

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.

Vandal Resistant LED Indicators

5mm LED Indicators

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Indicator Lights

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Low Voltage Lampholders

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LED Lamps and LED Lampholders

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Indicator Lights - Sealed to IP67

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## Vandal Resistant LED Indicators

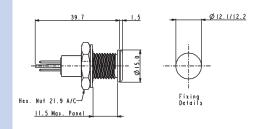


Proud of Panel Profile



DX0505

- Solder Tag/2.8mm Tag Termination
- Sealed to IP67
- Red, Green, Yellow or Blue LED Options
- Wide Viewing Angle
- Shock and Vibration Resistant
- Stainless Steel body



Flush Panel Profile

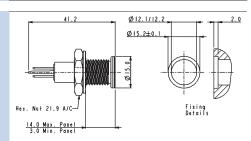


DX0506

/00 (no ballast resistor)

Compliant

- Solder Tag/2.8mm Tag Termination
- Sealed to IP67
- Red, Green, Yellow or Blue LED Options
- Wide Viewing Angle
- O Shock and Vibration Resistant
- Stainless Steel body



Specifications	DX0505/Col/Voltage	DX0506/Col/Voltage
Terminations: Forward Voltage: Cont. Forward Current: (max)	Solder Tab/2.8mm Tab Red 1.85V, Green 2.2V, Yellow 2.0V, Blue 3.8V Red 30mA, Green 25mA, Yellow 30mA, Blue 25mA	Solder Tab/2.8mm Tab Red 1.85V, Green 2.2V, Yellow 2.0V, Blue 3.8V 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 d.c.), /24 (24V d.c.) or	/12 (12V d.c.), /24 (24V d.c.) or

/00 (no ballast resistor)

Compliant

## Vandal Resistant LED Indicators

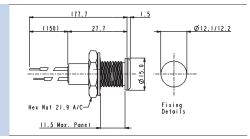


Proud of Panel Profile



DX0507

- O Flying Lead Termination
- Sealed to IP67
- Red, Green, Yellow or Blue LED Options
- Wide Viewing Angle
- Shock and Vibration Resistant
- Stainless Steel body



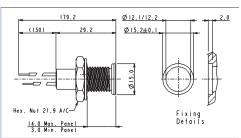
Flush Panel Profile



DX0508

Compliant

- Flying Lead Termination
- Sealed to IP67
- Red, Green, Yellow or Blue LED Options
- Wide Viewing Angle
- Shock and Vibration Resistant
- Stainless Steel body



	-V/- 144 II	
Specifications	DX0507/Col/Voltage	DX0508/Col/Voltage
Terminations: Forward Voltage:	Flying Leads Red 1.85V, Green 2.2V, Yellow 2.0V, Blue 3.8V	Flying Leads 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 d.c.), /24 (24V d.c.) or /00 (no ballast resistor)	/12 (12V d.c.), /24 (24V d.c.) or /00 (no ballast resistor)

Compliant

## 5mm LED Indicators

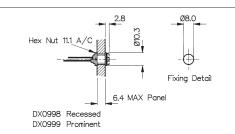






DX0998

- O Chrome Plated Brass Bezel
- Prominent or Recessed StyleChoice of LED Types and Colours



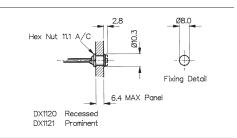
Nylon Bezel



DX1120

DX1121

- O Glass Filled Nylon Bezel
- O Prominent or Recessed Style
- Choice of LED Types and Colours



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 212 for LED options and specifications\*

## 5mm LED Indicators



Aluminium Bezel - IP66 Sealed

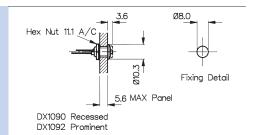


DX1090

DX1092

- O Aluminium Bezel, Black
- Anodised Finish
- IP66 Front Panel Sealed
- O Prominent or Recessed Style
- O Choice of LED Types and

