

**Ordering number FA11110\_LED-D**

|                 |                 |             |            |
|-----------------|-----------------|-------------|------------|
| Family          | Leila           | FWHM        | 25 degrees |
| Type            | Assembly        | Efficiency  | 89 %       |
| LED             | Ostar Lighting+ | cd/Im       | -          |
| Color           | Black           | Gerber File | Available  |
| Diameter        | 21.6 mm         |             |            |
| Height          | 13.2 mm         |             |            |
| Style           | Round           |             |            |
| Optic Material  | PMMA            |             |            |
| Holder Material | PC              |             |            |
| Fastening       | Tape            |             |            |
| Status          | Ready           |             |            |

**Ordering number FA11112\_LED-M**

|                 |                 |             |            |
|-----------------|-----------------|-------------|------------|
| Family          | Leila           | FWHM        | 30 degrees |
| Type            | Assembly        | Efficiency  | 88 %       |
| LED             | Ostar Lighting+ | cd/Im       | -          |
| Color           | Black           | Gerber File | Available  |
| Diameter        | 21.6 mm         |             |            |
| Height          | 13.2 mm         |             |            |
| Style           | Round           |             |            |
| Optic Material  | PMMA            |             |            |
| Holder Material | PC              |             |            |
| Fastening       | Tape            |             |            |
| Status          | Ready           |             |            |

**Ordering number FA11113\_LED-W**

|                 |                 |             |                 |
|-----------------|-----------------|-------------|-----------------|
| Family          | Leila           | FWHM        | 31 degrees      |
| Type            | Assembly        | Efficiency  | (simulated) 0 % |
| LED             | Ostar Lighting+ | cd/Im       | -               |
| Color           | Black           | Gerber File | Available       |
| Diameter        | 21.6 mm         |             |                 |
| Height          | 13.2 mm         |             |                 |
| Style           | Round           |             |                 |
| Optic Material  | PMMA            |             |                 |
| Holder Material | PC              |             |                 |
| Fastening       | Tape            |             |                 |
| Status          | Ready           |             |                 |

**Ordering number FA11114\_LED-O-90**

|                 |                 |             |               |
|-----------------|-----------------|-------------|---------------|
| Family          | Leila           | FWHM        | 36+24 degrees |
| Type            | Assembly        | Efficiency  | 85 %          |
| LED             | Ostar Lighting+ | cd/Im       | -             |
| Color           | Black           | Gerber File | Available     |
| Diameter        | 21.6 mm         |             |               |
| Height          | 13.2 mm         |             |               |
| Style           | Round           |             |               |
| Optic Material  | PMMA            |             |               |
| Holder Material | PC              |             |               |
| Fastening       | Tape            |             |               |
| Status          | Ready           |             |               |

**Ordering number FA11115\_LED-REC**

|                 |                 |             |               |
|-----------------|-----------------|-------------|---------------|
| Family          | Leila           | FWHM        | 36+29 degrees |
| Type            | Assembly        | Efficiency  | 81 %          |
| LED             | Ostar Lighting+ | cd/Im       | -             |
| Color           | Black           | Gerber File | Available     |
| Diameter        | 21.6 mm         |             |               |
| Height          | 13.2 mm         |             |               |
| Style           | Round           |             |               |
| Optic Material  | PMMA            |             |               |
| Holder Material | PC              |             |               |
| Fastening       | Tape            |             |               |
| Status          | Ready           |             |               |

**Ordering number FA11893\_LED-WW**

|                 |                 |             |                 |
|-----------------|-----------------|-------------|-----------------|
| Family          | Leila           | FWHM        | 42 degrees      |
| Type            | Assembly        | Efficiency  | (simulated) 0 % |
| LED             | Ostar Lighting+ | cd/Im       | -               |
| Color           | Black           | Gerber File | Available       |
| Diameter        | 21.6 mm         |             |                 |
| Height          | 13.2 mm         |             |                 |
| Style           | Round           |             |                 |
| Optic Material  | PMMA            |             |                 |
| Holder Material | PC              |             |                 |
| Fastening       | Tape            |             |                 |
| Status          | Ready           |             |                 |

