N -⊕- L <del>∛</del> F -⊗-	Red Y Yellow	8 24/ 28V Filament 9 125/250Vac LED	
L 5	(H) 0568 B(*)	8.0 0.8-3.5 p. 340	N -⊕- L <del>‡</del> - F -⊗-	Green B Blue		

#### Dimensions



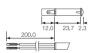


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Ø7.0

Ø7.0

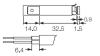


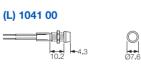






### (C) 0145 AA









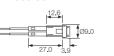
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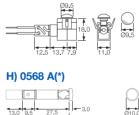
Ø7.5



L 2950 00



(L) 0195 BB







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#### **Key Features**

#### O Neon, LED, mains LED or filament lamp

- O Bezel sizes from 6.7 to 16.3mm diameter
- Red, amber, green, blue and clear lenses Ó
- Red, yellow, green, blue and white LEDs



NEON

**Colours and voltages:** 

DC LED

Available with Red, Amber, Green or Clear lenses 100/130V (marked 110V), 200/250V (marked 230V)



Red, Yellow, Green, Blue, White 110-230V AC operation.

AC MAINS LED

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AC

Available with Red, Amber, Green, Clear or Blue lenses 6V, 12/14V, 24/28V.

FILAMENT



K2.6 $1$ C $2.0$ maxH4.8 $1$ $R$ LED No Resistor $Chrome Berzel Finish$ $1 \times 2.0$ maxH4.8 $1 \times 2.0$ $M \div 2$ $Red$ $2$ $Chrome Berzel Finish$ $1 \times 2.0$ maxLE(C) 0278 00N $0 \times 1.4$ $Amber$ $3$ $250V$ Neon $0 \times 9.0$ $1 \times 2.0$ maxLE(C) 0278 00N $0 \times 1.4$ $G$ $3$ $250V$ Neon $0 \times 9.0$ $1 \times 2.0$ maxLE(C) 0276 00N $0 \times 1.4$ $G$ $3$ $250V$ Neon $0 \times 9.0$ $1 \times 2.0$ maxLE(C) 0276 AAN $0 \times 1.4$ $G$ $3$ $250V$ Neon $0 \times 9.0$ $1 \times 2.0$ maxLE(C) 0276 0AN $0 \times 1.4$ $0 \times 1.4$ $0 \times 9.0$ $0 \times 9.0$ $0 \times 9.0$ LE(C) 0275 00N $0 \times 1.4$ $0 \times 1.4$ $0 \times 9.0$ $0 \times 9.0$ LE(C) 0275 00N $0 \times 1.4$ $1 \times 9.0$ $0 \times 9.0$ LE(C) 0275 00N $0 \times 1.4$ $1 \times 9.0$ $1 \times 9.0$ LE(C) 0275 00N $0 \times 1.4$ $1 \times 9.0$ $1 \times 9.0$ $1 \times 9.0$ LE(C) 0275 00N $0 \times 9.0$ $1 \times 9.0$ $1 \times 9.0$ $0 \times 9.0$ LE(C) 0275 00N $0 \times 9.0$ $1 \times 9.0$ $0 \times 9.0$ LE(C) 0275 00N $0 \times 9.0$ $0 \times 9.0$ LE(C) 0275 00N $0 \times 9.0$	Terminal	Туре	Illumination	Colour	Voltage	Options	Panel	Approval
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	K 2.8	(C) 0273 00			-	Chrome	, i i i i i i i i i i i i i i i i i i i	RL KEGA Ø
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		5		Red		Bezel Finish	p. 340	(KEGA)
$ \begin{bmatrix} L & \vdots & C \\ Special Order \end{pmatrix} = \begin{bmatrix} O \\ Special Order \end{bmatrix} = \begin{bmatrix} O \\ Special Order$	K 2.8 H 4.8 ⊡		L <del>®</del> M <del>®</del>	Amber <b>G</b> Green	250V Neon		ez= ▲ 2.0 max	KIEGA () KIEGA () KIEGA
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	K 2.8	(C) 0276 AA	L <del>®</del> M <del>®</del>	Blue (Special Order)	6VDC LED		ez= ↓ 0.8-2.8	Kiega Kiega Kiega
L E (C) 0275 00 N - Bed 8	K 2.8		L <del>ö</del> M <del>ö</del>		24VDC LED		12.0	KEGA (KEGA
K       2.8       11.5         H       4.8       11.5         K       2.8       Y         K       2.4/28V Filament       11.5         M       H       Yellow       9         G       125/250VAC LED         Green       B         Blue       Blue	K 2.8		L <del>®</del> M <del>®</del>	Red Y Yellow Green B	24/ 28V Filament 9		∼	RA KEED 👀 KEED KEED