Colours



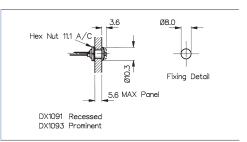
Aluminium Bezel - IP66 Sealed



DX1091

DX1093

- Aluminium Bezel, Clear
- $\Diamond$ Anodised Finish
- IP66 Front Panel Sealed
- O Prominent or Recessed Style
- Choice of LED Types and Colours



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:	0.056Nm (8ozf.in.) min	0.056Nm (8ozf.in.) min
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 212 for LED options and specifications

## 4mm LED Indicators

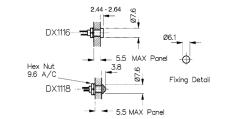


Chrome Plated Brass Bezel



DX1116 DX1118

- Chrome Plated Brass Bezel Prominent or Recessed Style
- Choice of LED Types and Colours



Black Nickel Pated Brass Bezel



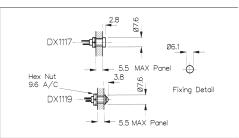
DX1117

DX1119

Aluminium, Black Anodised

Prominent or Recessed Style Choice of LED Types and

Colours



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 213 for LED specifications\*

# 5mm LED options



#### 5mm LEDs STANDARD

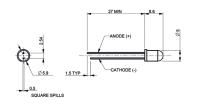
Specification	Red	Green	Yellow	Blue
Luminous Intensity @20mA: Forward voltage: Cont. Forward Current (max):	25mcd 2.0V 30mA	20mcd 2.0V 25mA	20mcd 2.1V 30mA	21mcd 3.5V 30mA
Power Dissipation:	105mW (	max) @20°C A	mbient	120mW
Reverse Current: Reverse Voltage:	10μA 5V (max)	10μA 5V (max)	10μA 5V (max)	50μA 5V (max)
Operating Temp:		10°C to +85°C		–20°C to +80°C

/GN

/YL

/BL

/RD



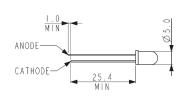
#### 5mm LEDs FLASHING

Part No:

Specification	Red	Green
Luminous Intensity @20mA:	1.2mcd	20mcd
Forward voltage:	2.0-15.0V	2.0V
Cont. Forward Current (max):	10-30mA	25mA

Power Dissipation: 200mW (max) @ 20°C ambient Flash Frequency @ 3V supply: 2.2Hz (typ)
Operating Temp: 0°C to +70°C

Part No: /RD/02 /GN/02



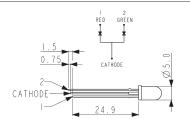
#### 5mm LEDs TRI COLOUR

Specification	Red/Green/Amber
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Luminous Intensity @20mA: 2.5mcd
Forward voltage: 2.4V
Cont. Forward Current (max): 30mA (max)

Power Dissipation: 150mW (max) @ 20°C Ambient

 $\begin{tabular}{lll} Reverse Current: & $100\mu A$ \\ Reverse Voltage: & $5V (max)$ \\ Operating Temp: & $-40^{\circ}C$ to $+70^{\circ}C$ \\ Part No: & $/TR$ \\ \end{tabular}$ 



#### 5mm LEDs DUAL COLOUR

Specifications	Red/Green	Red/Amber	Green/Amber	
Luminous Intensity:	4.5/5mcd	4.5/4mcd	4/5mcd	
Forward voltage:	2.2V	2.2V	2.2V	WIN T
Cont. Forward Current:	30mA/30mA	30mA/20mA	30mA/20mA	
Power Dissipation:	100mW/100mW	100mW/60mW	100mW/60mW	2
Reverse Current:	100mA	100mA	100mA	25.0
Reverse Voltage:	5V (max)	5V (max)	5V (max)	MIN
Operating Temp:	- ( )	-40°C to +85°C	- ( )	RED RED YELLOW
Part No:	/D1	/D2	/D3	GREEN YELLOW GREEN

