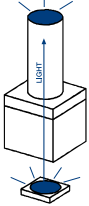
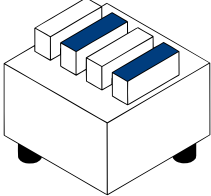
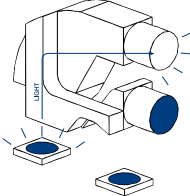
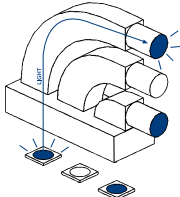
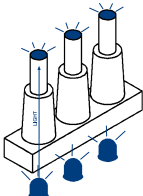
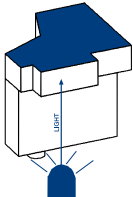
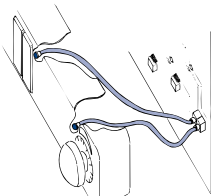
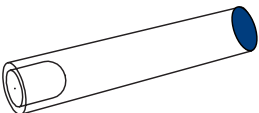
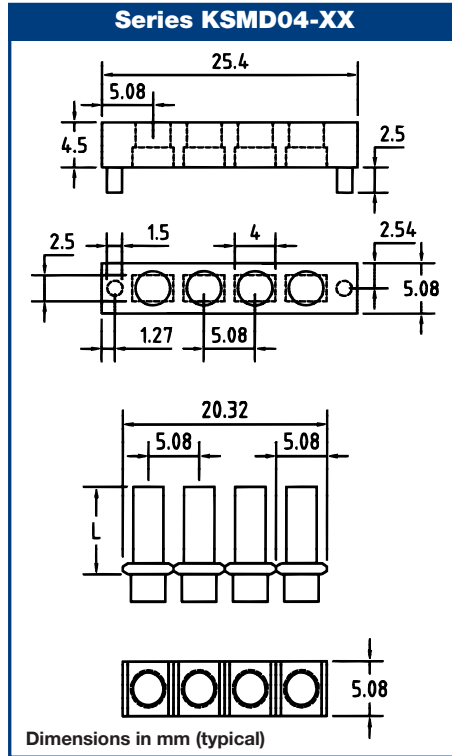
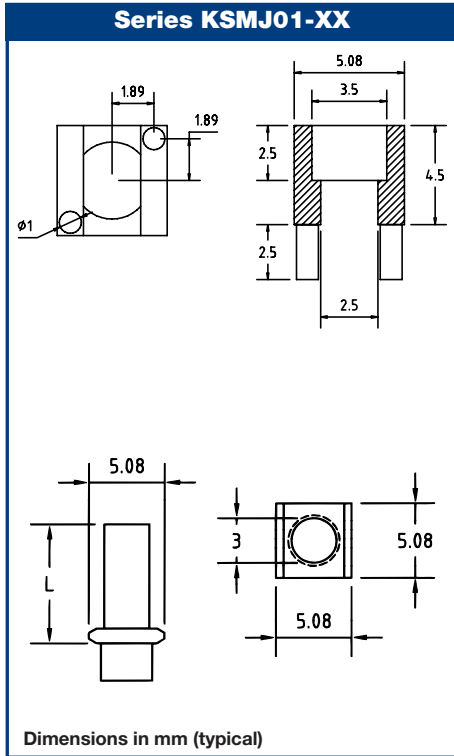
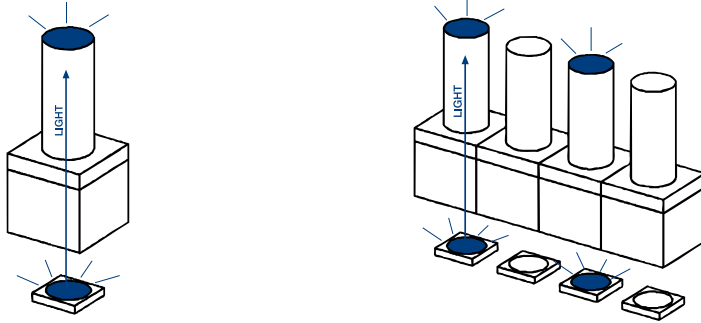


Package Outline Drawing	Description	Page No.
	<p><b>Light transporters (straight) for S.M.D. LEDs</b></p>	<p><b>2 ÷ 10</b></p>
	<p><b>Bar Graph Arrays</b></p>	<p><b>11</b></p>
	<p><b>Light transporters (right angle) for S.M.D. LEDs</b></p>	<p><b>12 ÷ 21</b></p>
	<p><b>Light transporters (right angle) for S.M.D. LEDs, three and four level</b></p>	<p><b>19 ÷ 20</b></p>
	<p><b>Light transporters (Ø 3 mm LEDs)</b></p>	<p><b>22 ÷ 25</b></p>
	<p><b>Optical Light Diffuser</b></p>	<p><b>26</b></p>
	<p><b>Optical cable system for panel</b></p>	<p><b>27 ÷ 30</b></p>
	<p><b>General applications</b></p>	<p><b>31 ÷ 32</b></p>



Type	Length
KT-02	L = 2 mm
KT-04	L = 4 mm
KT-054	L = 5,4 mm
KT-06	L = 6 mm
KT-075	L = 7,5 mm
KT-085	L = 8,5 mm
KT-10	L = 10 mm
KT-13	L = 13 mm
KT-15	L = 15 mm
KT-17	L = 17 mm
KT-20	L = 20 mm
KT-25	L = 25 mm
KT-30	L = 30 mm
KT-37	L = 37,9 mm
KT-40	L = 40 mm
KT-45	L = 45 mm
KT-47	L = 47,5 mm
KT-50	L = 50 mm
<b>Your length</b>	L = .....

- The code: KT-XX refers only to the transparent part. On the grounds of the desired length KT-XX can be supplied in rows of 3 or 8 places. We supply the complete device, that is black together with transparent part and the full code will be as follows: For example:  
**KSMD04 + KT30 = KSMD 04-30**

**RECOMMENDED LEDS:**

Size	Color	Range intensity (mcd)
1206	All	7,5÷140
0805	All	2÷60
0603	All	10÷60

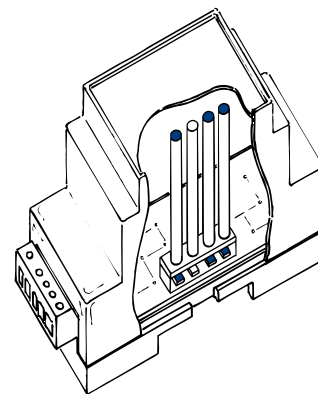
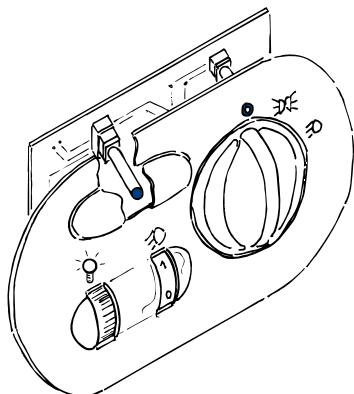
**RECOMMENDED LEDS:**

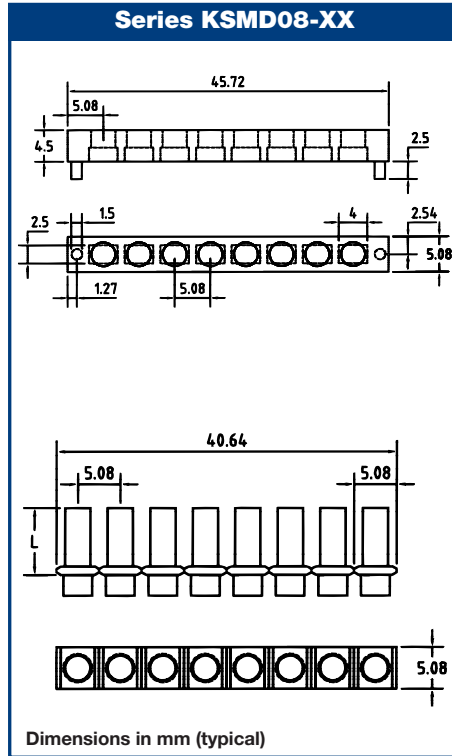
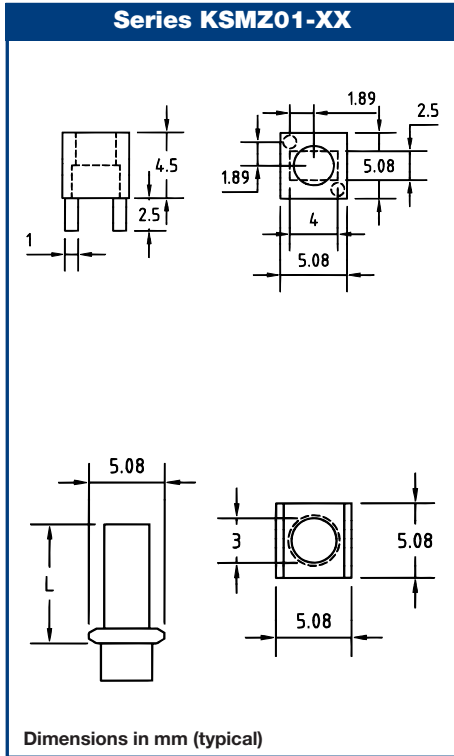
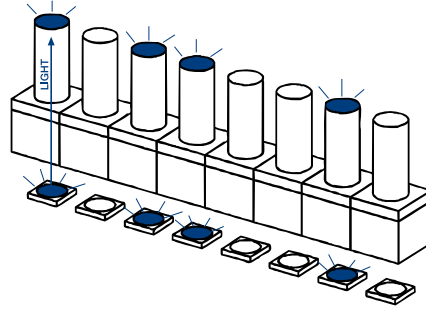
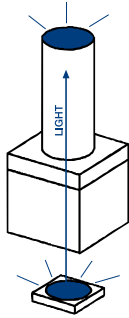
Size	Color	Range intensity (mcd)
0805	All	2÷60
0603	All	10÷60

**OPTIONS AVAILABLE**

- ◆ Other standard lengths - from 1 to 50 mm
- ◆ Right angle
- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**





Type	Length
KT-02	L = 2 mm
KT-04	L = 4 mm
KT-054	L = 5,4 mm
KT-06	L = 6 mm
KT-075	L = 7,5 mm
KT-085	L = 8,5 mm
KT-10	L = 10 mm
KT-13	L = 13 mm
KT-15	L = 15 mm
KT-17	L = 17 mm
KT-20	L = 20 mm
KT-25	L = 25 mm
KT-30	L = 30 mm
KT-37	L = 37,9 mm
KT-40	L = 40 mm
KT-45	L = 45 mm
KT-47	L = 47,5 mm
KT-50	L = 50 mm
<b>Your length</b>	L = .....

- The code: KT-XX refers only to the transparent part. On the grounds of the desired length KT-XX can be supplied in rows of 3 or 8 places. We supply the complete device, that is black together with transparent part and the full code will be as follows: For example:  
**KSMD08 + KT30 = KSMD 08-30**

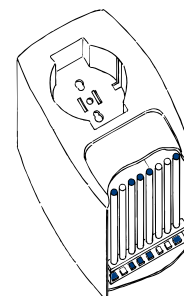
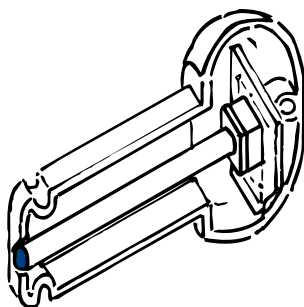
**RECOMMENDED LEDS:**

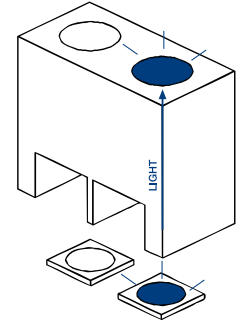
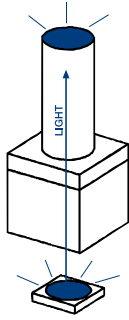
Size	Color	Range intensity (mcd)
0805	All	2÷60
0603	All	10÷60

**BENEFITS**

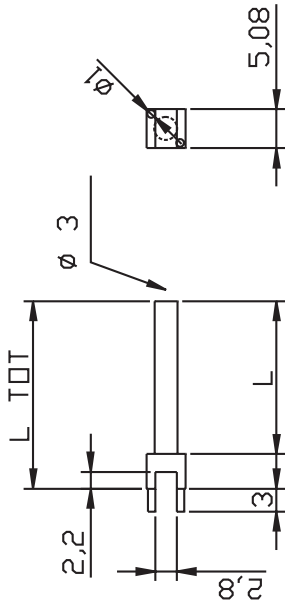
- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.

**One of many applications**





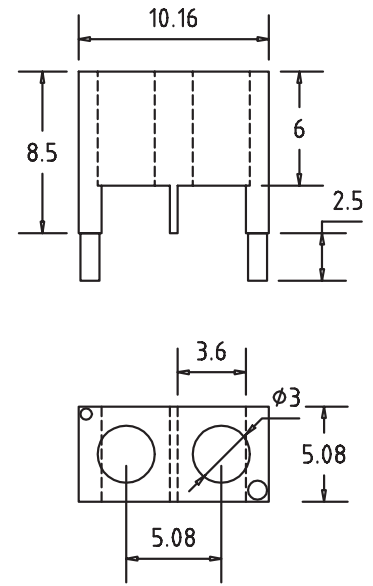
**Series KLP03-XX**



Dimensions in mm (typical)

Code	L = Length
KLP 03-04	2,5 mm
KLP 03-10	8,5 mm
KLP 03-15	13,5 mm
KLP 03-20	18,5 mm
KLP 03-40	38,5 mm
KLP 03-50	48,5 mm
Your length L = .....	

**K21399**



Dimensions in mm (typical)

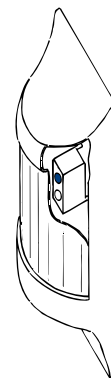
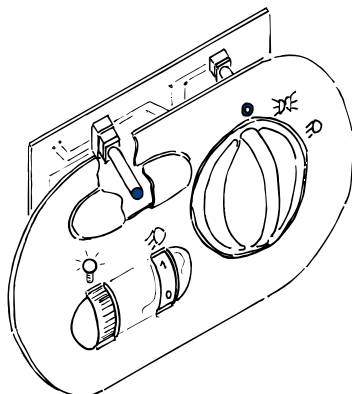
**RECOMMENDED LEDS:**

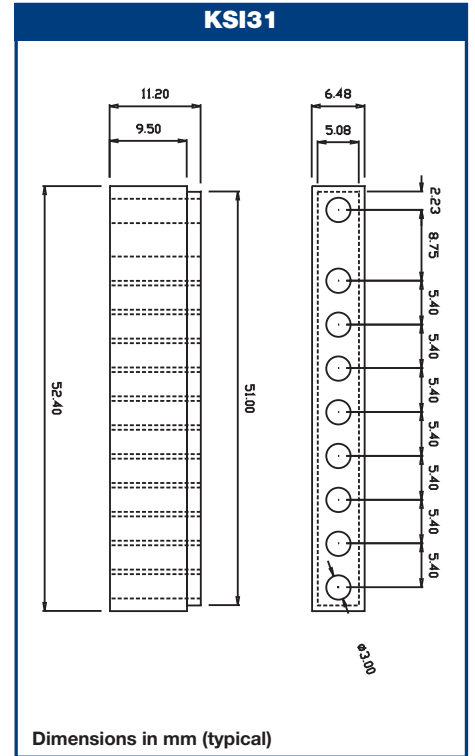
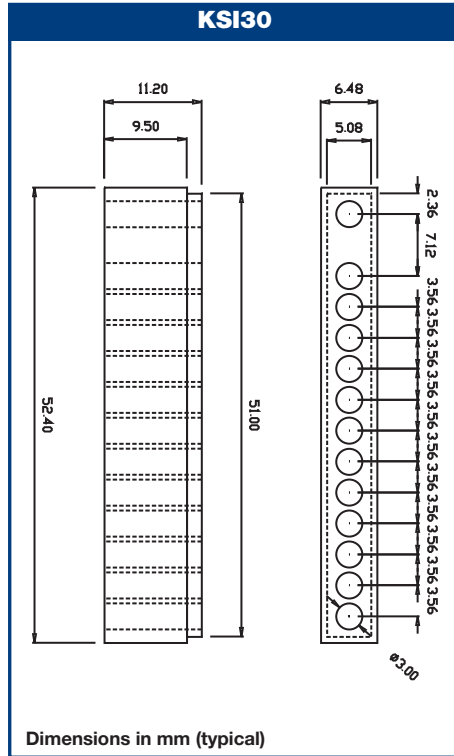
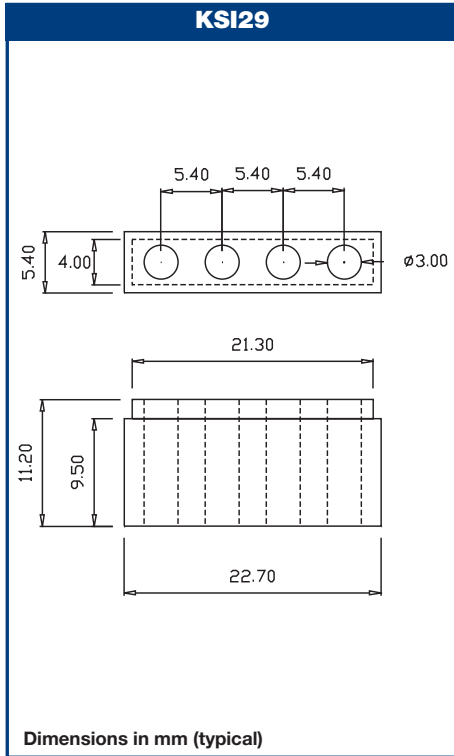
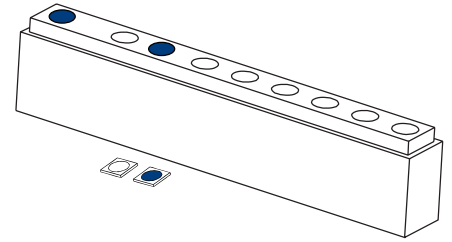
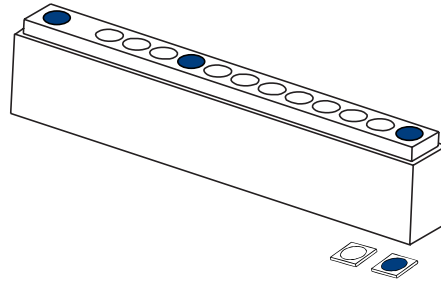
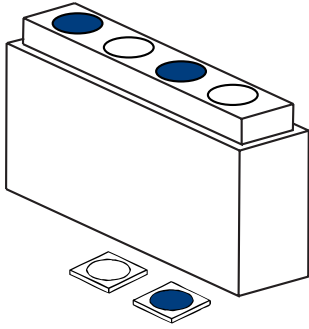
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

**OPTIONS AVAILABLE**

- ◆ Other standard lengths - from 1 to 50 mm
- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**





