

LEDiL

Guide for street lighting optics

V1-0 / 2024



Why LEDiL?

The world is full of different roads and strict street lighting requirements. Add to this different LED package preferences and mechanical size limitations and possible combinations multiply exponentially. That is why LEDiL offers so many specific light distributions for road lighting to help you meet these requirements.

Whether it is a tunnel in Europe or road in Brazil, we offer solutions for virtually any LED model and type; from tiny CSPs to large COBs, while keeping the optics as future proof and modular as we can, so you can keep it simple and flexible.

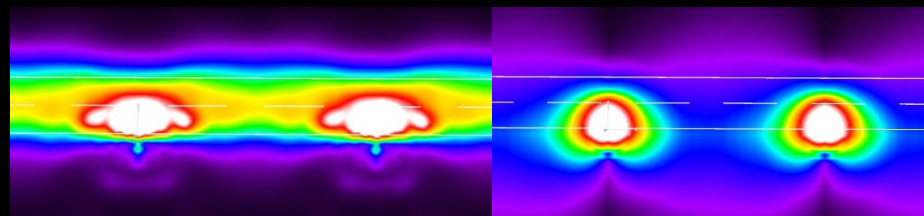
Make our optics the heart of your luminaire to **optimise cost, efficacy and light distribution with great results.**



Efficiency

With the same installation and light output LEDiL light distribution is 80 % more efficient than competitor equivalent!

- Needs fewer LEDs, lenses and heat sinks
- Uses less energy for a faster return on investment



LEDiL lens Average: 18 lx
Uniformity (uO): 0.58

Competitor lens Average: 10 lx
Uniformity (uO): 0.34

Freedom of design

Allows easy and flexible cost and efficacy optimization.

Typical usage

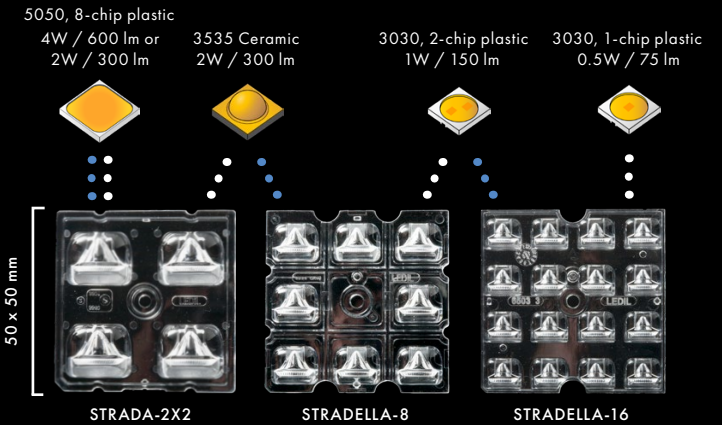
~1200 lm output @
8W / lens array

Needs typical thermal design to remain efficient

High density usage

~2400 lm output at
16W / lens array

Needs excellent thermal design to remain efficient



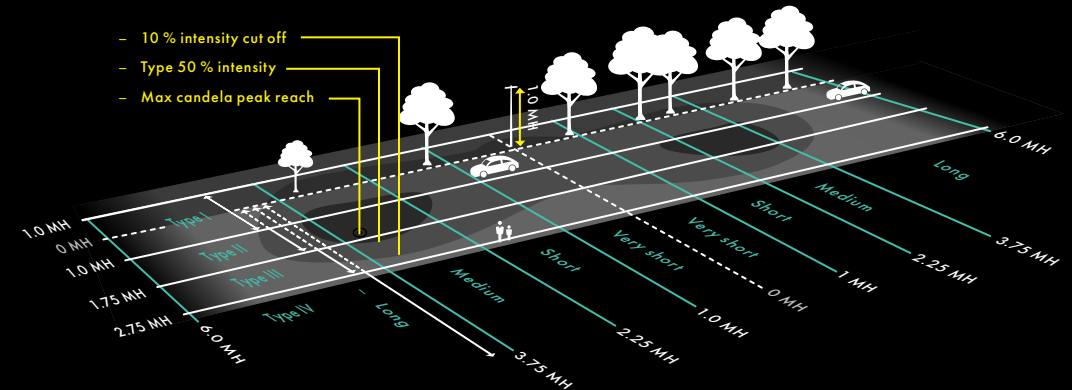
Ceramic package LED

Plastic package LED

● robustness / ● efficacy (lm/W)

IESNA Type

IESNA Type is defined by position of highest candela intensity. IESNA Type classification is established by measuring where the bulk of the pattern falls on the grid.