# Indicators 4mm LED Options



#### 4mm LEDs Standard

Specifications	Red	Green	Yellow	Blue	
Luminous Intensity @10mA:	2.5mcd	2.5mcd	2.5mcd	50mcd	
Forward voltage:	2.0V	2.1V	2.0V	3.8V	<u>₩, №</u>
Cont. Forward Current (max):	30mA	30mA	20mA	30mA	ANODE 8
Power Dissipation (max) @ 20°C Ambient:	100mW	100mW	85mW	120mW	ANODE
Reverse Current:	10μΑ	10μΑ	10µA	50μΑ	CATHODE
Reverse Voltage:	5V (max)	5V (max)	5V (max)	5V (max)	12.5
Part No:	/RD	/GN	/YL	/BL	MIN

#### Part No Breakdown

DXxxxx	/ <b>xx</b> /	/ 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:**

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

# **NEON**

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



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



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



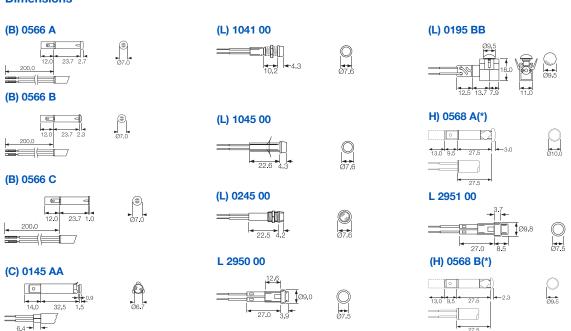
Available with Red, Amber, Green, Clear or Blue lenses 6V, 12/14V, 24/28V.

Terminal	Туре	Sealed	Illumination	Colour	Voltage	Options
B 2.8	(B) 0566 A	6.0 2.0 max p. 340	N -⊕- L <del>∛</del> M <del>∛</del>	Neon & Filament  R Red	1 LED No Resistor	C Chrome Bezel Finish
B 2.8   _	(B) 0566 B	6.0 2.0 max p. 340	N -⊕- L <del>å</del> M <del>≬</del>	A Amber G Green	125V Neon  3 250V Neon	
B 2.8 🗀	(B) 0566 C	6.0 2.0max	N -⊕- L <del>∜</del> M <del>∜</del>	B Blue (Special Order) C Clear	4 6Vdc LED  5 12Vdc LED	
<b>C</b> 6.3	(C) 0145 AA	5.8	N -⊕- L <del>-                                  </del>	LED	6 24Vdc LED	
L E	(L) 1041 00	6.3 6.3max p. 340	F -⊗- N -⊕- L <del>∛</del> F -⊗-	Red Y	12/14V Filament <b>8</b> 24/ 28V Filament	
L E W L	(L) 1045 00	6.3 10.0max	N -⊕- L <del>∜</del> M <del>∜</del> F -⊗-	G Green B Blue	<b>9</b> 125/250Vac LED	
		<b>—</b> p. 6.6	F -≪-			



Terminal	Туре	Sealed	Illumination	Colour	Voltage	Options
L E	(L) 0245 00	7.1 6.3 max p. 340	N -⊕- L <del>∯</del> M <del>∯</del> F -⊗-	Neon & Filament  R Red	1 LED No Resistor	C Chrome Bezel Finish
LE	L 2950 00	8.0 0.8-1.6 p. 340	N - () - L + <del>    </del> M + <del>    </del> F - ⊗-	A Amber G Green	3 250V Neon	
L	(L) 0195 BB	8.0 • 0.8-3.0 p. 340	N -⊕- F -⊗-	B Blue (Special Order) C Clear	4 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	6 24Vdc LED 7	
L	H) 0568 A(*)	8.0 0.8-3.5 p. 340	N -⊕- L <del>∯</del> F -⊗-	Red Y Yellow	12/14V Filament <b>8</b> 24/ 28V Filament	
L	(H) 0568 B(*)	8.0 • 0.8-3.5 • p. 340	N -⊕- L <del>∦</del> F -⊗-	G Green B Blue	125/250Vac LED	