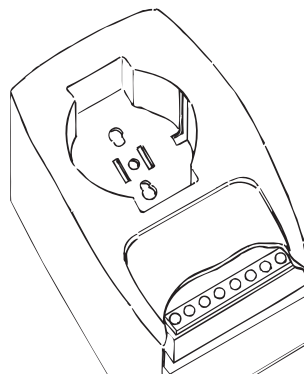
**RECOMMENDED LEDS:**

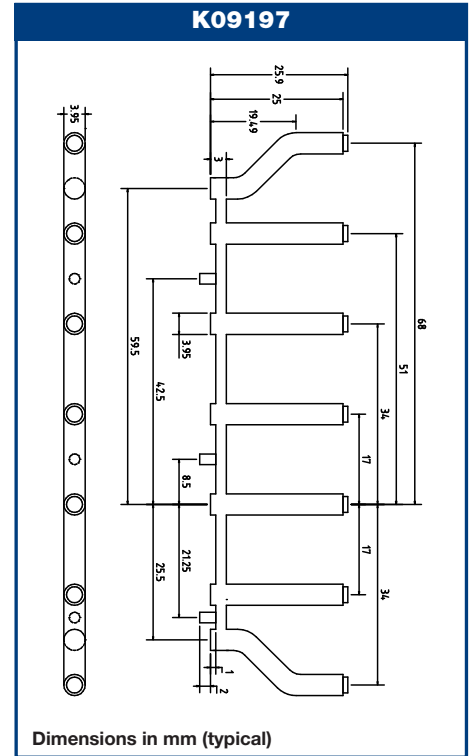
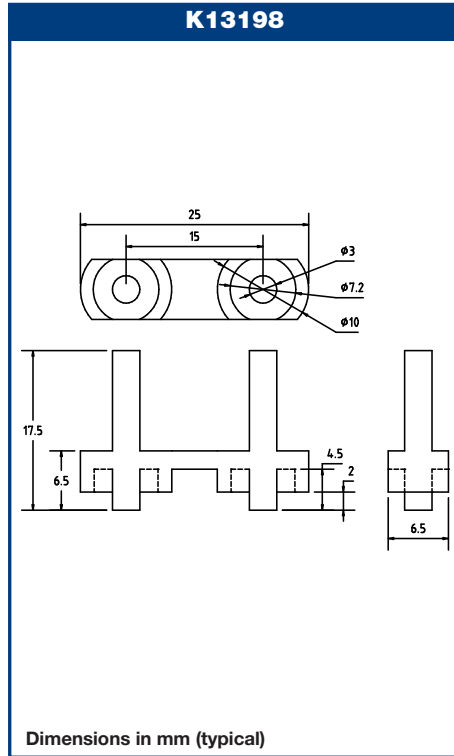
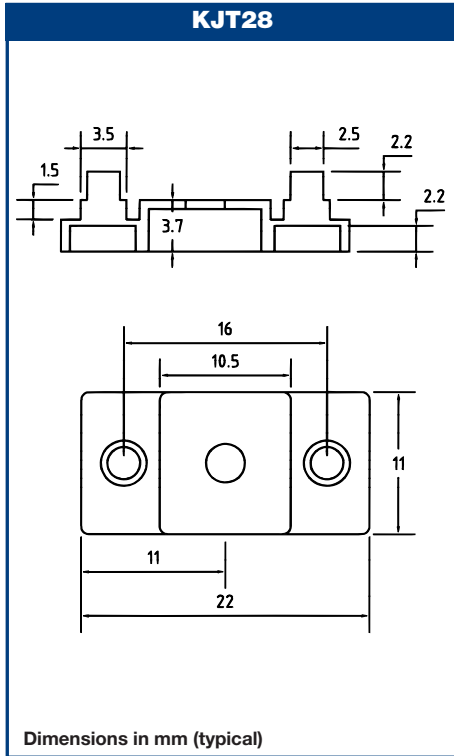
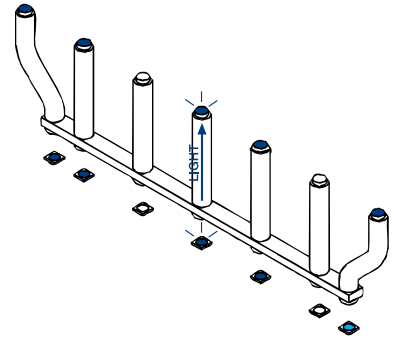
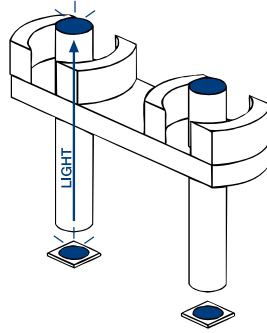
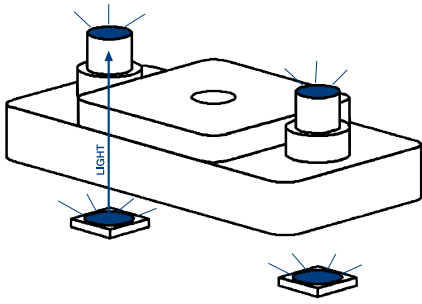
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
0805	All	2÷60
0603	All	10÷60

**BENEFITS**

- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.

**One of many applications**





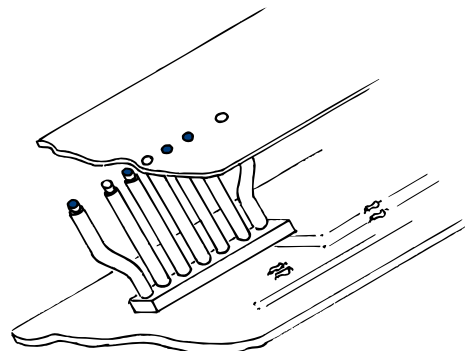
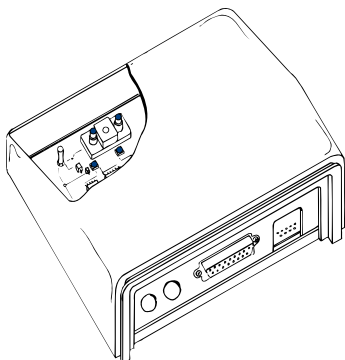
**RECOMMENDED LEDs:**

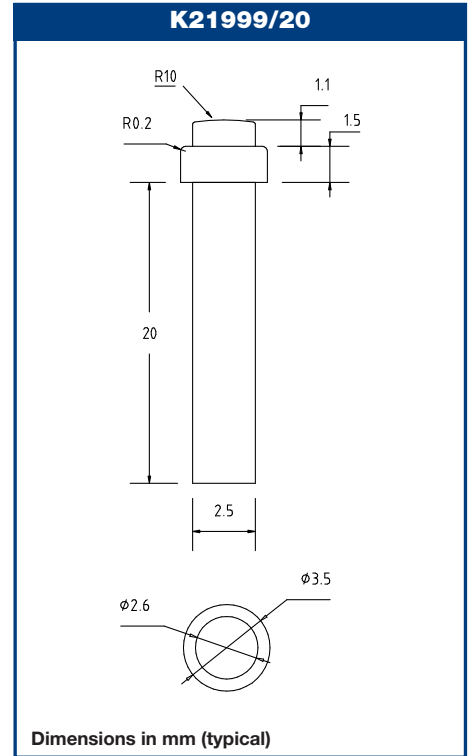
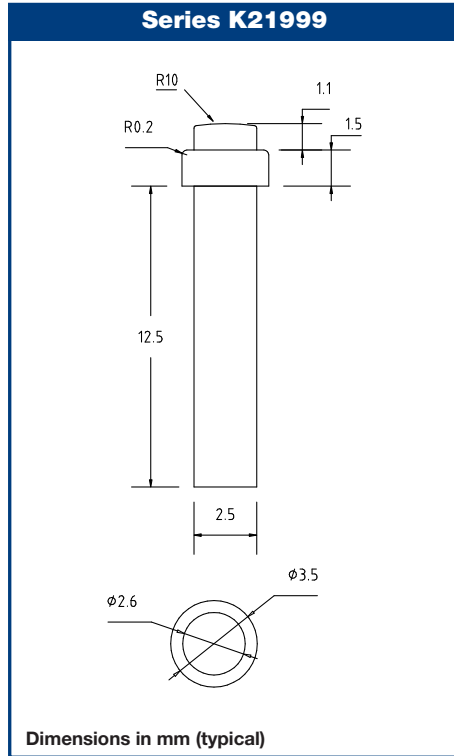
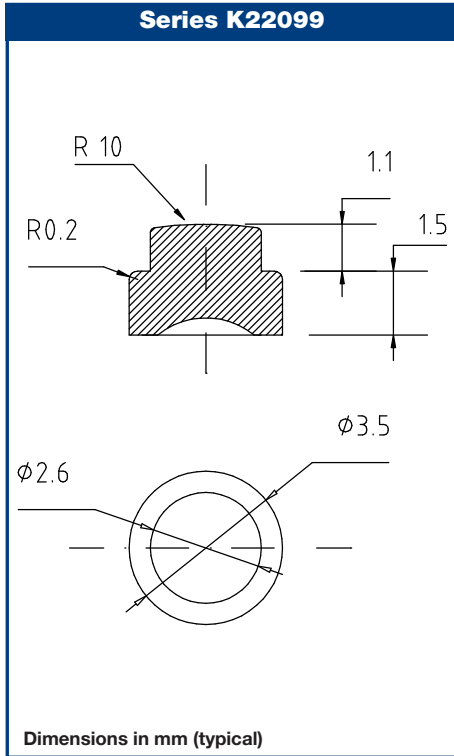
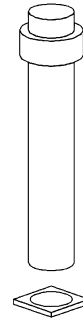
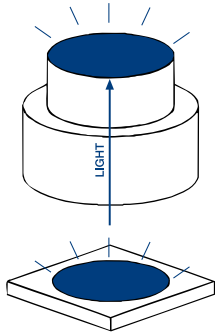
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

**OPTIONS AVAILABLE**

- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**





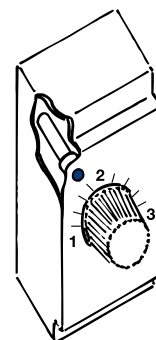
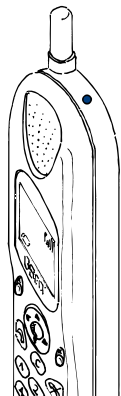
**RECOMMENDED LEDS:**

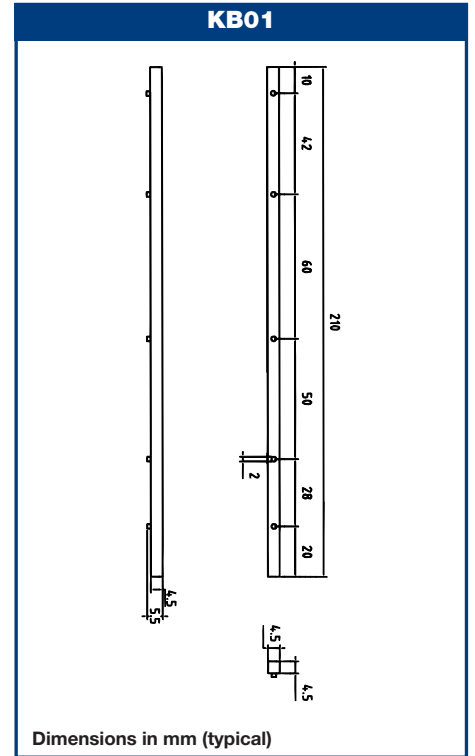
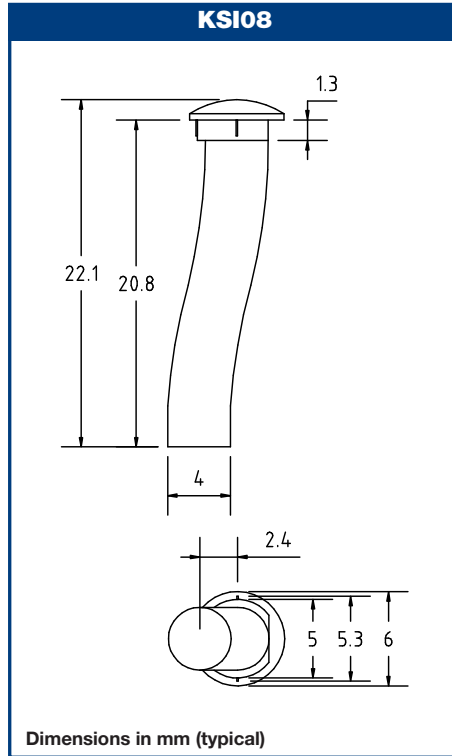
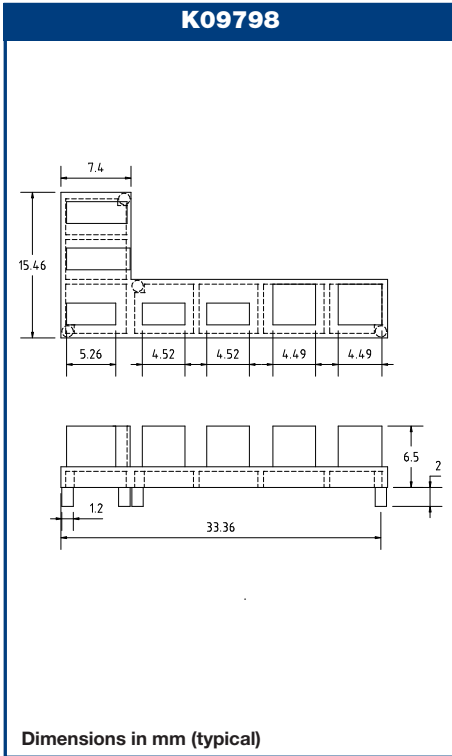
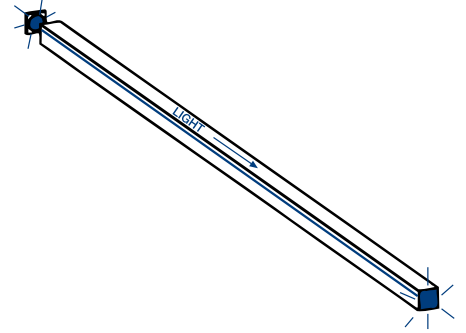
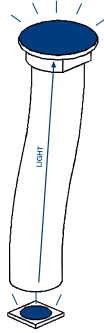
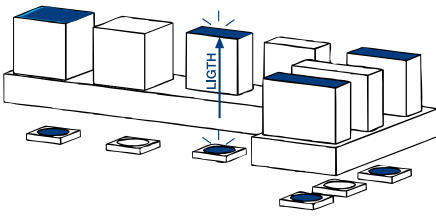
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

**OPTIONS AVAILABLE**

- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**





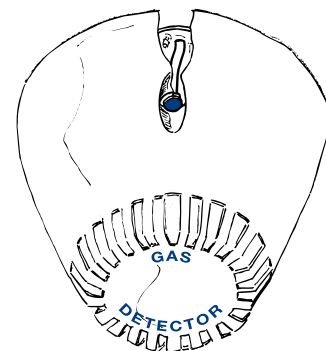
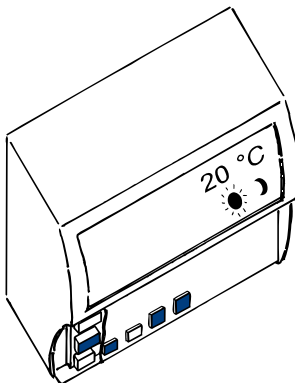
**RECOMMENDED LEDS:**

Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

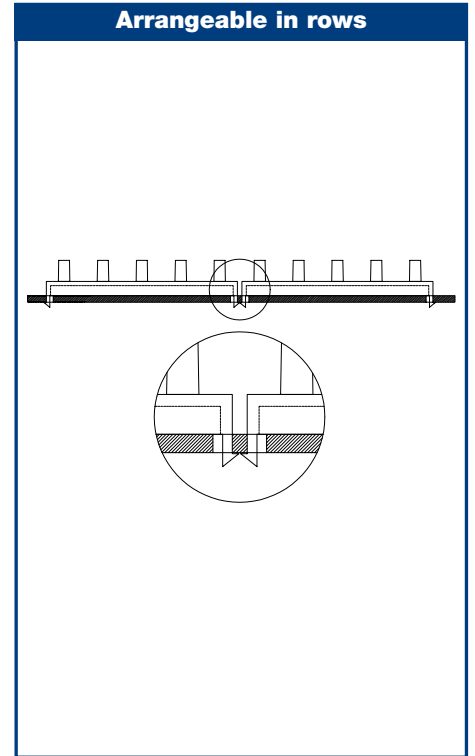
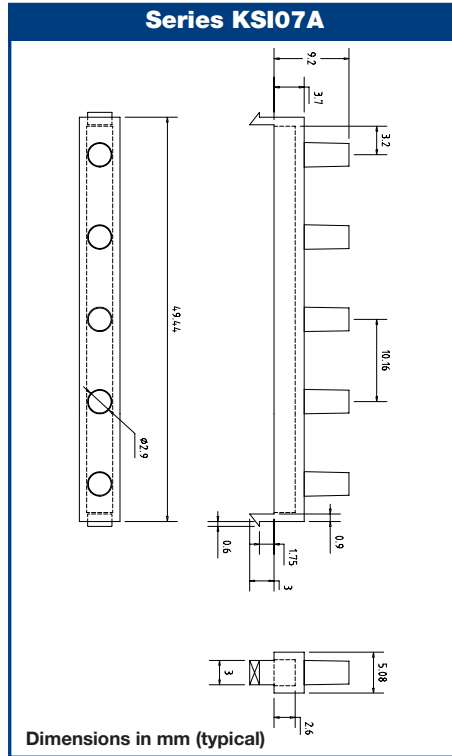
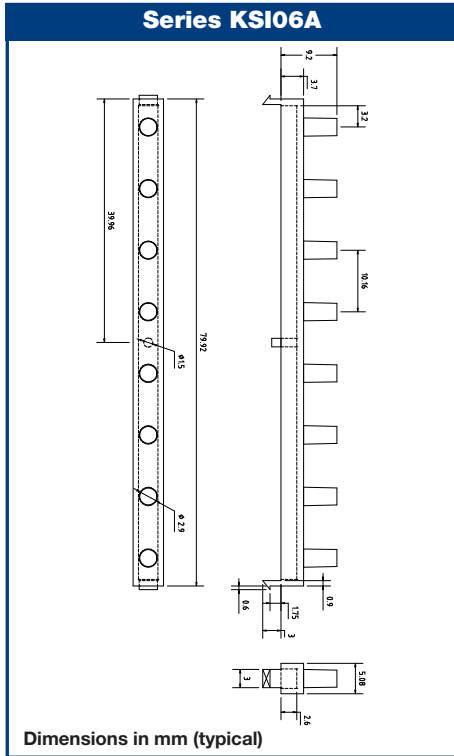
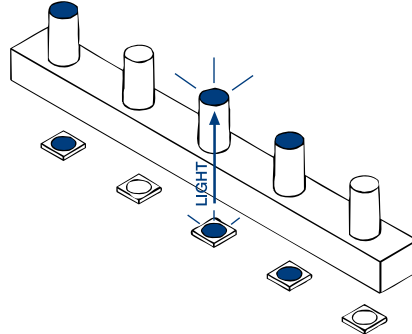
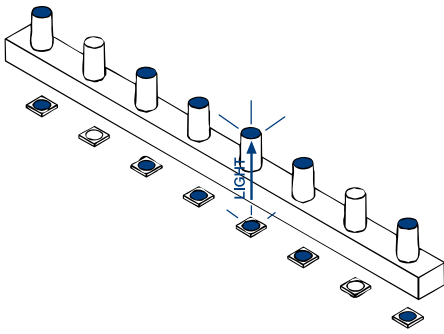
**OPTIONS AVAILABLE**

- ◆ Right angle
- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**







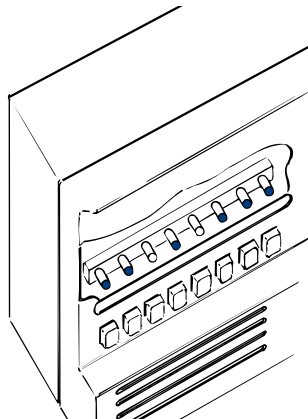
**RECOMMENDED LEDS:**

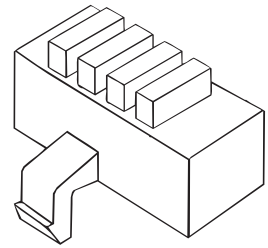
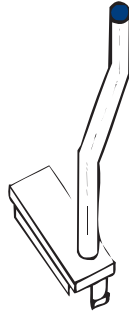
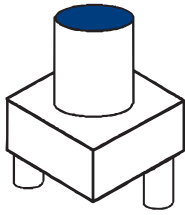
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

**BENEFITS**

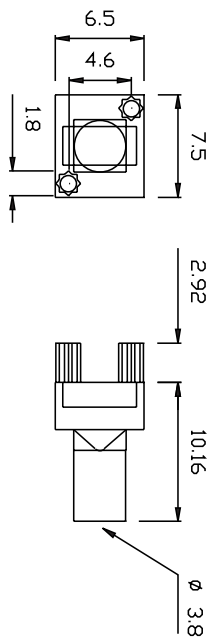
- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.