Terminal	Туре	Illumination	Colour	Voltage	Options	Panel	Approval
L 2.8 H 4.8 C 6.3	(C) 0276 00	N -@- L <del>∛</del> M <del>∛</del> F -⊗-	Neon & Filament R Red	1 LED No Resistor 2 125V Neon	C Chrome Bezel Finish	<ul> <li>10.0</li> <li>2.8 max</li> <li>p. 340</li> </ul>	<b>FL</b> KEEB KEEB <b>FL</b> KEEB KEEB
L 2.8 H 4.8 C 6.3	(C) 0277 00	N -⊕- L <del>∜</del> M <del>∜</del> F -⊗-	Amber G Green B	3 250V Neon 4		<ul> <li>10.0</li> <li>12 max</li> <li>p. 340</li> </ul>	KICA KICA KICA
L 2.8 H 4.8 C 6.3	(C) 0273 LL	N -⊕- L <del>∛</del> M <del>∜</del> F -⊗-	Blue (Special Order) Clear	6VDC LED 5 12VDC LED		<ul> <li>✓ 10.0</li> <li>↓ 0.6-2.0</li> <li>↓ p. 340</li> </ul>	RU KICA KICA KICA KICA
L 2.8 H 4.8 C 6.3	(C) 2820 00	N -⊕- L <del>∛</del> M <del>∛</del> F -⊗-	LED <b>R</b>	6 24VDC LED 7 12/14V Filament		<ul> <li>✓ 12.0</li> <li>★ 0.75-2.0</li> <li>▶ p. 340</li> </ul>	KEED (KEED) KEED KEED
L 2.8 H 4.8 C 6.3	(C) 2821 00	N -⊕- L <del>∛</del> M <del>∛</del> F -⊗-	Red Y Yellow G	8 24/ 28V Filament 9 125/250VAC LED		<ul> <li>✓ 12.0or12.</li> <li>✓ 12.0</li> <li>✓ 12.0</li> <li>✓ 12.0</li> <li>✓ 12.0</li> <li>✓ 10.0</li> <li>✓ 10.0&lt;</li></ul>	7 91 Kiel 3 Kiel Kiel 3 Kiel
L 2.8 H 4.8 C 6.3	(C) 0586 00	N -⊕- L <del>∛</del> M <del>∛</del> F -⊗-	Green B Blue			<ul> <li>✓ 12.5</li> <li>★ 0.8-1.5</li> <li>▶ p. 340</li> </ul>	RU KEED S
Dimensions							
(L) 0569 AW		) 0275 00 16.0 1.2 12.32.5 13.3 13.5 15.5		++++16.6 35.7			



012.2

12.0 Sq.

012.0

(C) 0278 00



## (C) 0276 AA





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32.6 32.5

(C) 0276 00

015.6

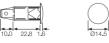
Ø12.0

014.6





(C) 2821 00



15.5 S

(C) 0586 00



**bulgin** 



### **Key Features**

#### **Colours and voltages:**

- $\bigcirc$ Neon, LED, mains LED or filament lamp
- O Bezel sizes from 6.7 to 16.3mm diameter
- O Red, amber, green and clear lenses
- Red, yellow, green, blue and white LEDs



NEON

DC Red, Yellow, Green, Blue, White White 2.0/2.2V Resistors for other voltages available.

DC LED

11



AC MAINS LED

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FILAMENT

Available with Red, Amber, Green, Clear or Blue lenses 6V, 12/14V, 24/28V.