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



## PRODUCT DATASHEET

### Leila series

last update 11/10/2012



#### GENERAL INFORMATION

- Product series especially designed & optimized for Ostar Lighting+ series of LEDs.
- Special care taken to make light distribution as uniform as possible.
- Lens material optical grade PMMA with high UV and temperature resistance (105 degrees of Celcius / 220 degrees of Fahrenheit). Allows use of high current and temperature conditions.

Please find more information about used material from below:

[http://ledil.fi/sites/default/files/Documents/Technical/Material/PMMA%20N%20UL94\\_Yellow%20Card.pdf](http://ledil.fi/sites/default/files/Documents/Technical/Material/PMMA%20N%20UL94_Yellow%20Card.pdf)

<http://ledil.fi/sites/default/files/Documents/Technical/Material/PMMA%20N%20PLEXIGLAS-Datasheet.pdf>

- Optic holder molded by high quality PC material (120 dergees of Celcius / 248 degrees of Fahrenheit).

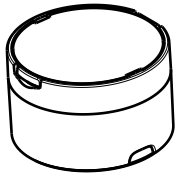
- Fastening to heat sink with a PU foam adhesive tape of automotive grade. Please find fastening details by clicking link: [http://www.ledil.com/datasheets/DataSheet\\_TAPE.pdf](http://www.ledil.com/datasheets/DataSheet_TAPE.pdf)

**NOTE 1:** We advise customer to ensure the suitability and sufficiency of the bond in the end product. For example, mechanical stress, vibration and holes on the surface of the circuit board weaken the strength of the tape.

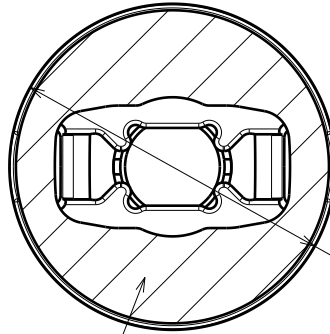
**NOTE 2:** Assembly to the surface must be made straight, so the tape bonds constant and balanced with fastening surface. Slanted assembly might cause unbalanced bond to the surface. All surfaces where tape is applied must be clean, dry and free from grease and dirt.

If cleaning of PCB surfaces is needed, please follow strictly the cleaning instructions of your LED manufacturer - this is important as cleaning shall under no circumstances damage LEDs or other electronics components on the PCB.

Further note that optical components shall not be cleaned with any chemicals - only micro fiber cloth may be used to remove fingerprints or other traces from handling.



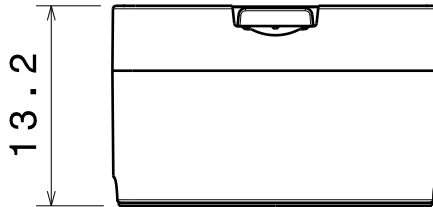
Isometric view  
Scale: 1:1



Bottom view

Tape 0.2mm

Ø21.6



Front view

MATERIALS

Lens: PMMA

Holder: PC

Tape: PU Foam

Part no.s:

FA11109\_LOST-RS

FA11110\_LOST-D

FA11112\_LOST-M

FA11114\_LOST-O-90

FA11115\_LOST-REC

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Ledil Oy  
Tehdaskatu 13  
FIN-24100 SALO  
Finland

DRAWING TITLE

Datasheet Lost-Series assy

DRAWN BY

pv

DATE

09.03.2010

CHECKED BY

hh

DATE

17.09.2009

SIZE

A4

DRAWING NUMBER

REV

1

DESIGNED BY

pv

DATE

17.09.2009

SCALE

2:1

WEIGHT (g)

-

SHEET

1/1