**One of many applications**



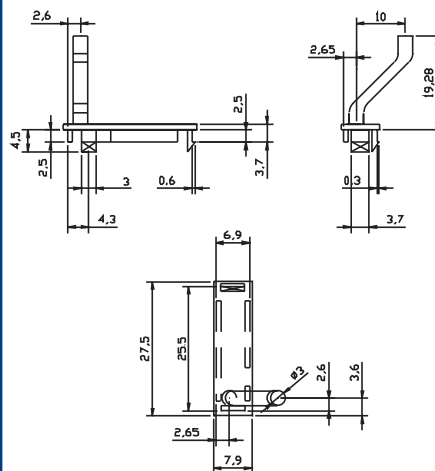


**Series KSI59T**



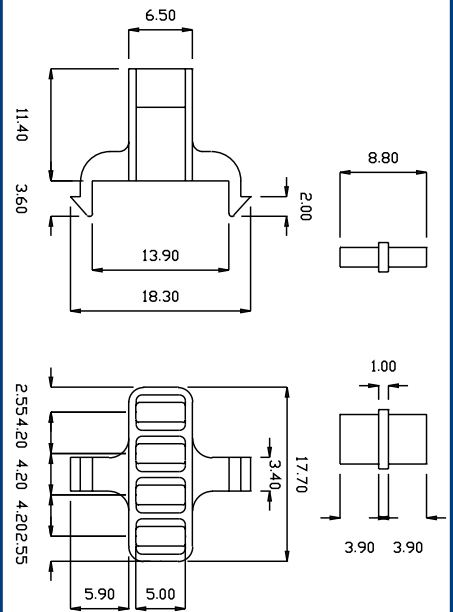
Dimensions in mm (typical)

**K37601**



Dimensions in mm (typical)

**Series KSI3110**



Dimensions in mm (typical)

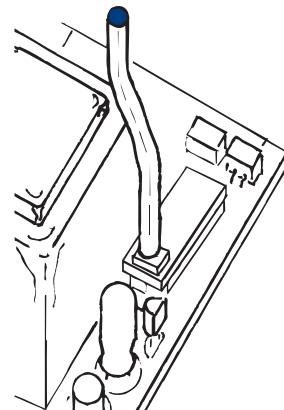
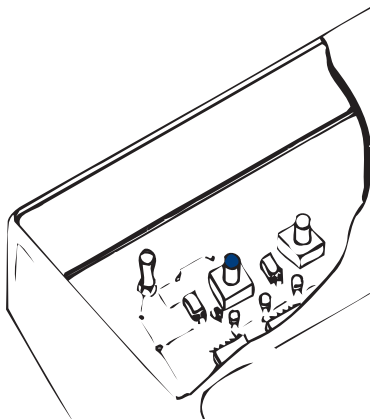
**RECOMMENDED LEDS:**

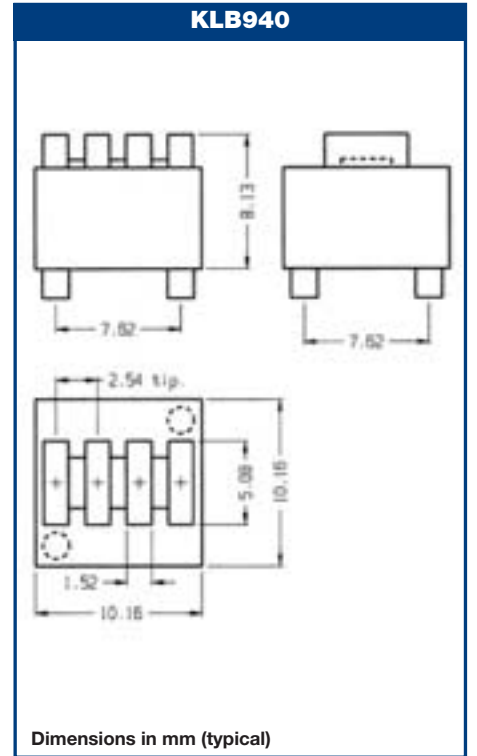
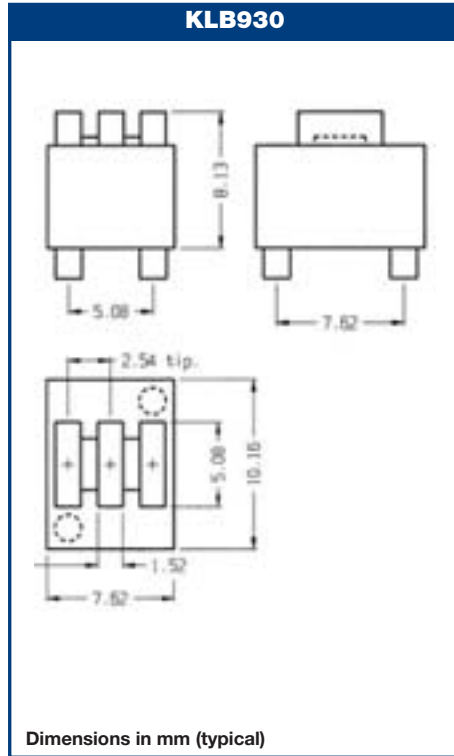
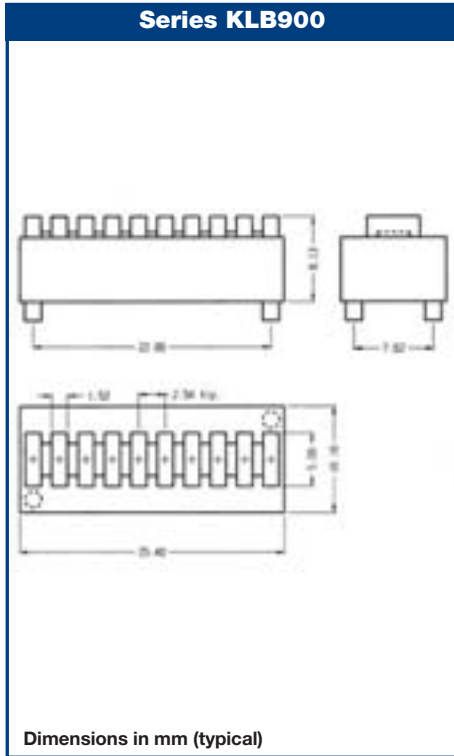
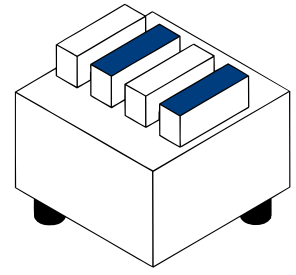
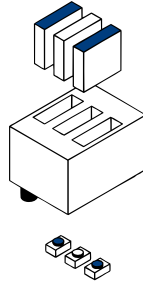
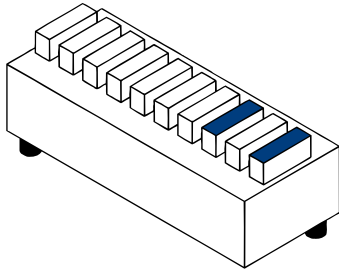
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

**OPTIONS AVAILABLE**

- ◆ Right angle
- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**





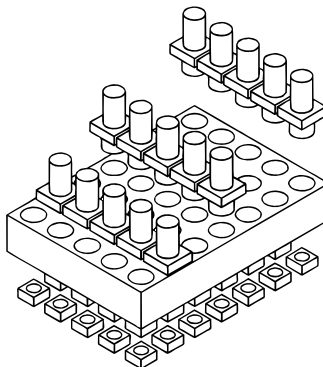
**RECOMMENDED LEDS:**

Size	Color	Range intensity (mcd)
0805	All	2÷60
0603	All	10÷60

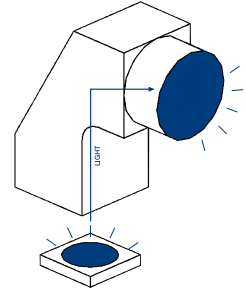
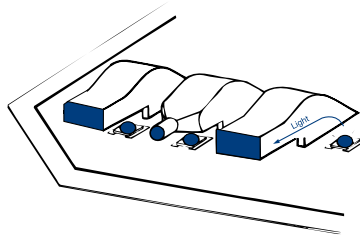
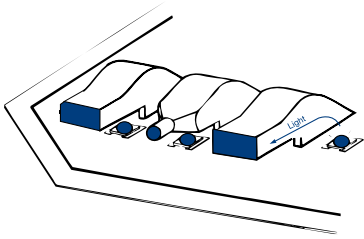
**BENEFITS**

- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.

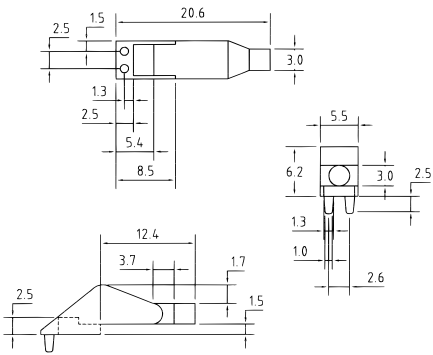
**One of many applications**



see K31 Catalogue

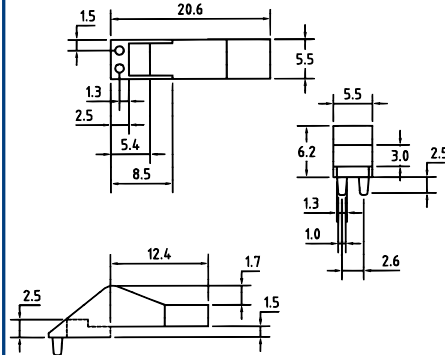


**Series KSMT01**



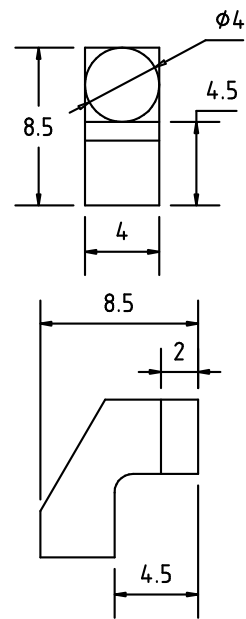
Dimensions in mm (typical)

**Series KSMT02**



Dimensions in mm (typical)

**KLP01**



Dimensions in mm (typical)

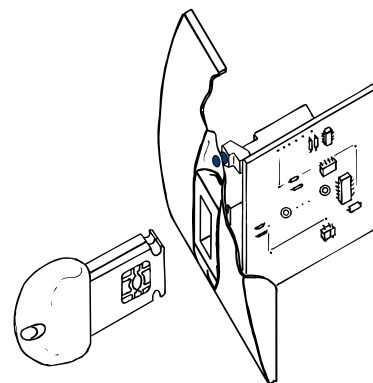
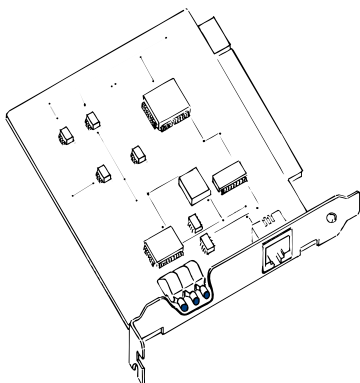
**RECOMMENDED LEDs:**

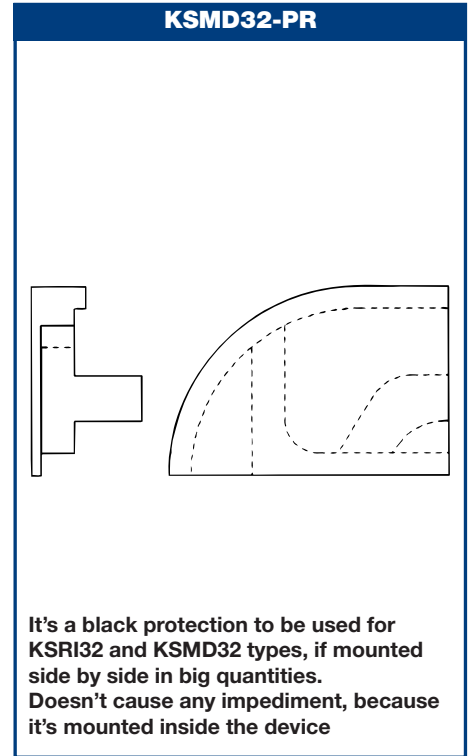
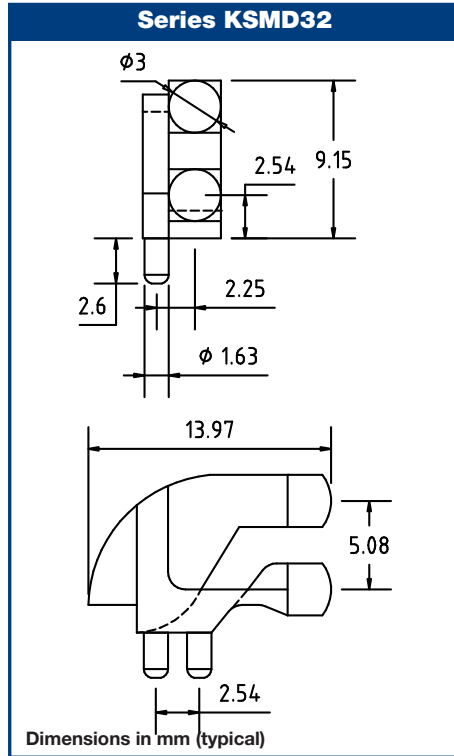
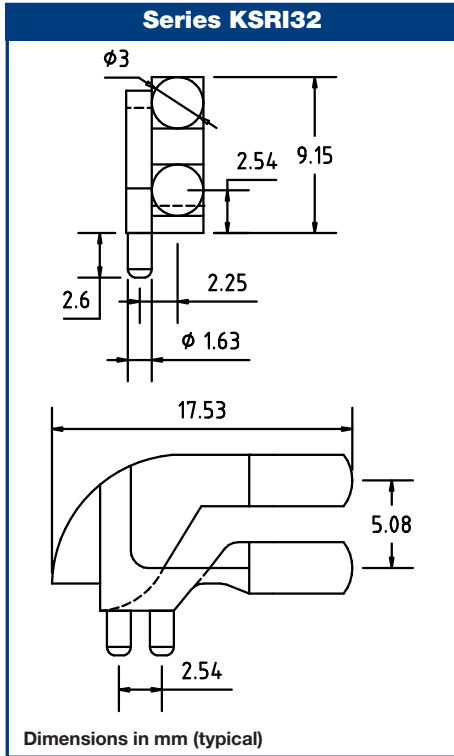
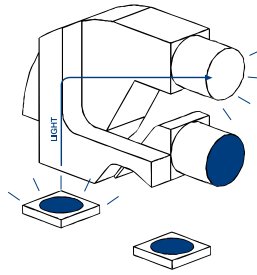
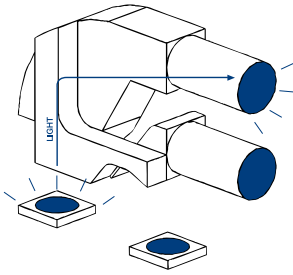
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
0805	All	2÷60
0603	All	10÷60