Wide choice of styles

Terminal	Туре	Illumination	Colour	Voltage	Options	Panel	Approval
L E K 2.8 P H 4.8 C C 6.3 C L E K 2.8 P H 4.8 C	(C) 2870 00 C) 0589 00	N -⊕- L # F -⊗- N -⊕- L # M #	Neon & Filament R Red A Amber G Green	1 LED No Resistor 2 125V Neon 3 250V Neon	C Chrome Bezel Finish	<ul> <li>12.7</li> <li>0.75-2.0</li> <li>P. 340</li> <li>12.7</li> <li>0.8-1.5</li> </ul>	KEE         (8)           KEE         (8)
C 6.3	L 0081 00	F -⊗- N -⊕-	Blue (Special Order) Clear	4 6VDC LED 5 12VDC LED		<ul> <li>p. 340</li> <li>12.7</li> <li>9.5</li> <li>p. 340</li> </ul>	KEDE KEDE KEDE
L 2.8 H 4.8 C 6.3	(C) 0177 00	N -⊕- L <del>∛</del> M <del>∛</del> F -⊗-	LED R	6 24Vdc LED 7 12/14V Filament		<ul> <li>12.7</li> <li>12.0max</li> <li>p. 340</li> </ul>	Keel & Keel Keel Keel
L 2.8 H 4.8 C 6.3	(C) 0067 00	N -⊕- L <del>∜</del> M <del>∛</del> F -⊗-	Red Y Yellow G	8 24/ 28V Filament 9 125/250VAC LED		<ul> <li>12.7</li> <li>1.14 max</li> <li>p. 340</li> </ul>	KEDA GO KEDA KEDA
L E	(C) 0180AA	N -⊕- L <del>∛</del> F -⊗-	Green B Blue			<ul> <li>12.7</li> <li>19.0 max</li> <li>p. 340</li> </ul>	KEER G



Terminal	Туре	Illumination	Colour	Voltage	Options	Panel	Approval
L E C 6.3	(C) 0180BB	N -⊕- L +ੈ F -⊗-	Neon & Filament R Red	1 LED No Resistor 2	C Chrome Bezel Finish	<ul> <li>✓ 13.5</li> <li>✓ 0.9-1.14</li> <li>● p. 340</li> </ul>	Kiii ()
L	(C) 0579 00	N -⊕- L <del>∛</del> M <del>∜</del> F -⊗-	A Amber G Green	125V Neon 3 250V Neon		<ul> <li>✓ 14.0</li> <li>✓ 2.5 max</li> <li>● p. 340</li> </ul>	Ken (Ken)
<b>C</b> 6.3	(C) 1092	N -⊕-	B Blue (Special Order) C Clear	4 6VDC LED 5 12VDC LED		<ul> <li>19.0</li> <li>4.0max</li> <li>p. 340</li> </ul>	K
			LED R	6 24VDC LED 7			
			Red Y Yellow	12/14V Filament <b>8</b> 24/ 28V Filament			
			G Green B Blue	<b>9</b> 125/250VAC LED			

#### **Dimensions**

(C) 2870 00





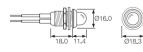
Ø15.

22.8

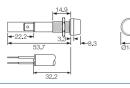




#### L 0081 00

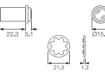


(C) 0177 00









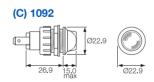




(C) 0579 00

10.0







#### **Key Features**

### **Colours and voltages:**



- Bezel sizes from 6.7 to 16.3mm diameter  $\bigcirc$
- Red, amber, green and clear  $\bigcirc$ lenses
  - Red, yellow, green, blue and white LEDs
- Wide choice of styles

 $\bigcirc$ 

-(_)	
Available with	
Red, Amber,	
Green or Clear	
lenses	
100/130V	
(marked 110V),	
200/250V	
(marked 230V)	

NEON



DC LED



FILAMENT

Red, Yellow, Green, Blue, White 110-230V AC White 2.0/2.2V Resistors for other voltages available. operation.

AC MAINS LED

77

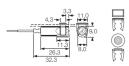
AC

Available with Green, Clear or Blue lenses 6V, 12/14V, 24/28V.

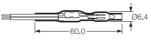
Termin	al	Туре	Illumination	Colour	Voltage	Options	Panel	Approval
L		Type L 0234 00 L 0233 00	Illumination N	Colour Neon & Filament R Bed A Amber G Green B Blue (Special Order) C Clear LED R Red Y Yellow G	1 LED No Resistor 2 125V Neon 3 250V Neon 4 6Vdc LED 5 12VDC LED 6 24VDC LED 7 12/14V Filament 8 24/ 28V Filament	Options C Chrome Bezel Finish	Panel	
				Green B Blue	<b>9</b> 125/250VAC LED			

#### **Dimensions**

#### L 0234 00



#### L 0233 00



Neon tube, resistor and flexible lead assembly, protected by "shrunk on" transparent sleeving.