#### **Dimensions**





#### **Key Features**

- Neon, LED, mains LED or filament lamp
- O Bezel sizes from 6.7 to 16.3mm diameter
- Red, amber, green, blue and clear lenses
- Red, yellow, green, blue and white LEDs
- Wide choice of styles

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



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



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

## **AC MAINS LED**



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

#### **FILAMENT**



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

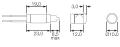
Terminal	Туре	Illumination	Colour	Voltage	Options	Panel	Approval
L D	(C) 0273 00	N	Neon & Filament	1	С	9.0	A77 Keth 20
K 2.8 H 4.8 C 6.3		L <del>∯</del> M <del>∯</del> F -⊗-	Red	LED No Resistor	Chrome Bezel Finish	2.0 max p. 340	KETA KETA
L E	(C) 0278 00	r	A Amber	125V Neon		Ø 9.0	A77 Keith 🐠
K 2.8 P	0	L <del>ᢤ</del> M <del>ᢤ</del>	<b>G</b> Green	<b>3</b> 250V Neon		2.0 max	KETA  KETA
C 6.3	(C) 0276 AA	F -⊗-	<b>B</b>	<b>4</b> 6Vdc LED		Ø 9.5	AN KERA &
K 2.8 H 4.8 C 6.3		N <del>-</del> ⊕- L <del>-{ </del> M <del>-{ </del> F -⊗-	(Special Order)  C Clear	<b>5</b> 12Vdc LED		0.8-2.8 p. 340	K801 K801
L	(C) 0275 00	N		<b>6</b> 24Vdc LED			FAN KEDA Ø
H 4.8 C 6.3		L <del>∯</del> M <del>∯</del> F ∹⊗-	LED	<b>7</b> 12/14V Filament		12.0 p. 340	KEUA SP
L D	(C) 0275 00	N	Red	8		2 10.0	AN KETA ®
K 2.8 H 4.8 C 6.3		L <del>ᢤ</del> M <del>ᢤ</del> F -⊗-	Yellow	24/ 28V Filament		p. 340	KEDA SP
			<b>G</b> Green	125/250Vac LED			
			Blue				



Terminal	Туре	Illumination	Colour	Voltage	Options	Panel	Approval
L	(C) 0276 00	N -⊕- L <del>∛</del> M <del>∜</del>	Neon & Filament	<b>1</b> LED No Resistor	C Chrome Bezel Finish	10.0 2.8 max	<b>91</b> Kega <b>\$</b>
<b>C</b> 6.3	(C) 0077 00	F -⊗-	Red  A  Amber	2 125V Neon		p. 340	RETA CETA
L	(C) 0277 00	N()- L + <del>()</del> M + <del>()</del> F -⊗-	<b>G</b> Green	3 250V Neon		10.0 12 max p. 340	KETA KETA KETA
L	(C) 0273 LL	N -⊕- L <del>∛</del>	B Blue (Special Order)	6Vdc LED		10.0	RETA SE
H 4.8 D C 6.3 D	(C) 2820 00	M <del>*</del> F -⊗- N -⊕-	Clear	12Vdc LED		p. 340	Keta (Keta
K 2.8 P H 4.8 P C 6.3 P		L <del>∜</del> M <del>∜</del> F-⊗-	LED R	24Vdc LED  7 12/14V Filament		12.0 0.75-2.0 p. 340	REDA © KEDA (KEDA KEDA KEDA
L	(C) 2821 00	N -⊕- L <del>∛</del> M <del>≬</del>	Red Y Yellow	8 24/ 28V Filament		12.0or12. • 12.0 • 12.0 • 012.0 • 012.7 • 012.7 • 012.7 • 012.7	7 <b>%1</b> KESA <b>©</b> KESA <b>©</b>
C 6.3	(C) 0586 00	F -⊗- N -⊕-	<b>G</b> Green	<b>9</b> 125/250Vac LED		p. 340	Kesa <b>s</b>
<ul><li>K 2.8 →</li><li>H 4.8 →</li><li>C 6.3 →</li></ul>	The same of the sa	L <del>∯</del> M <del>∯</del> F-⊗-	Blue			0.8-1.5 p. 340	Keta Keta Keta