**OPTIONS AVAILABLE**

- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**





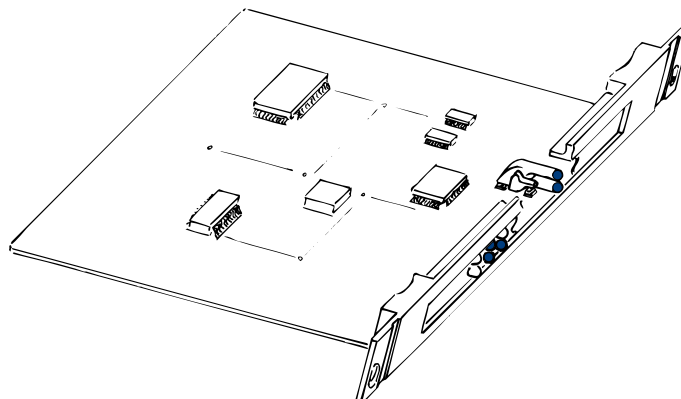
**RECOMMENDED LEDS:**

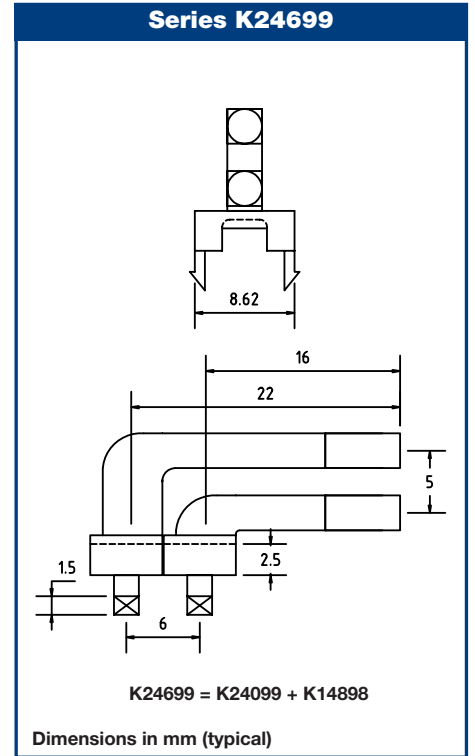
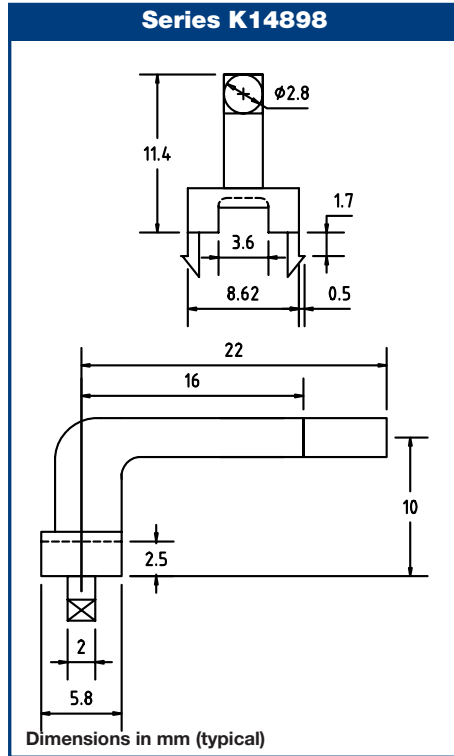
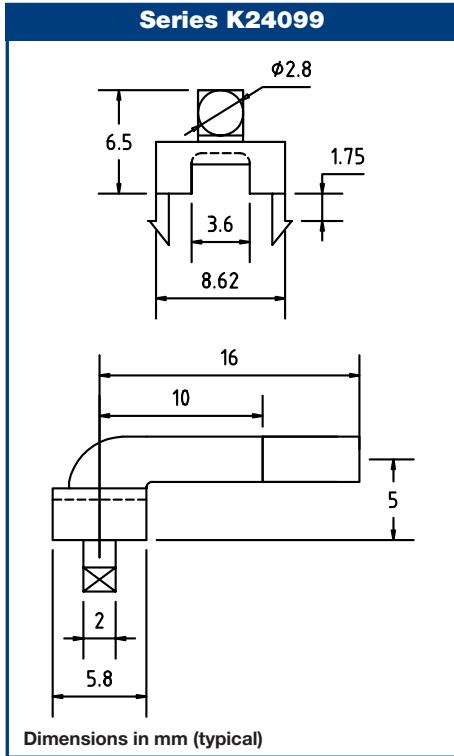
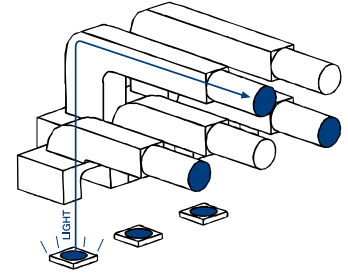
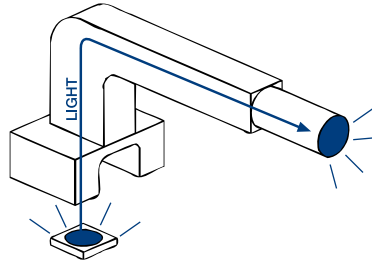
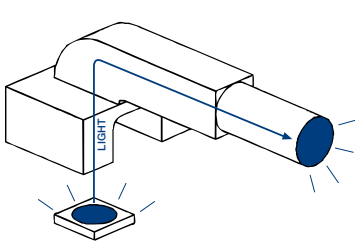
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
0805	All	2÷60
0603	All	10÷60

**BENEFITS**

- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.

**One of many applications**





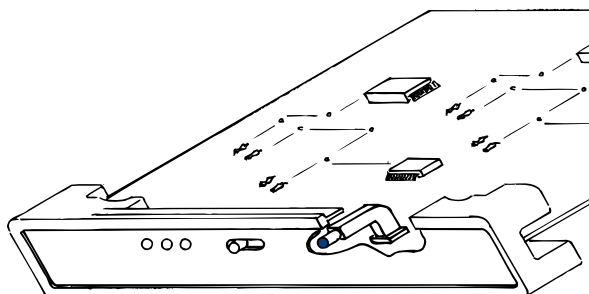
**RECOMMENDED LEDS:**

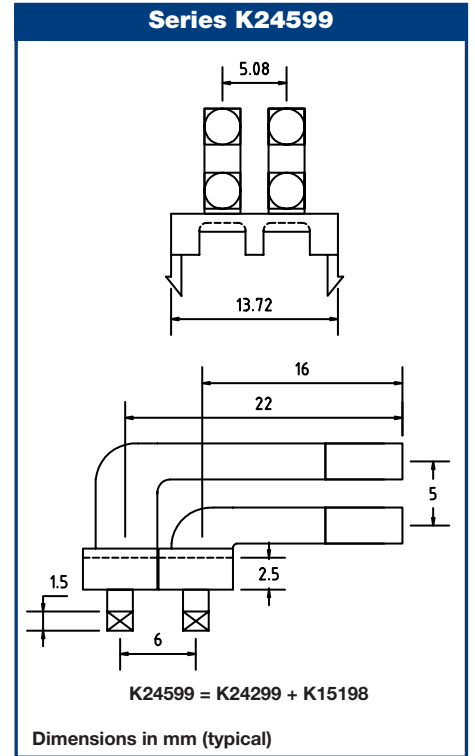
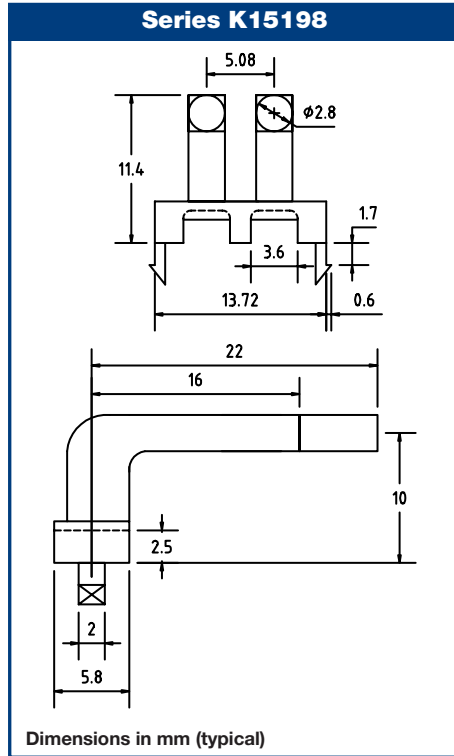
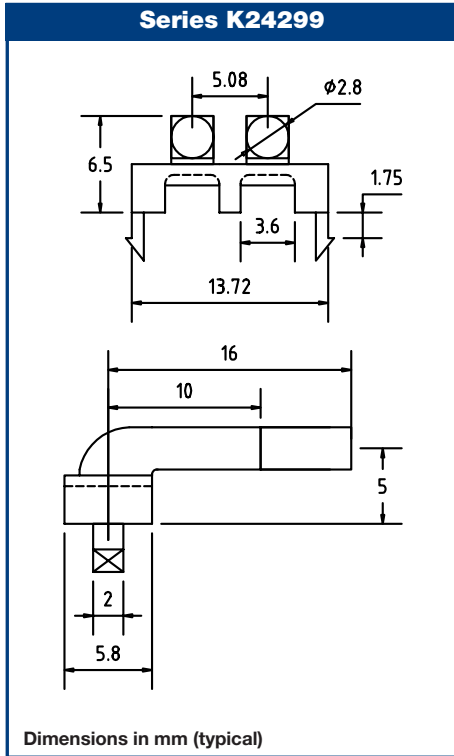
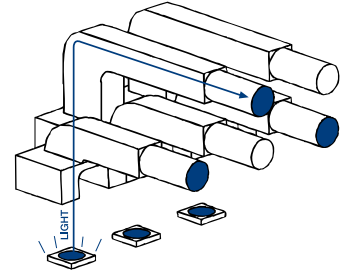
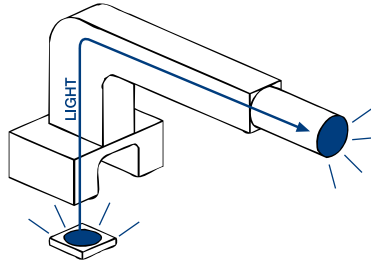
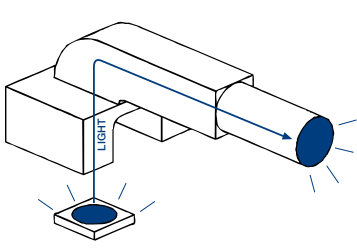
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

**OPTIONS AVAILABLE**

- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**





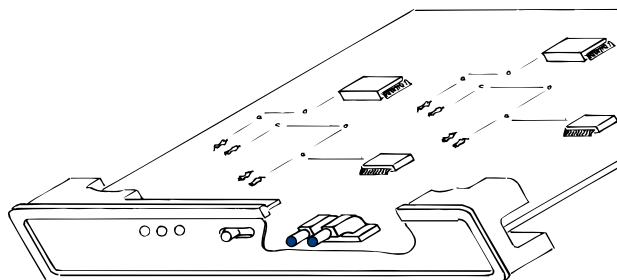
**RECOMMENDED LEDS:**

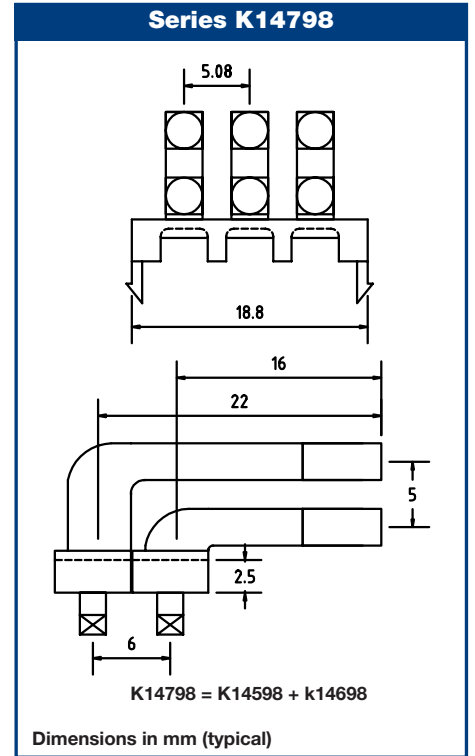
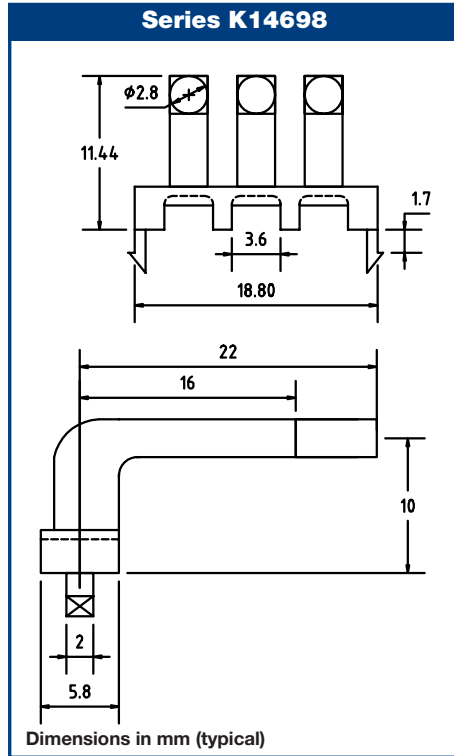
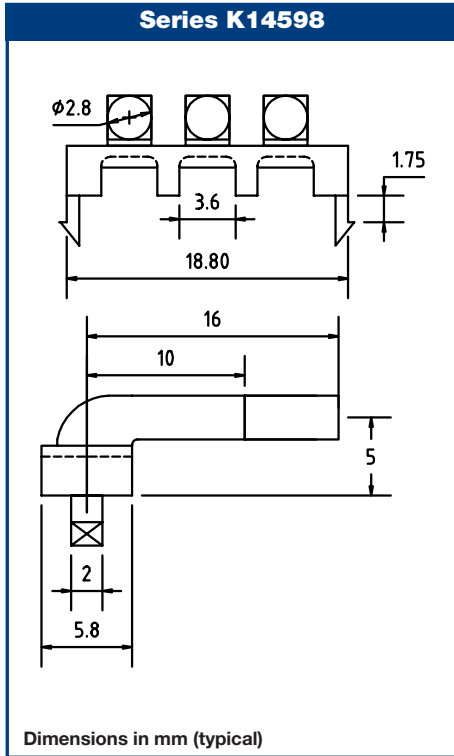
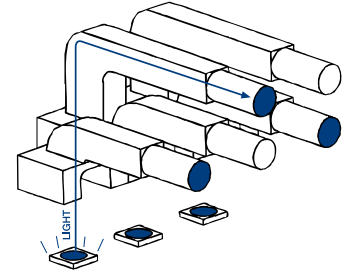
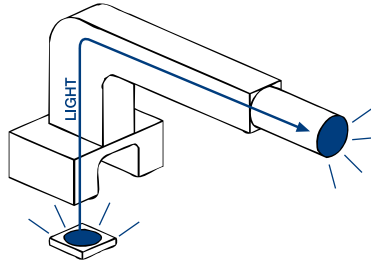
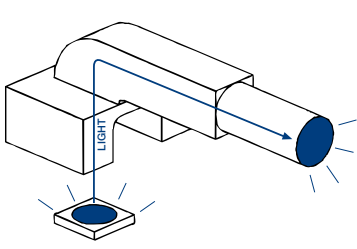
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

**BENEFITS**

- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.

**One of many applications**





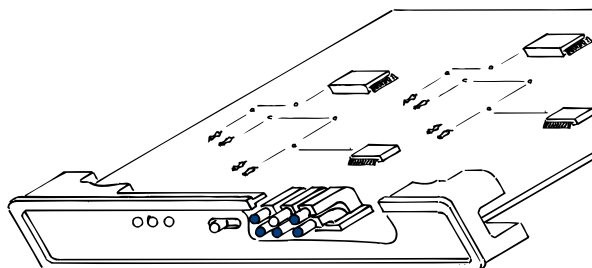
**RECOMMENDED LEDS:**

Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

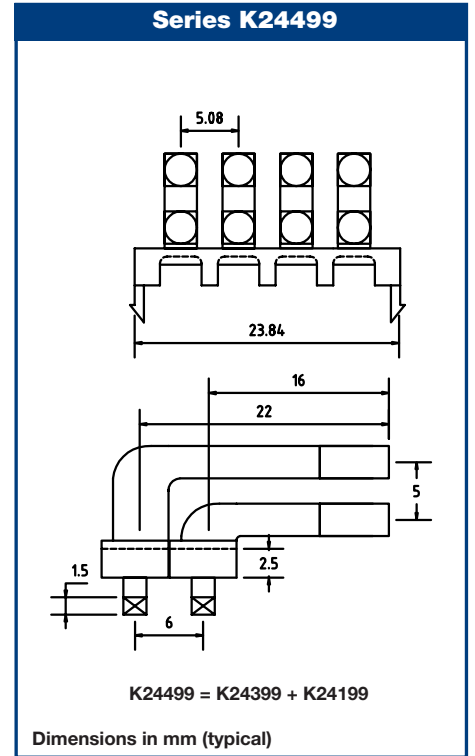
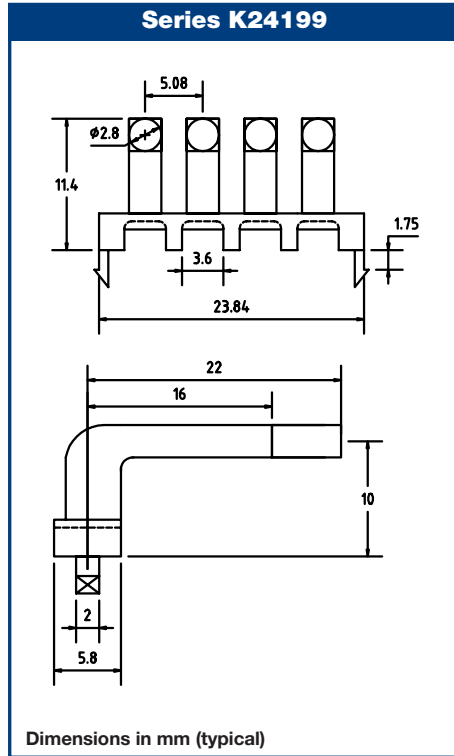
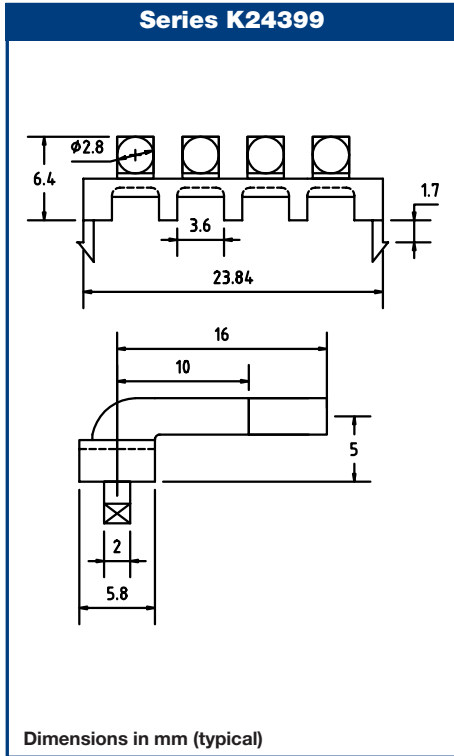
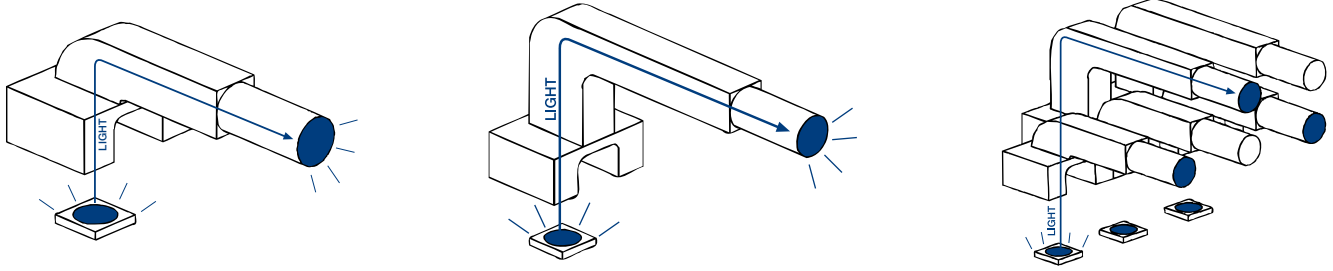
**OPTIONS AVAILABLE**

- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**







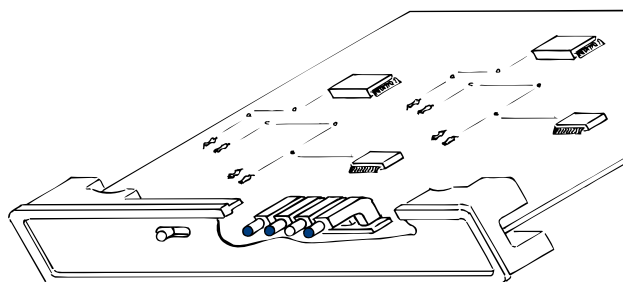
**RECOMMENDED LEDS:**

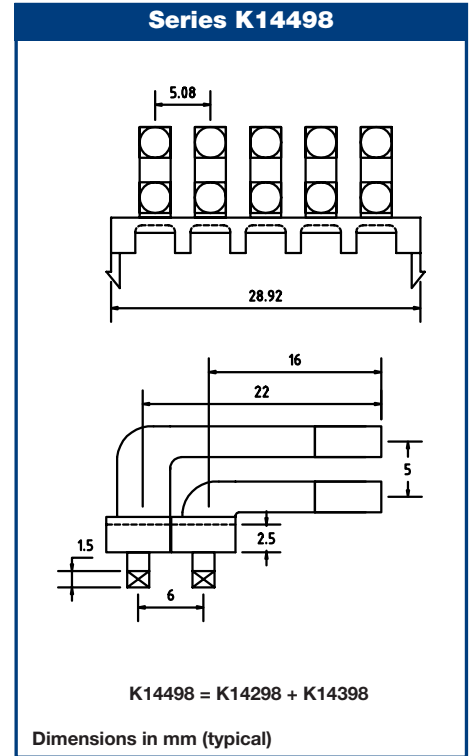
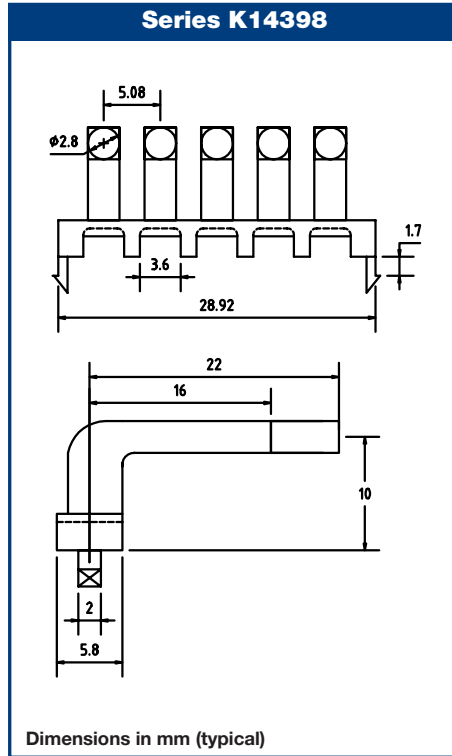
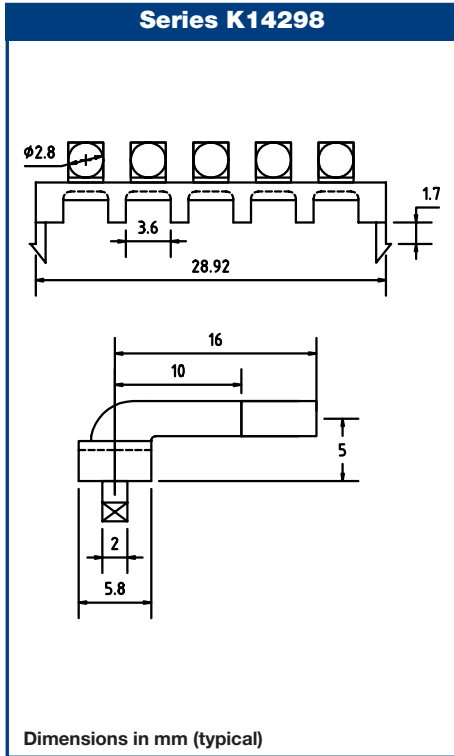
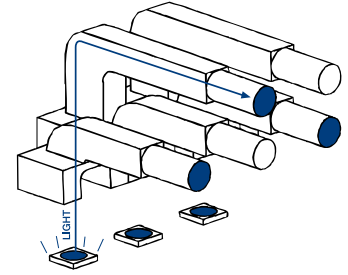
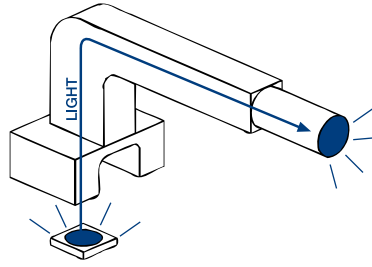
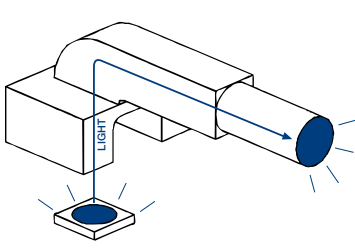
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

**BENEFITS**

- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.

**One of many applications**





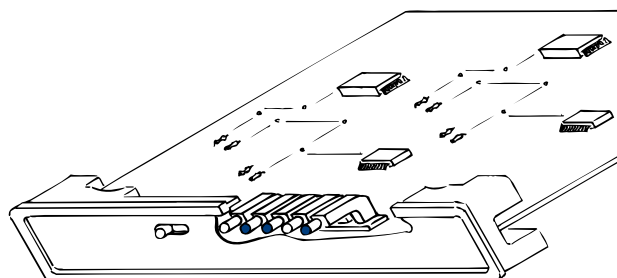
**RECOMMENDED LEDS:**

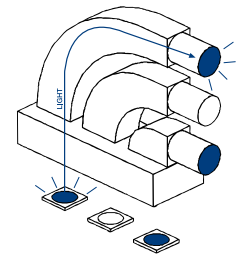
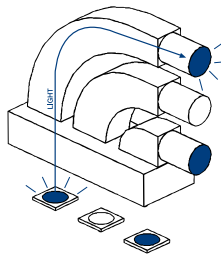
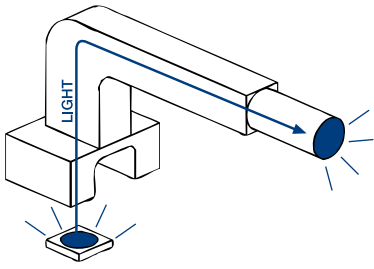
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

**OPTIONS AVAILABLE**

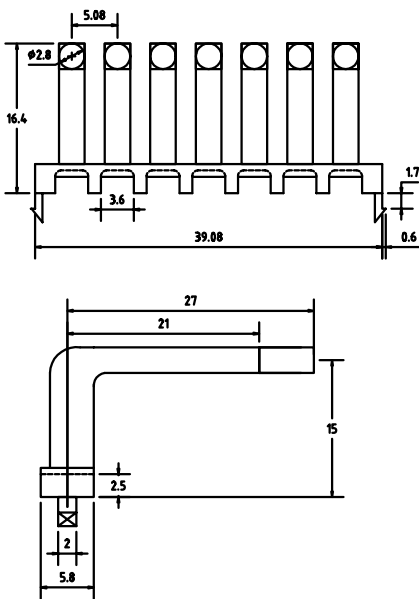
- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**



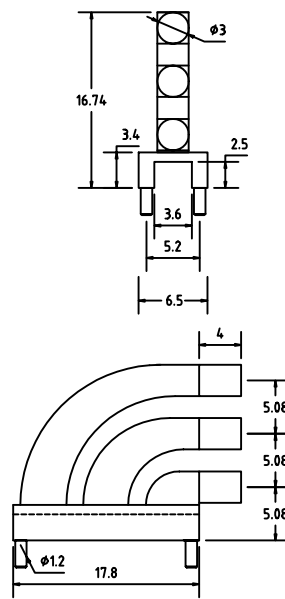


**Series K14998**



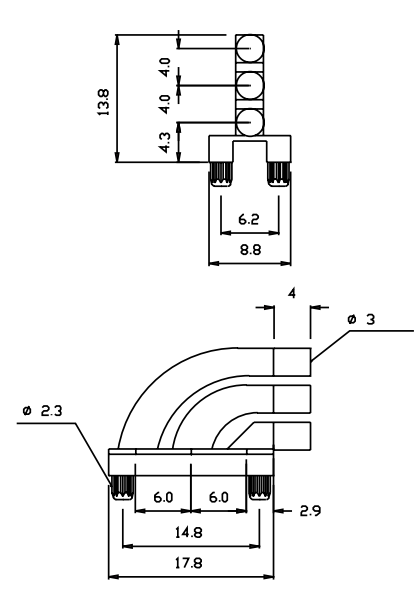
Dimensions in mm (typical)

**Series KSI11**



Dimensions in mm (typical)

**Series KSI50**



Dimensions in mm (typical)

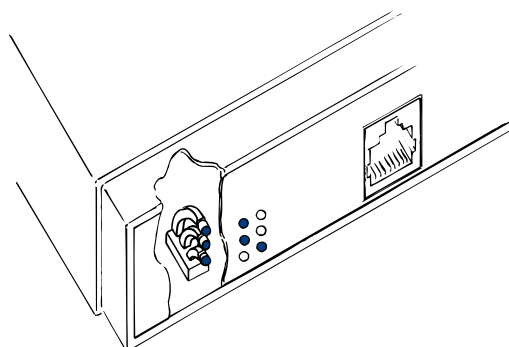
**RECOMMENDED LEDS:**

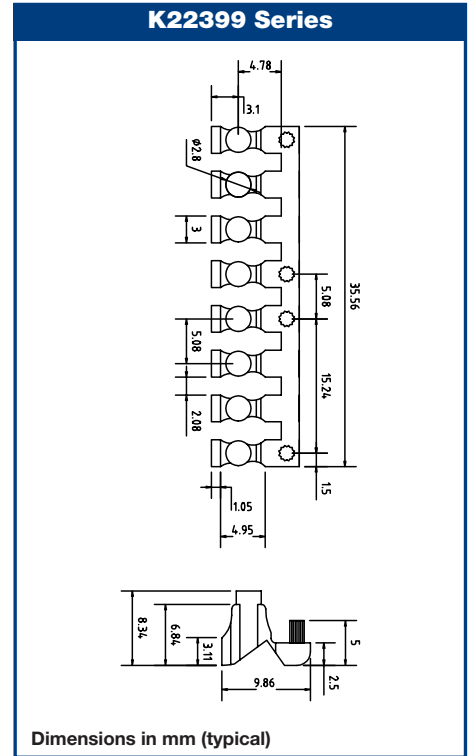
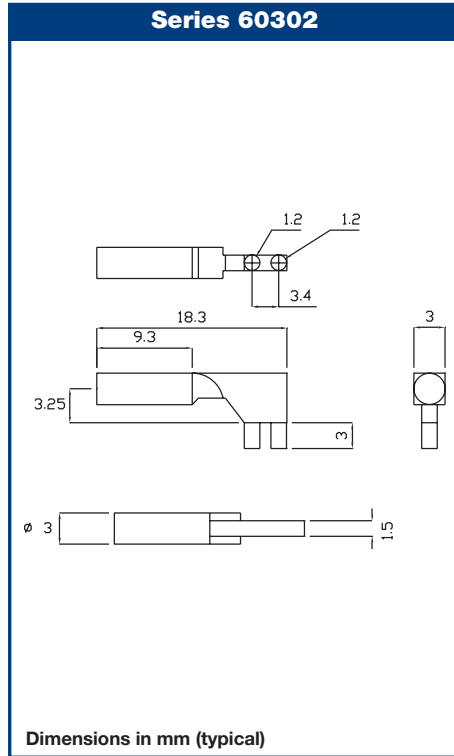
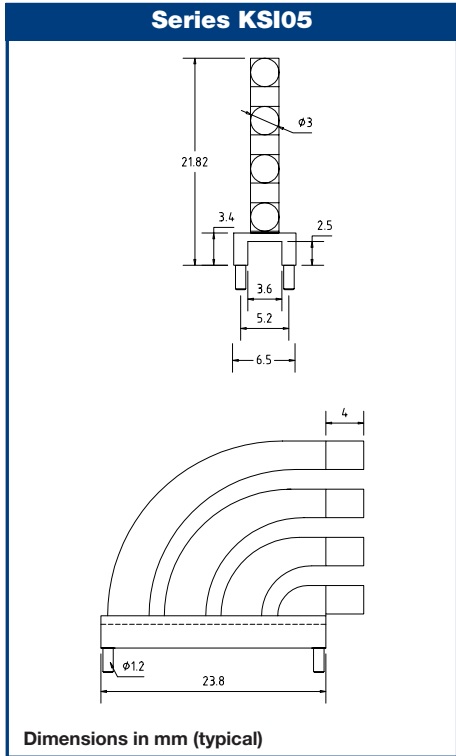
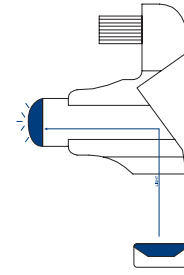
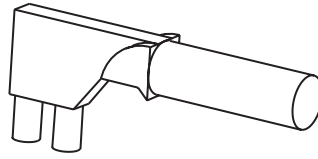
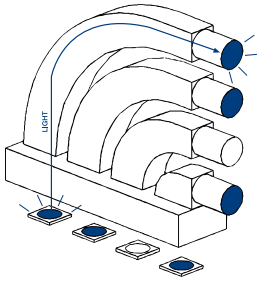
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
PLCC2	All	4,2÷72
0805	All	2÷60
0603	All	10÷60

**BENEFITS**

- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.

**One of many applications**





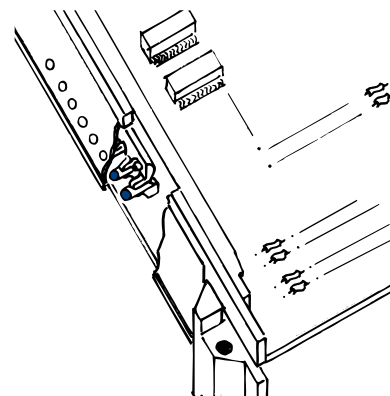
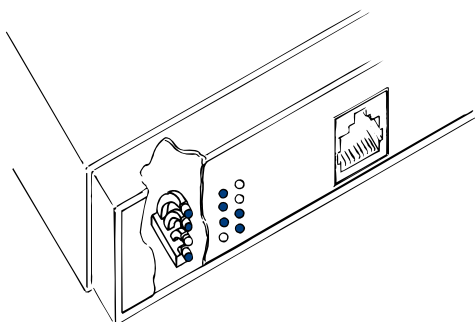
**RECOMMENDED LEDs:**

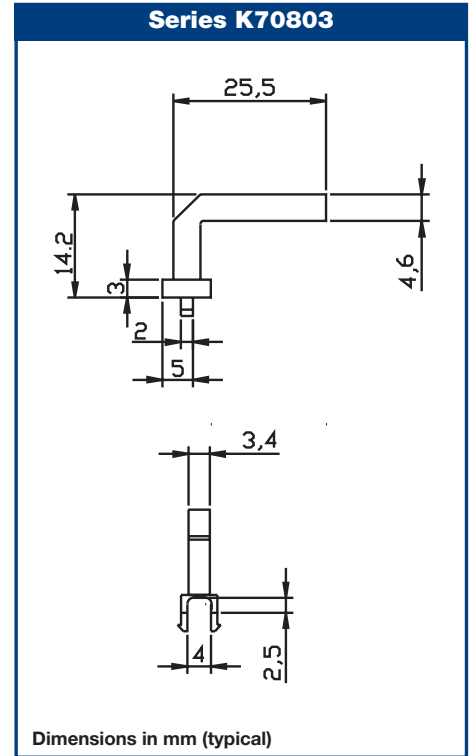
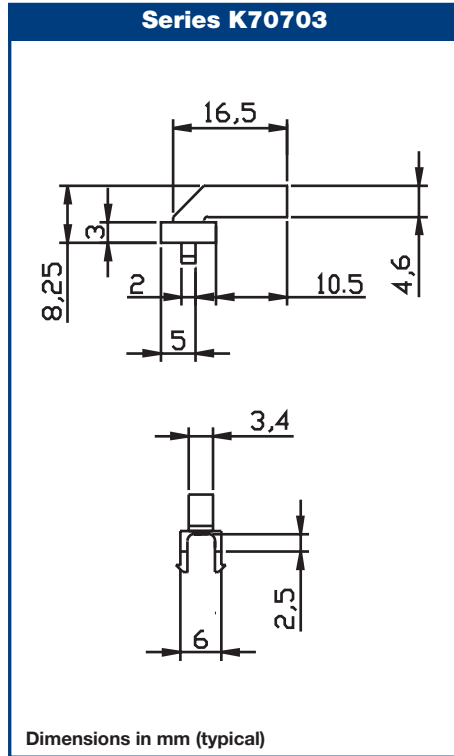
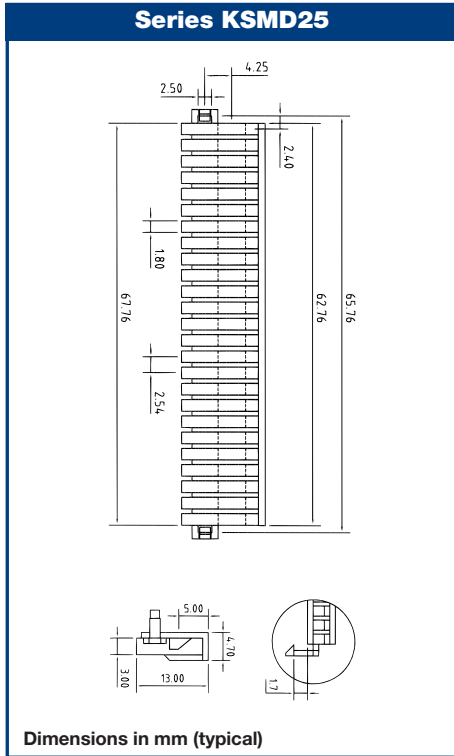
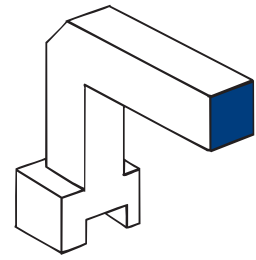
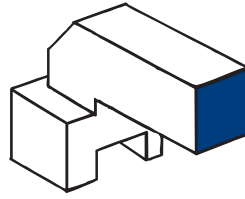
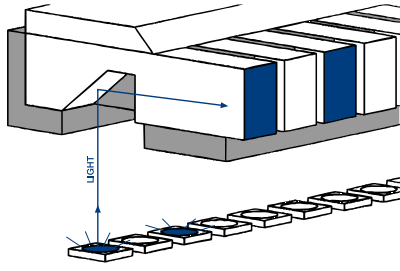
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
0805	All	2÷60
0603	All	10÷60

**OPTIONS AVAILABLE**

- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**





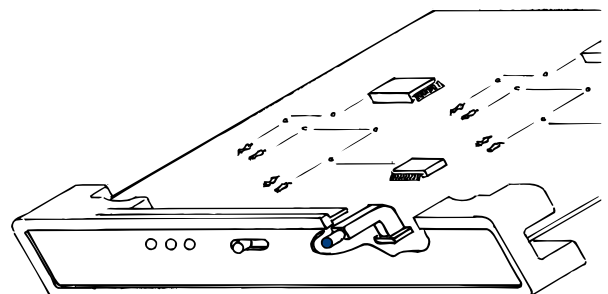
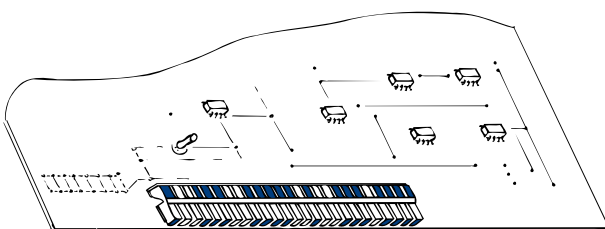
**RECOMMENDED LEDS:**

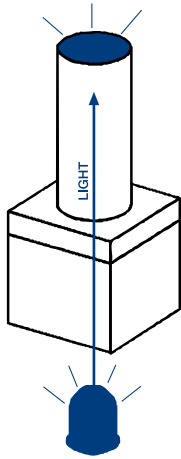
Size	Color	Range intensity (mcd)
1206	All	7,5÷140
0805	All	2÷60
0603	All	10÷60

**BENEFITS**

- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.