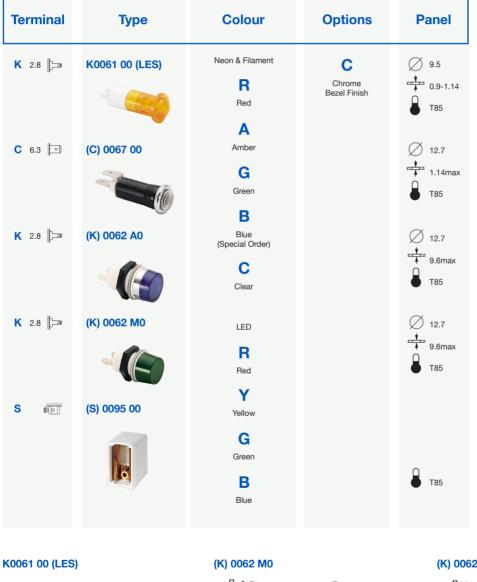
# Low Voltage Lampholders



#### **Key Features**

#### **Colours and voltages:**

- O Up to 50V
- Red, Amber, Green, Blue and Ô Clear
- These lampholders are suitable for up to 50V max. Colours - Red, Amber, Green, (Clear & Blue, check availability).
- C Linestra/Philinea lamp holder



21.3 9.1 (K) 0062 A0





(C) 0067 00

216.0



Indicators and Enclosures 17

# Large Low Voltage Lampholders









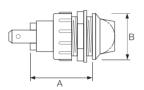
P1090FL - - -

### **Key Features**

#### O Up to 50V

- MES or MBC bulb
- C Flat and domed lens
- O Brass or nylon bodies
- Red, Amber, Green, Blue and Clear lenses

#### **Dimensions and Options**



Approvals and specifications

Colours - Red, Amber, Green, (Clear & Blue, check availability). Brass bodies have polished chrome finish.

These lampholders are suitable for up to 50V max.



Terminal	Туре	Colour	Options	Panel	Lens
C 9.1 6.3 × 0.8	1090 MES (E10) Internet Section 1000 MBC (BA9s) (C and S	R Red Y Yellow G Green B Blue C	C Chrome Bezel Finish	1090 (MES lamps)           Panel Hole         Body         Dim         Dim           Dia         Material         A         B           A         19.0         Brass         35.0         22.0           D         19.0         Brass         30.2         22.0           E         19.0         Nylon with         30.2         22.0           G         19.0         Brass         24.6         22.0           H         19.0         Nylon with         24.6         22.0           Chrome bezel         24.6         22.8         25.4         Brass         26.0         31.5	F Flat
Solder S Screw and Clamp	C and S Terminals only)	Clear		Panel Hole         Body         Dim         Dim           Dia         Material         A         B           B         19.0         Brass         36.0         22.0           C         19.0         Nylon         36.6         22.0           Q         19.0         Nylon         36.6         22.8           M         25.4         Brass         38.1         31.5	L No lens

F0445 MO P.V.C. Insulating terminal cover.