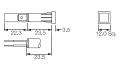
#### **Dimensions**

#### (L) 0569 AW





## (C) 0278 00



### (C) 0276 AA







(C) 0275 00















## (C) 0273 LL











### (C) 2821 00





### (C) 0586 00







#### **Key Features**

# Neon, LED, mains LED or filament lamp

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

### **Colours and voltages:**



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



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

### **AC MAINS LED**



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

### **FILAMENT**



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

Terminal	Туре	Illumination	Colour	Voltage	Options	Panel	Approval
L	(C) 2870 00 C) 0589 00 L 0081 00	N - ⊕- L + ⊕ M - ⊕- N - ⊕- L + ⊕ F - ⊗- N - ⊕-	Red A Amber G Green B Blue (Special Order)	1 LED No Resistor 2 125V Neon 3 250V Neon 4 6Vdc LED	C Chrome Bezel Finish	12.7  12.7  P. 340  12.7  0.8-1.5  p. 340	
L	(C) 0177 00	L ∯ M ∯ F-⊗- N-⊕- L ∯	C Clear	5 12Vdc LED 6 24Vdc LED		9.5 p. 340	KEGA KIGA
H 4.8 C 6.3 C	(C) 0067 00	M <del>½</del> F -⊗-	LED Red	7 12/14V Filament		12.0max p. 340	KEGA  KEGA
K 2.8 H 4.8 O C 6.3	(0) 0007 00	N +⊕ M +⊕ F -⊗-	Y Yellow <b>G</b>	8 24/ 28V Filament 9 125/250Vac LED		12.7 1.14 max p. 340	KEGA  KEGA
C 6.3	(C) 0180AA	N -⊕- L <del>∜</del> F -⊗-	Green  B  Blue			12.7 19.0 max p. 340	<b>71 K 3</b>



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

#### **Dimensions**

#### (C) 2870 00







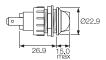




(C) 0067 00



### (C) 1092















#### L 0081 00





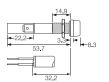




(C) 0579 00



#### (C) 0177 00











#### **Key Features**

- Neon, LED, mains LED or filament lamp
- Bezel sizes from 6.7 to 16.3mm diameter
- Red, amber, green and clear
- Red, yellow, green, blue and white LEDs
- Wide choice of styles

### **Colours and voltages:**



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



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

### **AC MAINS LED**



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

#### **FILAMENT**



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

Term	inal	Туре	Illumination	Colour	Voltage	Options	Panel	Approval
L	Linal E	Type  L 0234 00  L 0233 00	N -⊕-	Neon & Filament  R Red  A Amber  G Green  B Blue (Special Order)  C Clear  LED  R Red  Y Yellow	Voltage  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	C Chrome Bezel Finish	Panel    18.2/18.3	71 KEE S
				G Green B Blue	9 125/250Vac LED			

#### **Dimensions**

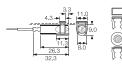
#### H 0581 AY



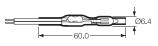




#### L 0234 00



### 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

These lampholders are suitable for up to 50V max.

Red, Amber, Green, Blue and Clear

Colours - Red, Amber, Green, (Clear & Blue, check availability).