**One of many applications**





**ORDERING CODE:**

**KNT - XXX - PX**

IS THE SERIES	INSERT YOUR LENGTH OF SERIES KT	INSERT YOUR LED CODE: P...
---------------	---------------------------------	----------------------------

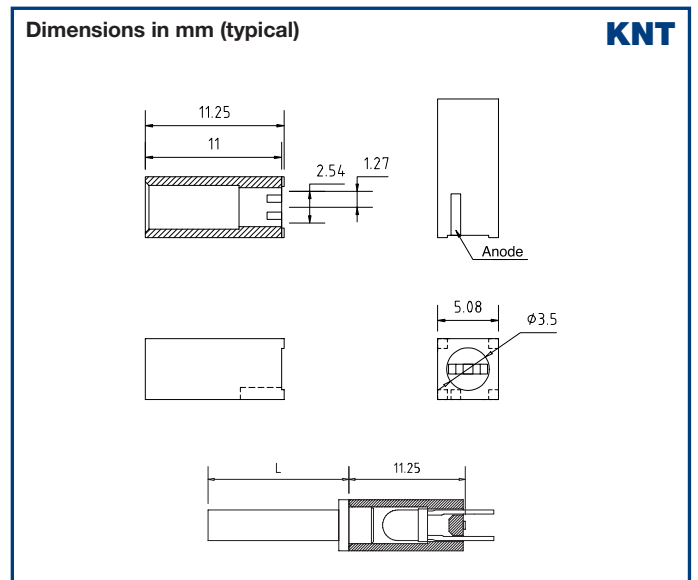
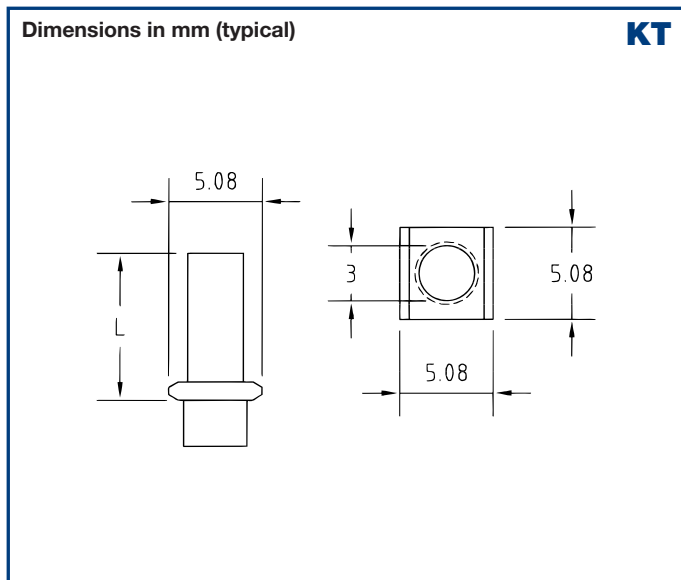
Type	Length
KT-02	L = 2 mm
KT-04	L = 4 mm
KT-054	L = 5,4 mm
KT-06	L = 6 mm
KT-075	L = 7,5 mm
KT-085	L = 8,5 mm
KT-10	L = 10 mm
KT-13	L = 13 mm
KT-15	L = 15 mm
KT-17	L = 17 mm
KT-20	L = 20 mm
KT-25	L = 25 mm
KT-30	L = 30 mm
KT-37	L = 37,9 mm
KT-40	L = 40 mm
KT-45	L = 45 mm
KT-47	L = 47,5 mm
KT-50	L = 50 mm
<b>Your length</b>	L = .....

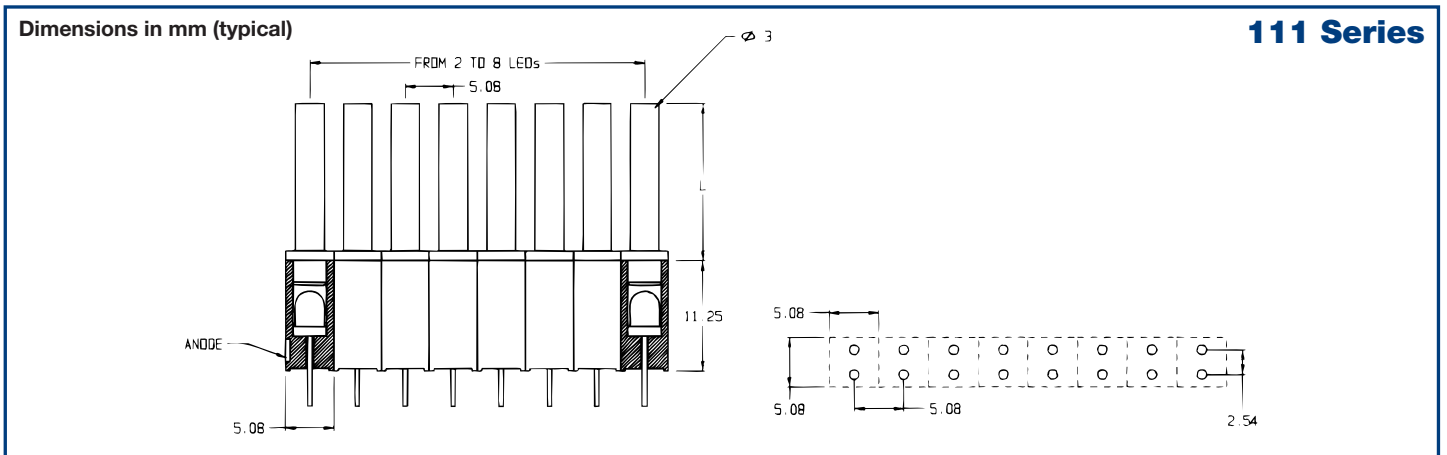
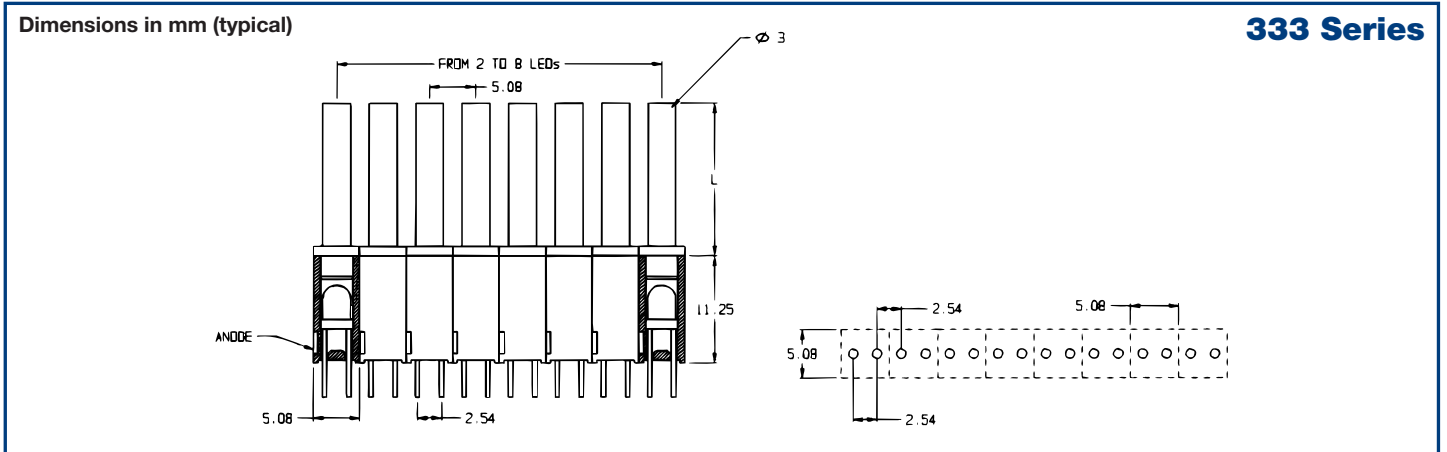
**OPTIONS AVAILABLE**

- Other standard lengths - from 1 to 50 mm
- Right angle
- Different shapes and lengths
- Low current (2 mA)
- Led from 10mcd to 3.000mcd
- 5V & 12V integrated resistor
- White LEDs
- Ultrabright-Infrared & Phototransistor
- Blinking LEDs
- Bicolor 3 Leads
- Special LEDs on request

HOLDER				
Type	Temperat. Range	Deflected Temp.	Flamability	Material
<b>KNT</b>	-60°C + 125°C	152°C	UL-94-V0	PA 6.6

LED					
IF 20mA					
Code	Size	Emited Color	mcd (TYP)	V (TYP)	Peak (nm)
<b>P1</b>	Ø3mm	Red	100	2.0	635
<b>P2</b>	Ø3mm	Green	100	2.2	568
<b>P3</b>	Ø3mm	Yellow	90	2.1	585
<b>P4</b>	Ø3mm	Bi-color red/green	30	2.2	635/568
<b>P5</b>	Ø3mm	Blue	60	5.1	430





**ORDERING CODE:**

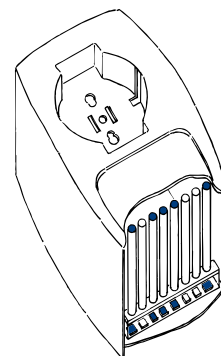
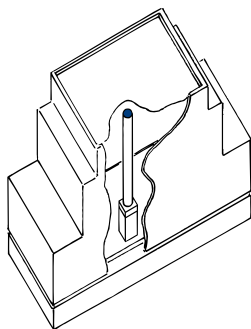
**KNT** - **X** - **XXX** - **PX** - **XXX**

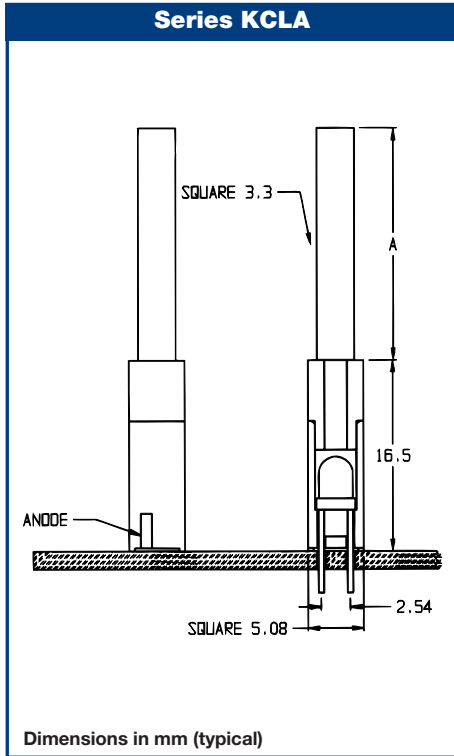
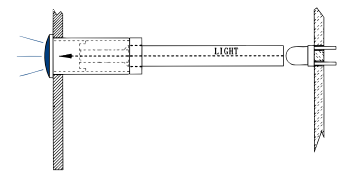
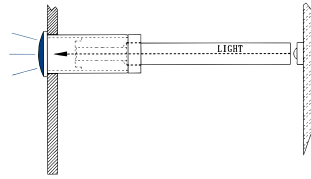
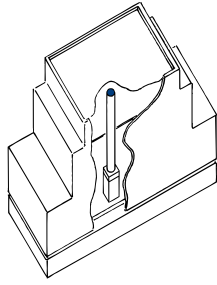
IS THE SERIES	NUMBER OF LEDS	INSERT YOUR LENGTH * OF SERIES KT	INSERT YOUR LED CODE: P...	TYPE OF MOUNTING: • 333 • 111
---------------	----------------	-----------------------------------	----------------------------	----------------------------------

MULTICOLOURED: INDICATE COLOURS FROM LEFT TO RIGHT IN P... RIGHT ANGLE: INDICATE **RA** (ONLY IN VERSION 333)

Number Leds	Length L (series KT)	*	Number Leds	Length L (series KT)
2	- 2 ÷ 50 mm		6	- 2 ÷ 15 mm
3	- 2 ÷ 50 mm		7	- 2 ÷ 15 mm
4	- 2 ÷ 15 mm		8	- 2 ÷ 15 mm
5	- 2 ÷ 15 mm		<b>• SPECIAL LENGTH ON REQUEST</b>	

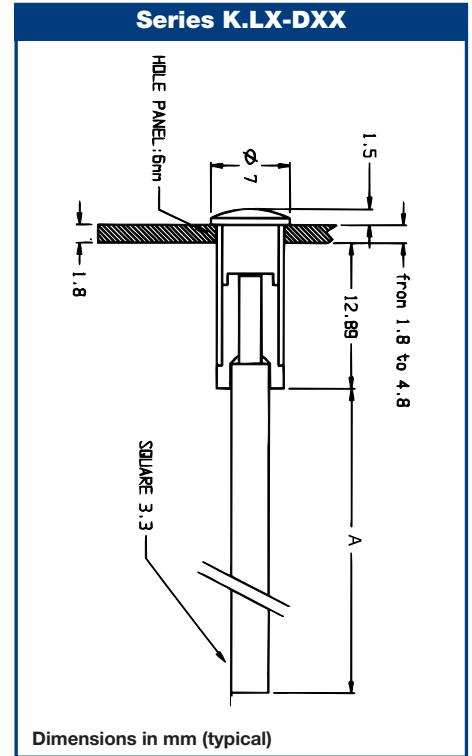
**One of many applications**





**OPTICAL SPACER FOR KCLA AND K-LX**

Code	Length A (mm)	Code	Length A (mm)
D050	5,0	D575	57,5
D075	7,5	D600	60,0
D100	10,0	D625	62,5
D125	12,5	D650	65,0
D150	15,0	D675	67,5
D175	17,5	D700	70,0
D200	20,0	D725	72,5
D225	22,5	D750	75,0
D250	25,0	D775	77,5
D275	27,5	D800	80,0
D300	30,0	D825	82,5
D325	32,5	D850	85,0
D350	35,0	D875	87,5
D375	37,5	D900	90,0
D400	40,0	D925	92,5
D425	42,5	D950	95,0
D450	45,0	D975	97,5
D475	47,5	D1000	100
D500	50,0	DXXX	your length from 5 to 100 mm
D525	52,5		
D550	55,0		



**ORDERING CODE:**

**KCLA** - **DXXX** - **PX**

LENGHT A      INSERT YOUR LED CODE: P...

**ORDERING CODE:**

**K** - **LXX** - **DXX**

LENSES      LENGHT A

**LED**

Code	Size	Case	Emited Color	IF 20mA			Operat. temp.
				mcd (TYP)	V (TYP)	Peak (nm)	
P1	Ø3mm	WATER CLEAR	Red	100	2.0	635	-30°C +85°C
P2	Ø3mm		Green	100	2.2	568	
P3	Ø3mm		Yellow	90	2.1	585	
P4	Ø3mm		Bi-color red/green	30	2.2	635/568	
P5	Ø3mm		Blue	60	5.1	430	

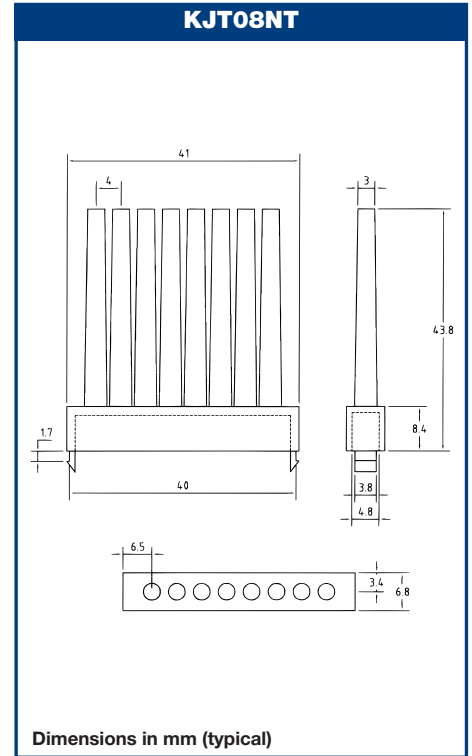
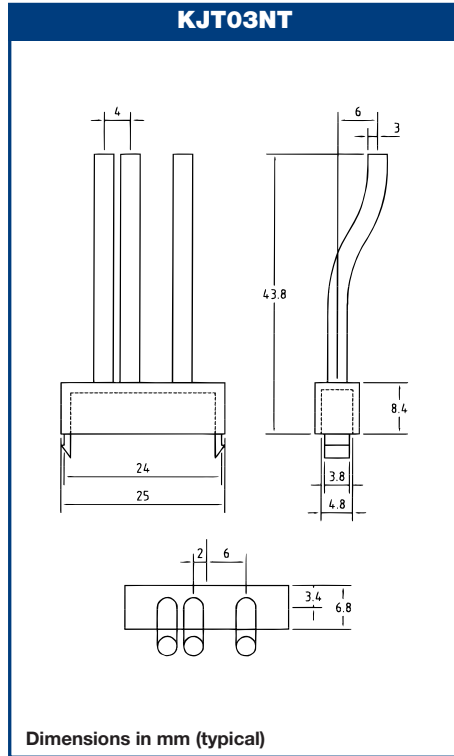
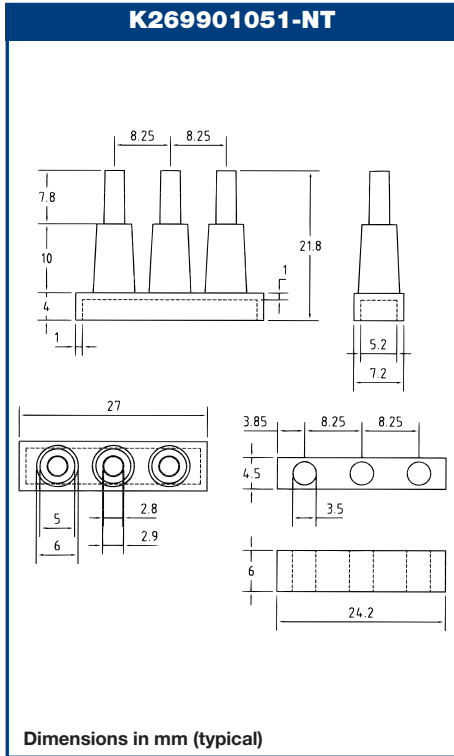
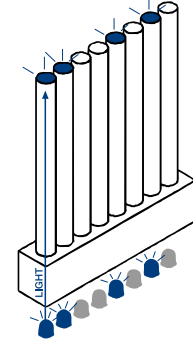
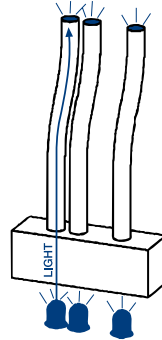
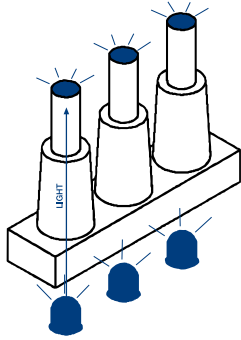
**LENSES**