## 18 Indicators and Enclosures

# LED Lamps and LED Lampholders LED Lampholders can be supplied with or without LEDs



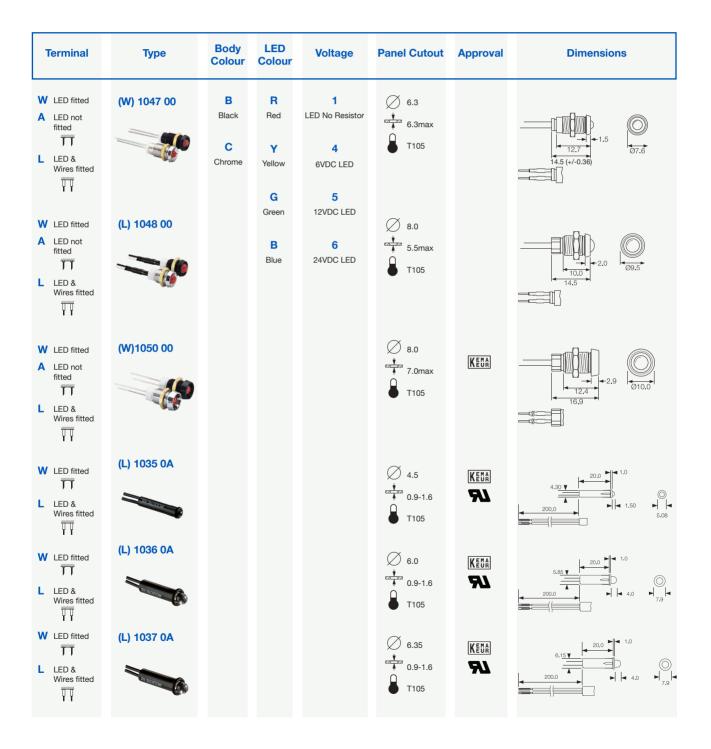
#### **Key Features**

#### **Colours and voltages:**

- C LED lampholders
- Supplied with or without LEDs
- O Black or Chrome finish

Colours: Red, Yellow, Green and Blue LEDs (High Intensity is standard. Option of extra super bright). Voltages: LEDs are available for direct connection to 2.0/2.2V or 12VDC

For other voltages contact sales.



# LED Lamps and LED Lampholders - Sealed to IP67



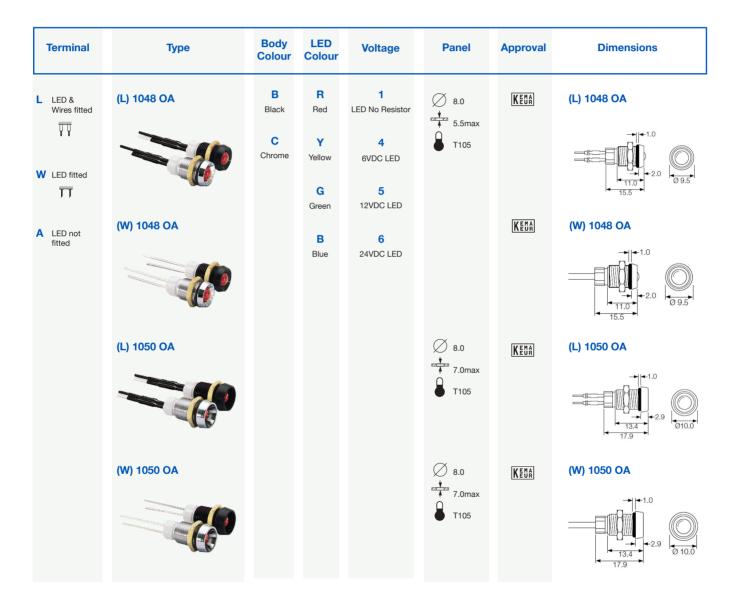
#### **Key Features**

#### **Colours and voltages:**

$\bigcirc$	IP67 front bezel sealing

- C LED lampholders
- Supplied with or without LEDs
- O Black or Chrome finish

#### Colours: Red, Yellow Green and Blue LEDs. (High Intensity is standard. Option of extra super bright). Voltages: LEDs are available for direct connection to 2.0/2.2V or 12VDC. For other voltages contact sales.



#### Properties

#### Sealing

O-ring sealing equivalent to IP67, of both the LED to bezel, and bezel to panel is available where shown.

Polarity The nylon base mouldings are polarity marked.

Body Material and Finish Chromed brass or Black oxide coated brass. Lampholders only Items prefixed 'A' are supplied without LEDs.

LED wires or PVC covered wire leads 125mm min length wires, 6.3mm standard strip. Alternative colours, length and strip available.



### **Key Features**

- O IP67 Panel Sealing
- Supplied complete with gaskets/'O' rings  $\bigcirc$
- C Red, yellow, green, blue and white LEDs  $\bigcirc$ Neon, LED, mains LED or ○ Wide choice of styles filament lamp
- O Bezel sizes from 7.6 to 22.9mm diameter

#### **Colours and voltages:**



 $\bigcirc$  Red, amber, green, blue and

clear lenses

Available with Red, Amber, Green or Clear lenses lenses 100/130V (marked 110V), 200/250V (marked 230V) Resistors for other voltages available.

