

# LISA

Miniature TIR-lenses for jewellery shops, reading lights, torches and head lamps.

LISA series of lenses, measuring less than 10 mm in diameter and less than 7 mm tall, achieves up to 90 % light transmission efficiency through superior design and materials. Each lens is mounted in a molded polycarbonate (PC) housing and attaches to the PCB by means of locating pins or optional mounting clips and is built to maintain its physical integrity over the usable life of the luminaire.

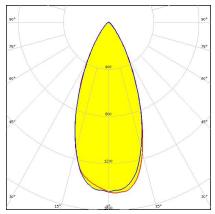
## LISA3CSP

Ø10.0 mm variant with glue mounting for top side emitting CSP LEDs



#### **PRODUCTS:**

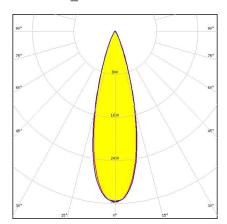
#### FP18205\_LISA3CSP-WW-CLIP16



Dimensions: 10.0 mm x 10.0 mm Height: 7.20 mm

~45° wide beam with clip installation.

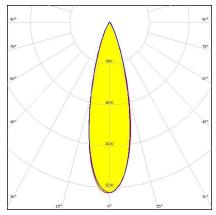
#### FP18203\_LISA3CSP-W-CLIP16



Dimensions: 10.0 mm x 10.0 mm Height: 7.20 mm

~35° wide beam with clip installation.

# FP18201\_LISA3CSP-M-CLIP16



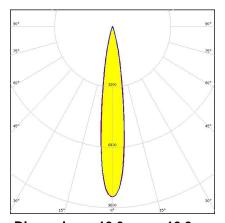
Dimensions: 10.0 mm x 10.0 mm Height: 7.20 mm

~25° medium beam with clip installation.



### **PRODUCTS:**

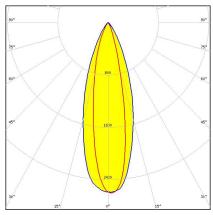
#### FP18199\_LISA3CSP-RS-CLIP16



Dimensions: 10.0 mm x 10.0 mm Height: 7.20 mm

~15° spot beam with clip installation.

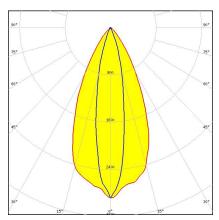
#### FP18682\_LISA3CSP-O2-90-CLIP16



Dimensions: 10.0 mm x 10.0 mm Height: 6.33 mm

~20° x 35° oval beam optimized for CSP LEDs with clip installation. Variant with beam direction rotated 90°.

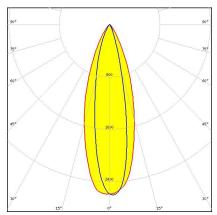
## FP16612\_LISA3CSP-O-PIN



Dimensions: 10.0 mm x 10.0 mm

**Height: 7.20 mm** ~20° + 50° ovat beam

# FP18681\_LISA3CSP-O2-CLIP16

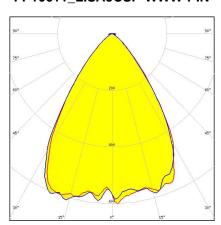


Dimensions: 10.0 mm x 10.0 mm

Height: 6.33 mm

~20° x 35° oval beam optimized for CSP LEDs with clip installation

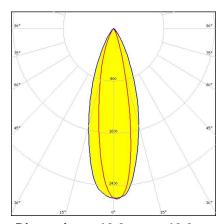
### FP16611\_LISA3CSP-WWW-PIN



Dimensions: 10.0 mm x 10.0 mm Height: 7.20 mm

~60° wide beam

# FP18680\_LISA3CSP-O2-90-PIN



Dimensions: 10.0 mm x 10.0 mm

Height: 6.33 mm

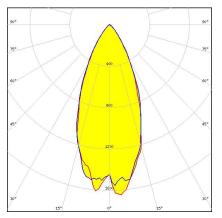
~20° x 35° oval beam optimized for CSP LEDs with location pin installation.

Variant with beam direction rotated 90°.



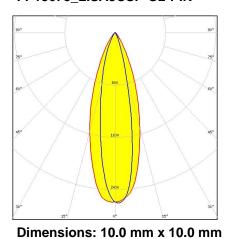
### **PRODUCTS:**

#### FP16610\_LISA3CSP-WW-PIN



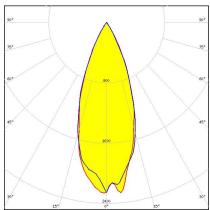
Dimensions: 10.0 mm x 10.0 mm Height: 7.20 mm ~45° wide beam

## FP18678\_LISA3CSP-O2-PIN



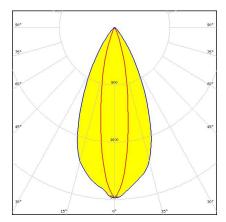
**Height: 6.33 mm**~20° x 35° oval beam optimized for CSP
LEDs with location pin installation.

# FP16609\_LISA3CSP-W-PIN



Dimensions: 10.0 mm x 10.0 mm Height: 7.20 mm ~35° wide beam

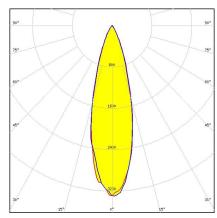
### FP18591\_LISA3CSP-O-90-CLIP16



Dimensions: 10.0 mm x 10.0 mm Height: 7.20 mm ~15° x 50° oval beam with clip

~15° x 50° oval beam with clip installation. Variant with beam direction rotated 90°.

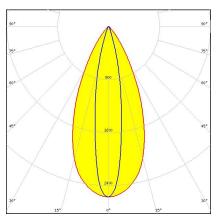
### FP16608\_LISA3CSP-M-PIN



Dimensions: 10.0 mm x 10.0 mm Height: 7.20 mm

~25° medium beam

### FP18209\_LISA3CSP-O-CLIP16



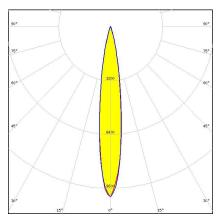
Dimensions: 10.0 mm x 10.0 mm Height: 7.20 mm

 $\sim$ 15° x 50° oval beam with clip installation.



# **PRODUCTS:**

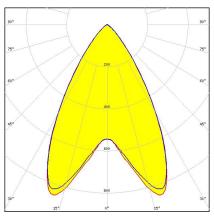
### FP16607\_LISA3CSP-RS-PIN



Dimensions: 10.0 mm x 10.0 mm Height: 7.20 mm

~15° spot beam

### FP18207\_LISA3CSP-WWW-CLIP16



Dimensions: 10.0 mm x 10.0 mm

Height: 7.20 mm

~60° wide beam with clip installation.



#### **GENERAL INFORMATION:**

NOTE: The typical beam angle will be changed by different color, chip size and chip position tolerance. The typical total beam angle is the full angle measured where the luminous intensity is half of the peak value.

#### **MATERIALS:**

As part of our continuous research and improvement processes, and to ensure the best possible quality and availability of our products, LEDiL reserves the right to change material grades without notice.

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