Code	Color
L71	Red
L72	Green
L73	Yellow
L74	Clear
L75	Blu

**OPTIONS AVAILABLE**

- ◆ Special shapes and symbols
- ◆ Special color
- ◆ Water proof





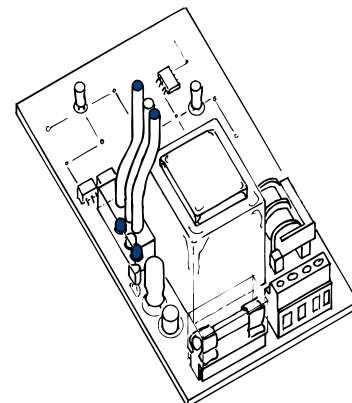
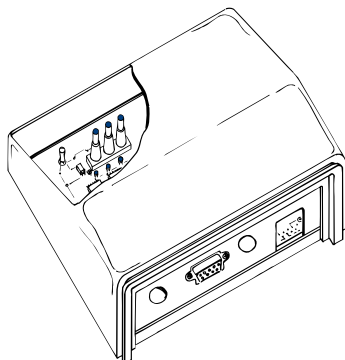
**RECOMMENDED LEDs:**

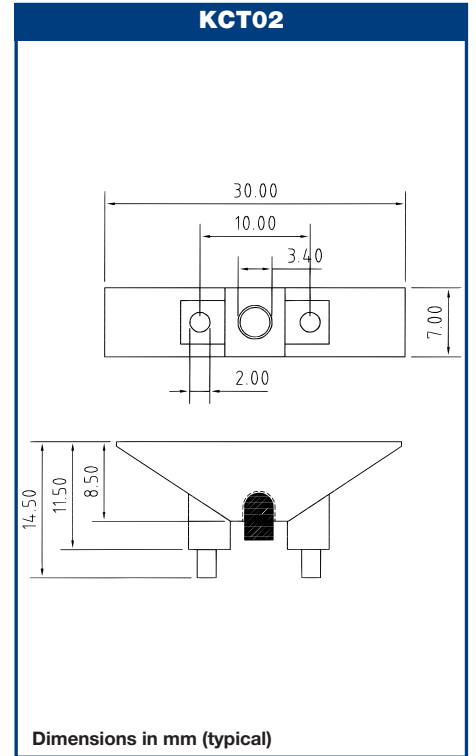
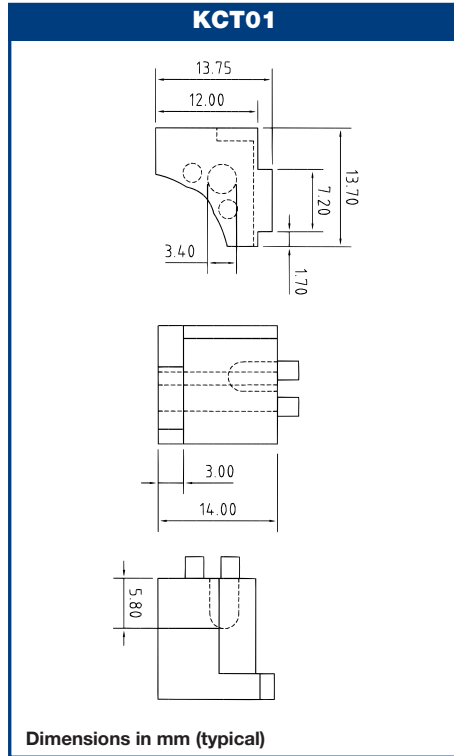
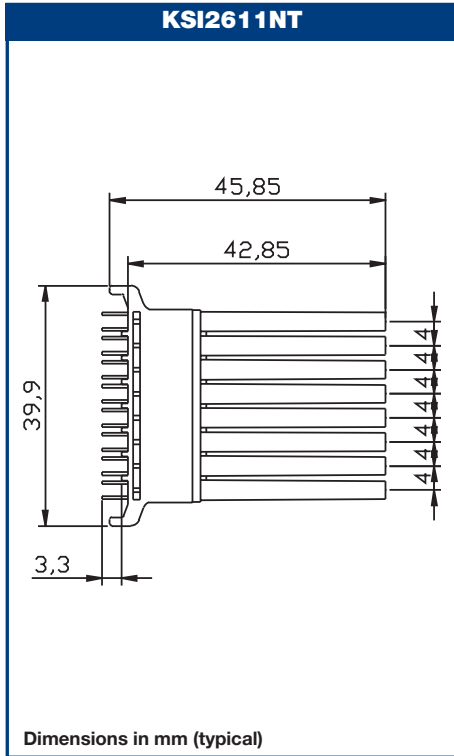
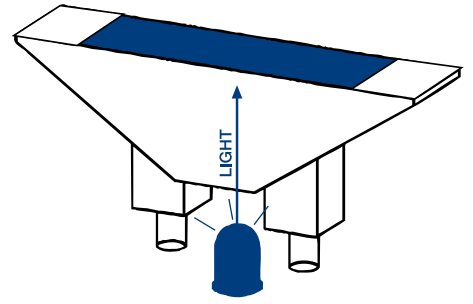
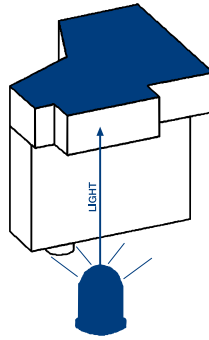
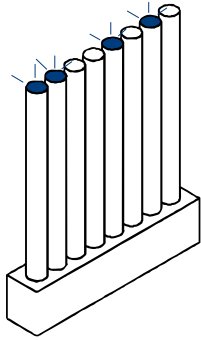
Size	Color	Range intensity (mcd)
Ø 3 mm	All	5÷12,5
Ø 1,8 mm	All	2÷60

**BENEFITS**

- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.

**One of many applications**





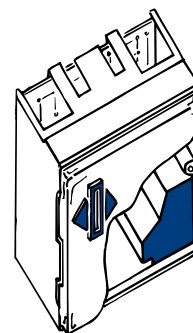
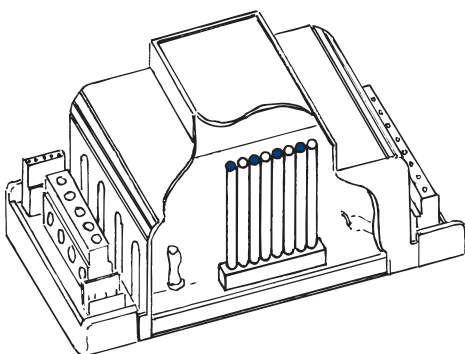
**RECOMMENDED LEDS:**

Size	Color	Range intensity (mcd)
Ø 3 mm	Al	5÷12,5
Ø 1,8 mm	All	2÷60

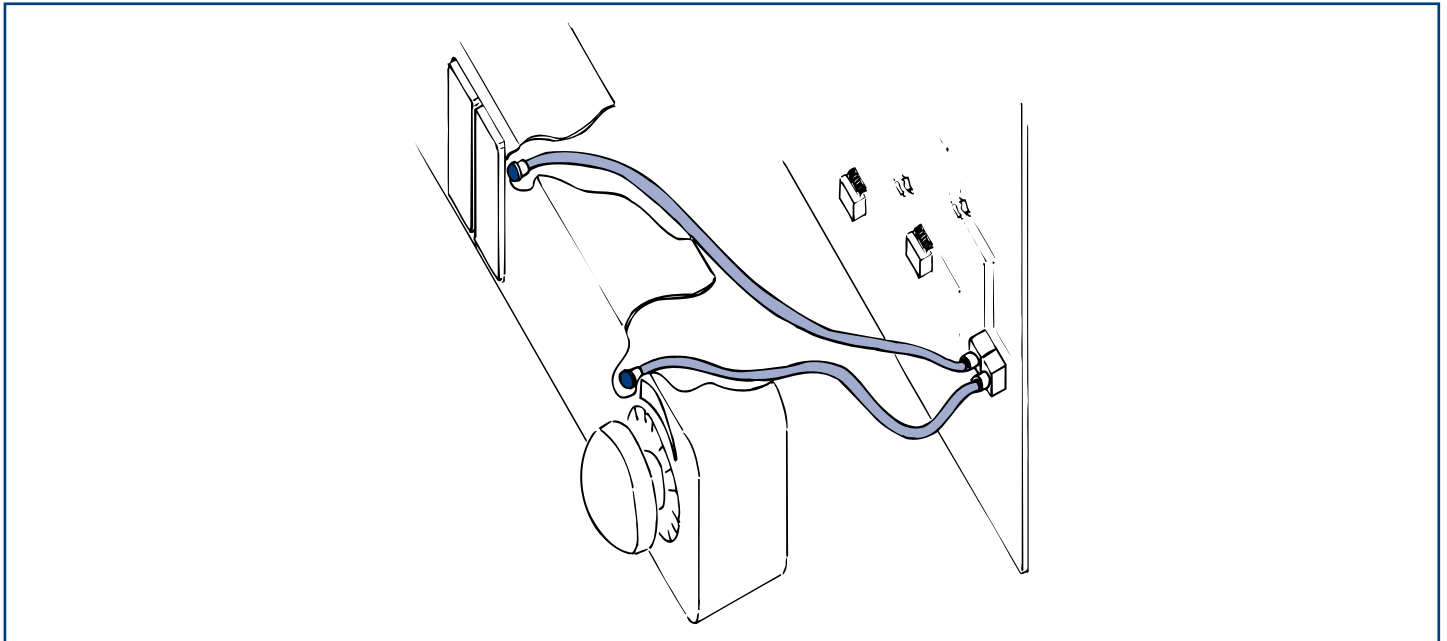
**OPTIONS AVAILABLE**

- ◆ Right angle
- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**One of many applications**



**Optical Cable System**



**Optical cable system** solves many important problems connected to:

quality, reliability, low mounting costs, flexibility, on time deliveries, fast solution in your mounting system, utilization of only 3 codes for a range of own products, possibility to use the actual PCB without modifying or changing it, elimination of connection and/or soldering, transport/receive of every luminous source (visible or invisible).

You can now use the technology tested for many years in the aerospace field in order to improve the quality and above all to reduce costs without making essential changes. Since 1979 our idea stands out from the others for the creativeness and simply because **WE MANUFACTURE SOLUTIONS.**

135°C operating temperature, different shapes and symbols on request. Cold area and without voltage on all panels with ESD protection.

**Optical cable system** offers many advantages respect to the traditional panel LED-holder, in fact it is easier to assemble LED and other components on pcb, to insert lens and support in press-fit and snap-in, to cut the cable at the right length close the system.

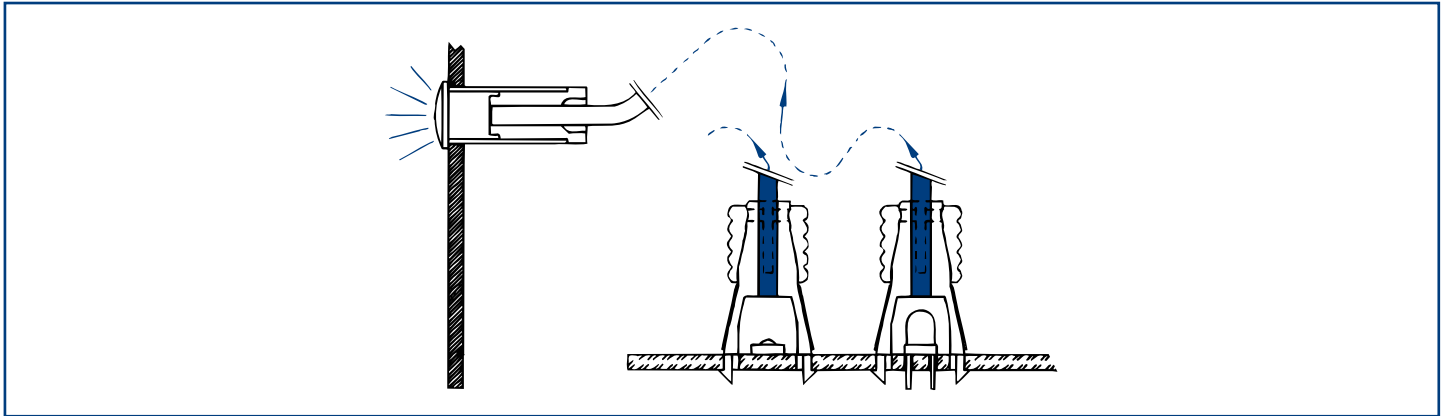
You can specify desired length from 10cm till to 250 m.

**Traditional System**

- ▶ Cold soldering
- ▶ Voltage to the Panel
- ▶ At least 12 operations for mounting
- ▶ High mounting costs
- ▶ Connection and/or soldering
- ▶ Vibration's problems
- ▶ Large pitch
- ▶ Necessary tool for mounting
- ▶ Isolation problems
- ▶ Range temperature problems

**Optical Cable System**

- ▶ No solder
- ▶ ESD protection
- ▶ Only 3 operations for mounting
- ▶ Low mounting costs
- ▶ No connection and no soldering
- ▶ No vibration problems
- ▶ Reduced pitch
- ▶ Water proof available
- ▶ From SMD led to front panel
- ▶ High visibility 180°



**Make up your code**

**KTAB**

Series

**LXX**

Lens  
LX=Ø 7mm

**WX**

PCB Holder  
 ● WR for all LED size, (from SMD to 3mm)  
 ● WA for 3mm LED  
 ● WP for 3mm LED

**XX**

LED Type  
See below

**XXX**

Optical Cable:  
C01 Ø 2mm:  
Indicate your length (cm)

Example for code: **KTAB-L74-WR-S1-10**

- ▶ **KTAB:** is the series
- ▶ **L74:** lens clear (insert colour)
- ▶ **WR:** generic PCB holder
- ▶ **S1:** SMD LED 1206 Red (put your LED)
- ▶ For Optical Cable System you can use only the code C01, to means the cable length in cm.

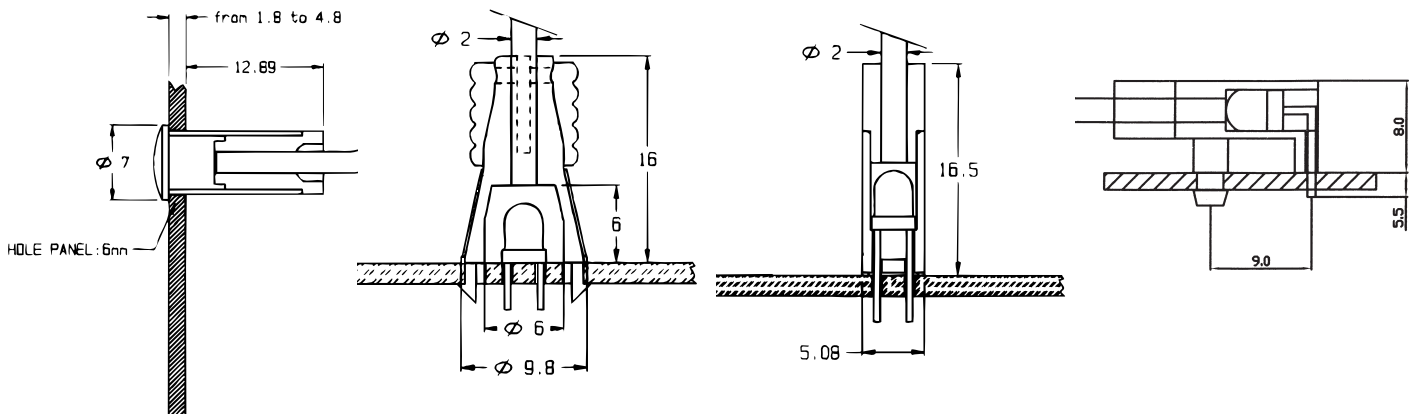
*You can order each code separately: you have to indicate KTAB before the product code (es. KTABL75 is the lens Blue)*

**L7X**

**WR**

**WA**

**WP**



<b>Lens</b>				
Code	Colour	Ø Lens (mm)	Ø Hole (mm)	Material
L71	Red	Ø 7	Ø 6	Transparent UL94 V-O Operating temperature -60°C +125°C
L72	Green	Ø 7	Ø 6	
L73	Yellow	Ø 7	Ø 6	
L74	Clear	Ø 7	Ø 6	
L75	Blue	Ø 7	Ø 6	
L..	Special Color			

<b>PCB Holder</b>				
Code	Temperature Range	Deflected temp.	Flamability	Material
WR	-60 °C +125 °C	135 °C	UL 94 V-0	PC
WA	-60 °C +125 °C	150 °C	UL 94 V-0	PA 66
WP	-60 °C +125 °C	150 °C	UL 94 V-0	PA 66

<b>LED</b>						
Code	Size	Emitted Color	IF 20 mA		Peak (nm)	Operating Temperature
			mcd (TYP)	V (TYP)		
Q1	PLCC2	Red	65	2.0	624	-30 °C +85°C
Q2	PLCC2	Green	40	2.1	571	
Q3	PLCC2	Yellow	56	2.0	589	
Q4	PLCC2	Red/Green	40/25	2.1/2.0	625/571	
Q5	PLCC2	Blue	37	3.8	470	
Q6	PLCC2	White	160	3.6	-	
P1	Ø 3mm	Red	100	2.0	635	
P2	Ø 3mm	Green	110	2.2	568	
P3	Ø 3mm	Yellow	90	2.1	585	
P4	Ø 3mm	Red/Green	30	2.2	635/568	
P5	Ø 3mm	Blue	60	5.1	430	
P6	Ø 3mm	White	180	4.5	-	
P7	Ø 3mm	Orange	20	2.1	625	
S1	1206	Red	50	1.8	660	
S1	1206	Green	35	2.0	568	
S3	1206	Yellow	70	2.0	587	
S4	1206	Red/Green	30	2.0	660/568	
S5	1206	Blue	22	4.0	430	