C Linestra/Philinea lamp holder

Terminal	Туре	Colour	Options	Panel
T	T0061 00 (LES)	Neon & Filament	<b>C</b> Chrome	9.5 • 0.9-1.14
		Red	Bezel Finish	T85
C	(C) 0067 00	Amber		12.7
		G Green		1.14max T85
T 6.3	(T) 0062 A0	Blue (Special Order)		12.7 \$\frac{1}{4} 9.6max
		<b>C</b> Clear		T85
T	(C) 0062 M0	LED		12.7 • 9.6max
		R Red		9.6max T85
S OF	(S) 0095 00	Y Yellow		
		<b>G</b> Green		
	LÒ	<b>B</b> Blue		T85

#### T0061 00 (LES)











(T) 0062 A0





#### (C) 0067 00





### (S) 0095 00







# Large Low Voltage Lampholders









P1090FL - - -

#### **Key Features**

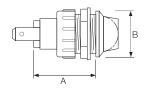
- O Up to 50V
- MES or MBC bulb
- Flat and domed lens
- O Brass or nylon bodies
- Red, Amber, Green, Blue and Clear lenses

#### **Approvals and specifications**

These lampholders are suitable for up to 50V max.

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

### **Dimensions and Options**



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



Terminal	Туре	Colour	Options	Panel	Lens
C 9.1 6.3 x 0.8  T Solder	1090 MES (E10)  1091 MBC (BA9s) (C and S Terminals only)	R Red Y Yellow G Green B Blue C Clear	C Chrome Bezel Finish	Panel Hole   Body   Dim   Dim     Dia   Material   A   B     A   19.0   Brass   35.0   22.0     E   19.0   Nylon with   30.2   22.0     Chrome bezel   30.2   22.8     G   19.0   Brass   24.6   22.0     H   19.0   Nylon with   24.6   22.0     Chrome bezel   24.6   22.8     L   25.4   Brass   26.0   31.5     1091 (MBC lamps)   Panel Hole   Body   Dim   Dim     Dia   Material   A   B     B   19.0   Brass   36.0   22.0     Q   19.0   Nylon   36.6   22.0     Q   19.0   Nylon   36.6   22.8     M   25.4   Brass   38.1   31.5	F Flat  V MES (E10)  L No lens
9.1 Screw and Clamp					

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



#### **Key Features**

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

○ LED lampholders

Colours: Red, Yellow, Green and Blue LEDs (High Intensity is standard. Option of extra super bright).

Supplied with or without LEDs

Voltages: LEDs are available for direct connection to 2.0/2.2V or 12Vdc

Black or Chrome finish

For other voltages contact sales.

Terminal	Туре	Body Colour	LED Colour	Voltage	Panel Cutout	Approval	Dimensions
W LED fitted A LED not fitted TT L LED & Wires fitted	(W) 1047 00	B Black — Blank	R Red Y Yellow	1 LED No Resistor 4 6Vdc LED	6.3 6.3max T105		1.5 07.6 07.6
W LED fitted A LED not fitted TT L LED & Wires fitted	(L) 1048 00		G Green B Blue	5 12Vdc LED 6 24Vdc LED	8.0 5.5max T105		+2.0 Ø9.5
W LED fitted  A LED not fitted  TT  L LED & Wires fitted	(W)1050 00				8.0 7.0max	KEMA	12.4 16.9
W LED fitted TT  L LED & Wires fitted	(L) 1035 0A				4.5 0.9-1.6 T105	KEMA	4.30 1 1.50 1.50 5.08
W LED fitted  TT  L LED & Wires fitted	(L) 1036 0A				6.0 0.9-1.6	KEMA	5.85 V 20.0 1.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
W LED fitted  TT  L LED & Wires fitted	(L) 1037 0A				6.35 0.9-1.6 T105	KEMA	6,15 7 20.0 1.0

# LED Lamps and LED Lampholders - Sealed to IP67



#### **Key Features** Colours and voltages:

O IP67 front bezel sealing

Red, Yellow Green and Blue LEDs.

O LED lampholders

(High Intensity is standard. Option of extra super

Supplied with or without LEDs

Voltages:

O Black or Chrome finish

LEDs are available for direct connection to

2.0/2.2V or 12Vdc.

For other voltages contact sales.