DC LED AC MAINS LED DC AC Red, Yellow, Green, Blue, White 2.0/2.2V Red, Yellow, Green, Blue, White 110-230V AC

operation.



Available with Red, Amber, Green, Clear or Blue lenses 6V, 12/14V, 24/28V.

Terminal	Туре	Sealed	Illumination	Colour	Voltage	Option	Panel Cutout	Approval
LE	(L) 1041 OS	<b>S</b> Sealed	N -⊕- L <del>∛</del> M <del>∛</del> F -⊗-	R Red A Amber	<b>1</b> LED No Resistor <b>2</b> 125V Neon	C Chrome Bezel Finish	<ul> <li>Ø 6.3</li> <li>2 ↓ 20</li> <li>2 ↓ 20</li></ul>	KEUR
L E	(L) 0245 OS		N -⊕- L +∄ M +∄ F -⊗-	G Green B Blue (Sposial)	<b>3</b> 250V Neon		7.1 • • • • • • • • • • • • • • • • • • •	KEUR
L 2.8 H 4.8 C 6.3	(C) 0275 OS		N -⊕- L <del>∜</del> M <del>∜</del> F -⊗-	(Special) C Clear	4 6VDC LED 5 12VDC LED		<ul> <li>Ø 10.0</li> <li><sup>x→↓xx</sup>/<sub>4</sub> 11.15max</li> </ul>	KENA
L 2.8 H 4.8 C 6.3	(C) 0277 OS		N -⊕- L <del>∛</del> M <del>∜</del> F -⊗-	LED R Red	6 24VDC LED		<ul> <li>✓ 10.0</li> <li><sup>+</sup>/<sub>4</sub></li> <li>11.15max</li> </ul>	KEUA
L     L       K     2.8       H     4.8       C     6.3	(C) 0177 OS		N -⊕- L <del>∛</del> M <del>∛</del> F -⊗-	Y Yellow G Green	7 12/14V Filament 8 24/ 28V Filament		<ul> <li>Ø 12.7</li> <li>♥</li> <li>●</li> <li>●&lt;</li></ul>	KEUA
				B Blue W White	<b>9</b> 125/250VAC LED			
(L) 1041 OS			(C)	0275 OS		(C) 0177	OS	
(L) 0245 OS	■ -4.5			15.5 32.0 32.2	3.5	+ 22.2+ + 53.7	3.3   = -8.3 32.2	014.6
	9.5		(C)	0277 OS	8.3 014.6			

# Technical Information - Indicators



The majority of Arcolectric indicator lights can be supplied with alternative light sources: Neon, Fluorescent, Filament lamp or LED

# NEON and FLUORESCENT LAMPS

Colours Available with Red, Amber, Green, Blue or Clear lenses.

### Maximum striking voltages

Standard brightness types 65VAC 90VDC. High brightness types 85VAC 135VDC. High brightness types are usually fitted.

### Life

Typically 25,000 hours (Green fluorescent lamps 20,000 hours). (Measured to a point when the light output of the lamp is half its original level.) The end of life for a neon lamp is not usually a sudden failure.

### False signals due to long wiring

It is possible for neon or fluorescent tubes to glow when they should be off. Thefalse signal is caused by the capacitance effect of fairly long wiring to the indicator being adjacent to other live cables. This effect can be prevented in most cases by fitting a 100k resistor across the supply wires close to the indicator assembly.

### MATERIALS

### **TEMPERATURE RATING**

Authority	with Terminals	with Wire leads		
		PVC	SILICONE	
European	T105°C	T105°C T105°C		
UL	T65/75°C	T65/75°C		

## FILAMENT LAMPS

Colours Available with Red, Amber, Green, Clear or Blue lenses

LEDS - DC Colours Red, Yellow, Green, Blue and White.

### Voltage

Basic voltage 2.0/2.2V. Some items are available with integral resistors for 12V use. For details of resistors required for higher voltages, please call sales.

Current Maximum continuous forward current 20mA

Life >100,000hrs

## LEDs - AC

Colours Red, Yellow, Green, Blue and White.

Voltage Rated up to 230V AC, suitable for use at 110V and 230V AC.

Current <3mA

Life >100,000hrs