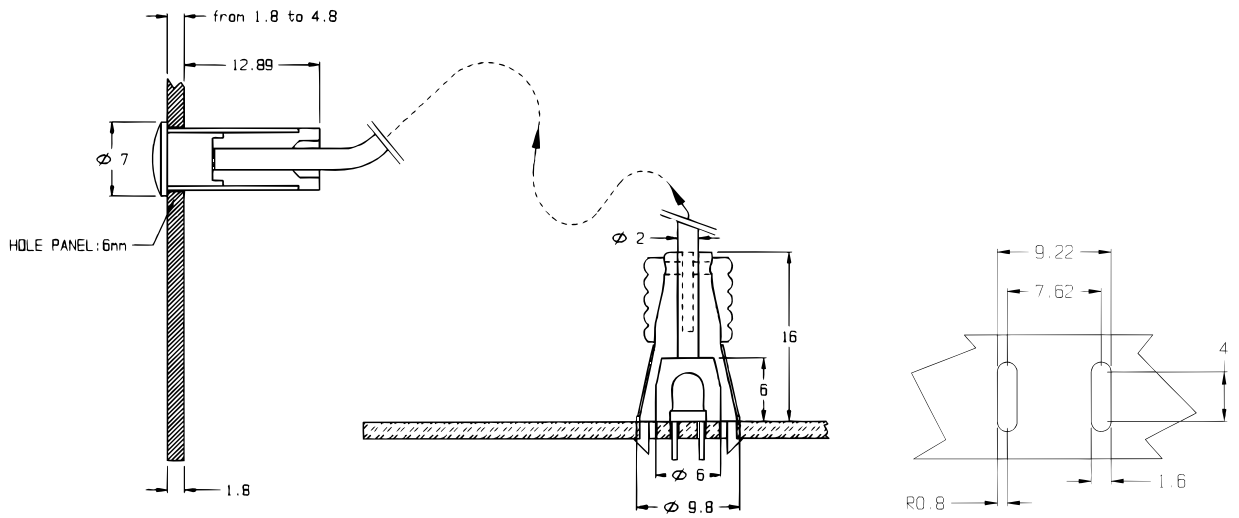
<b>Optical Cable</b>					
Code	Length (mt)	Max.Atten (db/m)	Fibre Ø (mm)	Operating Temp	Option
C01	0 ÷ 250	0.2	2.00	-55°C +70°C	Available other Ø

**FEATURES**

- ◆ No Solder
- ◆ Only 3 operations for mounting
- ◆ No connection and no soldering
- ◆ From SMD to front panel
- ◆ No vibration problems
- ◆ ESD protection
- ◆ Low mounting costs
- ◆ Water proof available
- ◆ High visibility 180°
- ◆ Reduced pitch

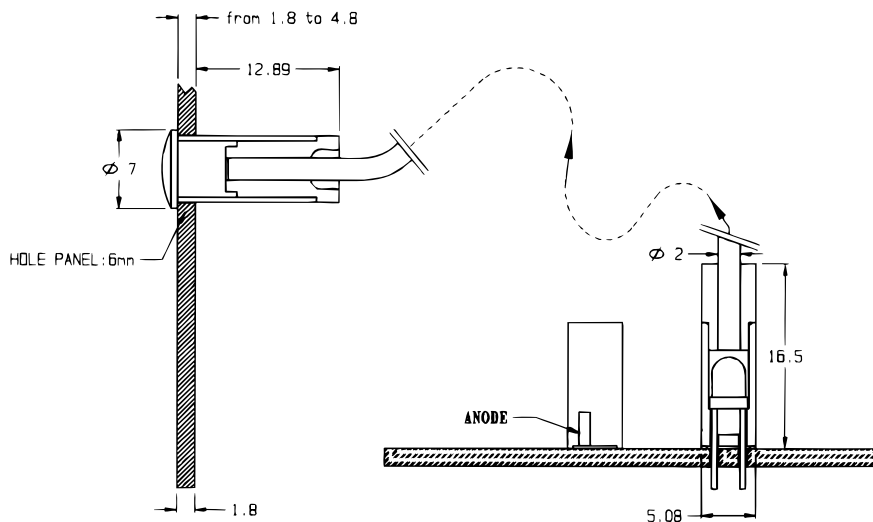
**WR**

Dimensions in mm (typical)



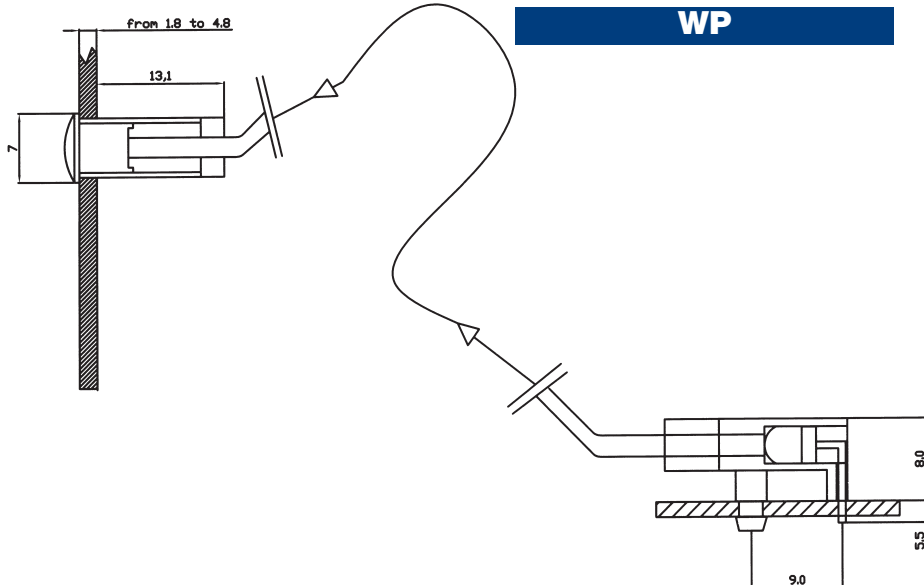
**WA**

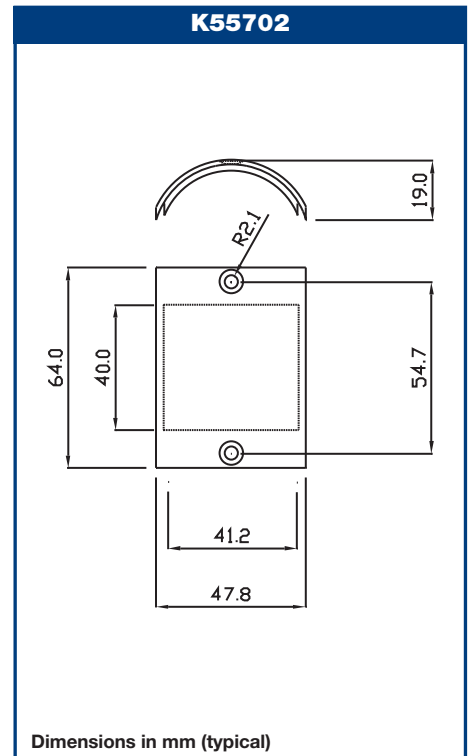
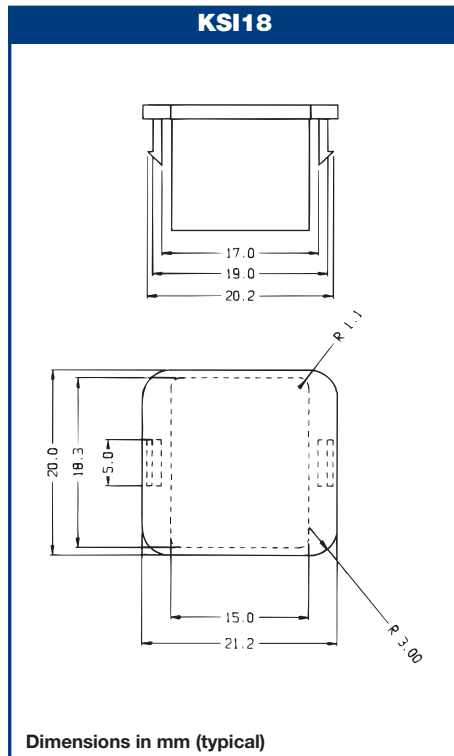
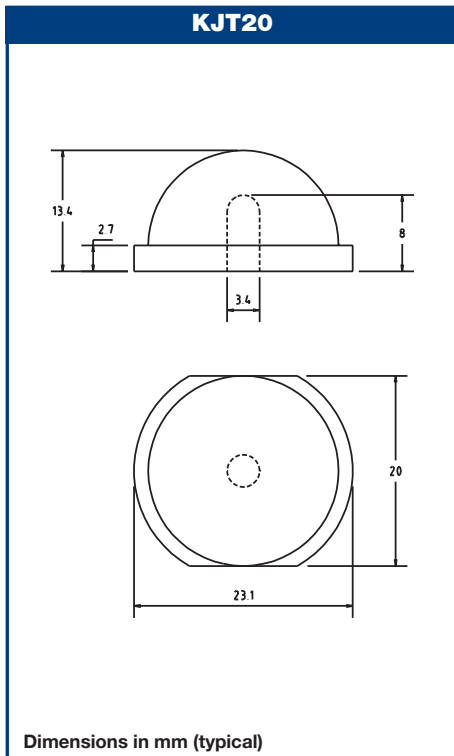
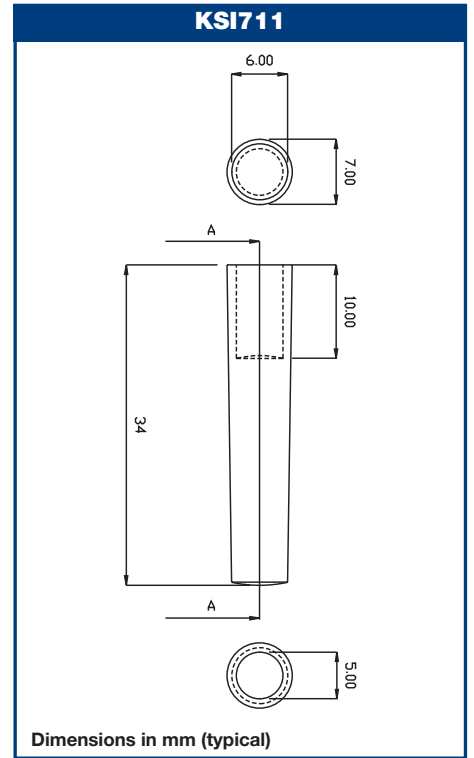
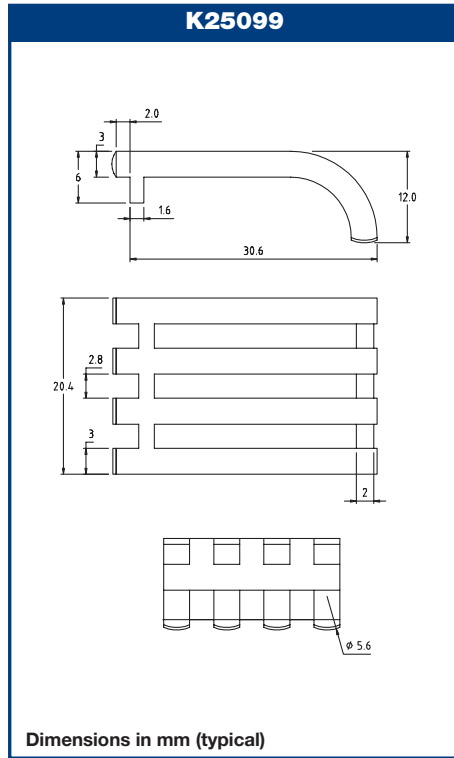
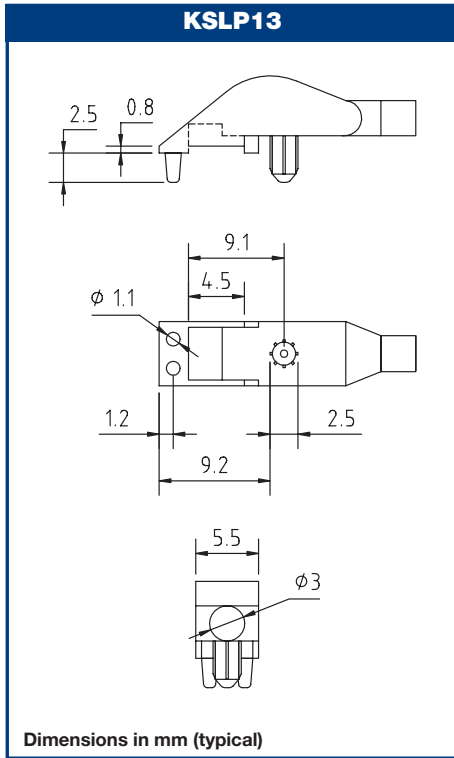
Dimensions in mm (typical)



**WP**

Dimensions in mm (typical)



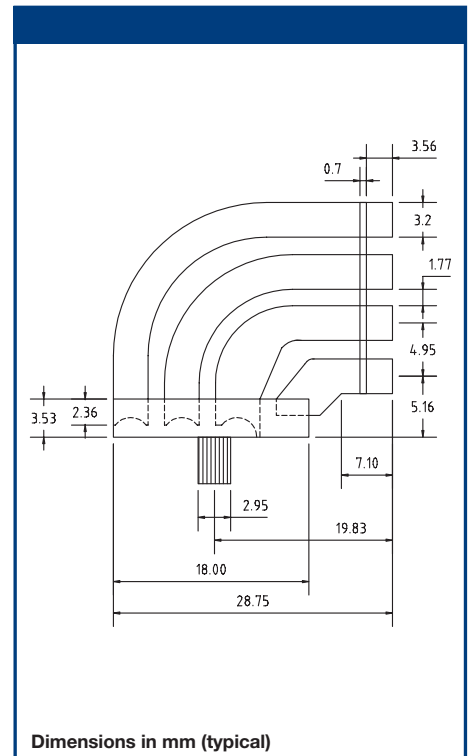
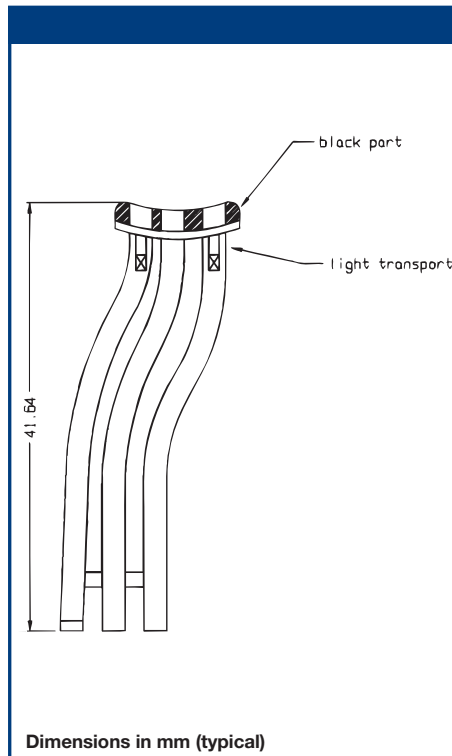
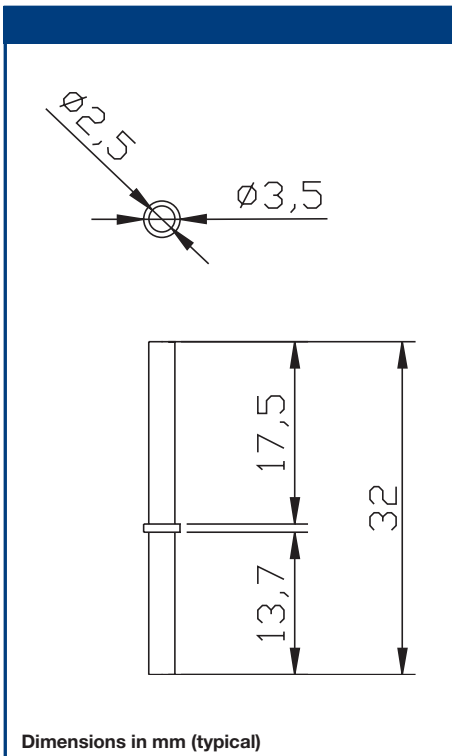
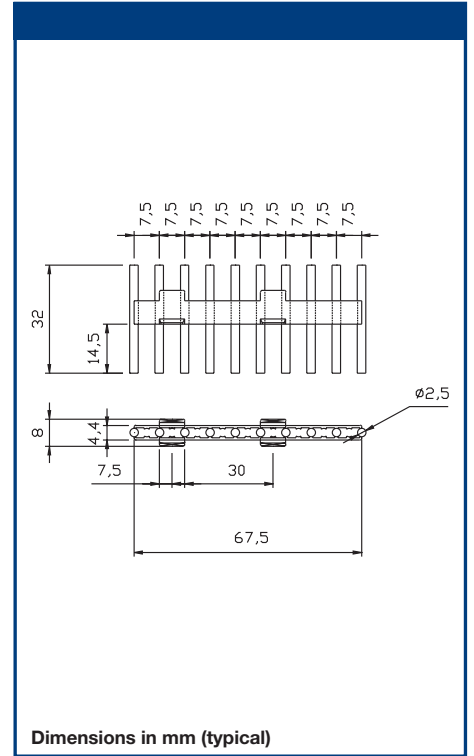
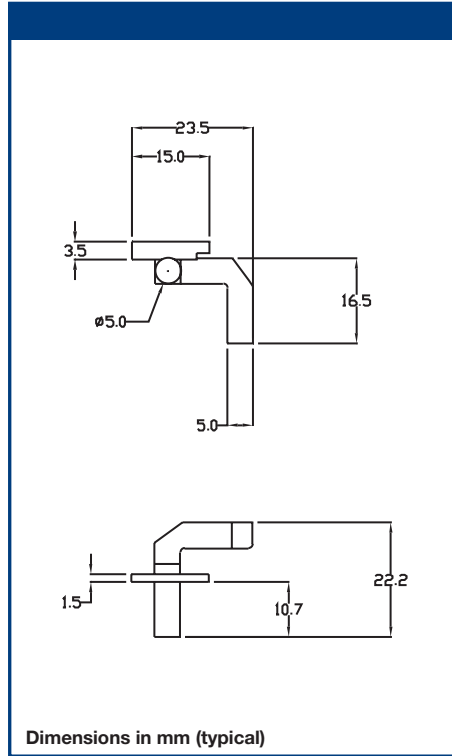
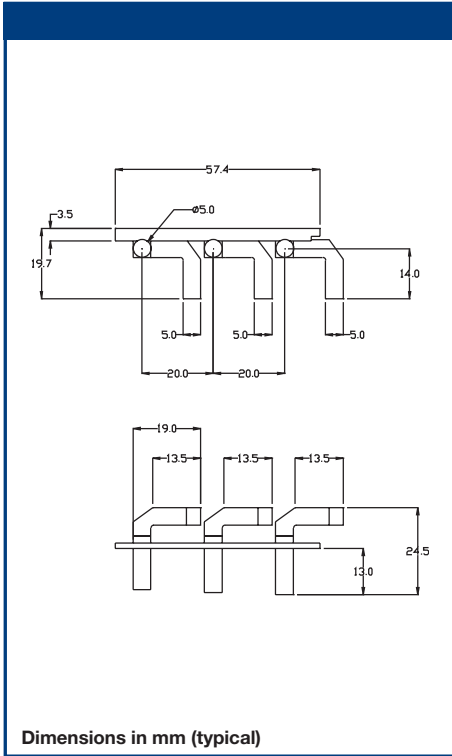


**OPTIONS AVAILABLE**

- ◆ Right angle
- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**BENEFITS**

- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.



**OPTIONS AVAILABLE**

- ◆ Right angle
- ◆ Different shapes and lengths
- ◆ Different fixing systems on P.C.B.

**BENEFITS**

- ◆ ESD protection electrostatic discharge;
- ◆ High transmissivity, delivery maximum light transmission;
- ◆ Helps to eliminate mixed technology PCB processing;
- ◆ Secures to PCB or front panel by snap-in or press-fit;
- ◆ Wide viewing angle;
- ◆ Special shapes and symbols;
- ◆ Reduce insertion cost.