Terminal	Туре	LED Colour	Voltage	Panel	Approval	Dimensions
L LED & Wires fitted	(L) 1048 00	<b>B</b> Blue	6 24Vdc LED	8.0 5.5max	KEUA	(L) 1048 00
W LED fitted  TT  A LED not fitted	(W) 1050 00			8.0 7.0max	Keur	(W) 1050 00
L LED & Wires fitted	(W) 1050 00			8.0 7.0max	KEUR	(W) 1050 00

#### Properties

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

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.

# Indicator Lights - Sealed to IP67



#### **Key Features**

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

## **Colours and voltages:**



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

#### DC LED



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

#### **AC MAINS LED**



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

#### FILAMENT



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	1 LED No Resistor 2 125V Neon	C Chrome Bezel Finish	6.3	KETA
L E	(L) 0245 OS		N -⊕- L +∯- M +∯- F -⊗-	G Green B	<b>3</b> 250V Neon		7.1 4.6max	KEMA
L C 6.3 K 2.8 C H 4.8	(C) 0275 OS		N -⊕- L <del>*</del> M <del>*</del> F -⊗-	(Special)  C Clear	4 6Vdc LED  5 12Vdc LED		10.0 11.15max	Kena
L	(C) 0277 OS		N -⊕- L <del>∛</del> M <del>∛</del> F -⊗-	R Red	<b>6</b> 24Vdc LED		10.0 11.15max	KEMA
L 6.3 C 4.8	(C) 0177 OS		N -⊕- L <del>∜</del> M <del>∜</del> F -⊗-	Y Yellow G Green	7 12/14V Filament  8 24/ 28V Filament		12.7 11.15max	KEMA
				B Blue W White	<b>9</b> 125/250Vac LED			
L) 1041 OS			(C)	0275 OS		(C) 0177	os	







#### (L) 0245 OS













#### (C) 0277 OS





# Low Voltage Lamp Holders - Sealed to IP67



#### **Key Features**

- O IP67 Panel Sealing
- Supplied complete with gaskets/'O' rings
- O Bezel sizes from 7.6 to 22.9mm diameter
- Red, amber, green, blue and clear lenses

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

These lampholders are suitable for up to 50V max.

Colours - Red, Amber, Green, (Clear & Blue, check availability).

Field installable filament lamps. See each series for the appropriate type.

Terminal	Туре	Sealed	Colour	Options	Panel	Approvals	Dimensions	5
C 6.3	C1090 FPS (MES)	<b>S</b> Sealed	R Red A Amber	Chrome Bezel Finish	19.0 4.0max	Kena	30.2 12.5 max	
<b>C</b> 6.3	C1091 FQS (MBC)		G Green B Blue (Special)		7.1 4.6max	KETA	35.0 12.5 max	
T 🍃	T0062 AOS (Midget flange) Chrome bezel T0063 AOS (LES) Chrome bezel		<b>C</b> Clear		10.0 † 11.15max	KEUA	21.3 9.1	Ø14.7
T 🏳	T0062 MOS (LES & Midget flange) T0063 MOS (LES)				10.0 11.15max	KETA	21.3 9.5	Ø14.7

# **F0445 MO**P.V.C. Insulating terminal cover. For use with C1090 & C1091



### 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**

IVI (I LI II) (LO
Moulded bodies and bases Nylon 6.6
Metal bodies and bezels
Lenses
Terminals (most types)
Terminals (exceptions)
Threaded metal nuts Brass (nickel plated on 0275/7)
Other fixings
* R9, 0061, 0062, 0430, 0480, 1090, 1091, 6030, 7030, 8630, 8580

\*\* # 3130, 3160, 3161, 3221 have nickel plated terminals with steel screws

#### 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

#### **TEMPERATURE RATING**

and plated polyamide bezel trims

Authority	with Terminals	with Wire leads	
		PVC	SILICONE
European	T125°C	T105°C	T125°C
UL	T65/75°C	T65/75°C	

#### **SYMBOLS**