 T1 IESNA Type I (medium)	 T1-A IESNA Type I (short)	 T1-M IESNA Type I (medium) beam for European P-class standard	 T2 IESNA Type II (medium)	 T2-B IESNA Type II, minimized house side backlight	 T2-C/C2/C3 IESNA Type II, added house side backlight
 A-T Short IESNA Type II	 T2-L IESNA Type II (long)	 T2-M IESNA Type II (medium)	 T2-S IESNA Type II (short)	 T3 IESNA Type III (medium)	 T3B / T3-B IESNA Type III (medium), minimized backlight
 T3-L IESNA Type III (long)	 T3-M IESNA Type III (medium)	 T4 IESNA Type IV	 T4B / T4-B IESNA Type IV, forward throw beam	 VSM IESNA Type V (square)	 SCL Type II/III (long), ideal for pedestrian paths and residential roads
 DWC / T-DWC Universal road lighting (Typ. IESNA Type III Medium)	 DWC2 Universal road lighting (Typ. IESNA Type III Medium)	 DNW Soft wide beam with good illuminance uniformity	 DN / T-DN For area lighting with shorter illumination distances	 DW / T-DW Soft wide beam with good illuminance uniformity	 FW Wide light distribution, residential streets, staggered pole setup
 ME ★ Excellent longitudinal luminance uniformity fulfilling EN13201 M-class requirements	 ME3 ★ For ultra-long pole distances with excellent longitudinal luminance uniformity fulfilling EN13201 M-class req.	 ME-N ★ Designed for high poles, fulfilling EN13201 M-class requirements	 ME-WIDE1 ★ Fulfilling EN13201 M-class requirements, added house side backlight	 ME-WIDE2 ★ For staggered pole setups fulfilling EN13201 M-class requirements	 MEW ★ Extremely low glare fulfilling EN13201 M-class requirements for wet road surfaces in North Europe
 NHS Narrow beam, minimal house side light	 LN1 ★ For EN13201 M-class requirements with high poles or where road width ≤ the pole height	 LM1 ★ For EN13201 M-class requirements where road width ≥ the pole height	 LM2 ★ For EN13201 M-class requirements where road width ≤ the pole height	 LW1 ★ For EN13201 M-class requirements where road width > the pole height	 J1 Low glare street lighting optic for European and Japanese requirements.
 ANZ-P Pedestrian lighting in Australia & New Zealand	 ANZ-V Vehicular road lighting in Australia & New Zealand	 XW Wide beam	 DB Floodlight beam for the area between the railway tracks acc. to DB requirements.	 PX Double asym., pedestrian crossings, right side traffic	 PXL Double asym., pedestrian crossings, left side traffic
 FN Narrow forward throw beam for area lighting	 FT Forward throw beam for area lighting	 TF Narrow forward throw beam optimized for European tunnels	 FR Asymmetric spot light beam for floodlighting railway tracks according to Russian normative	 FS Forward throw beam for area lighting	 FS2 For symmetrical tunnel lighting and parking garages, ideal for catenary street lighting
 FS3 Forward throw beam optimized for European tunnels, extremely efficient lighting with counter-beam method	 B2 / B2-STP For area lighting and applications demanding a wide oval beam pattern	 CAT ★ Catenary street light beam optimized for EN13201 M-classes	 CAT-B ★ Narrow catenary street light beam optimized for EN13201 M-classes and tilted poles	 C / C-STP For area and street lighting such as parks and pedestrian walkways	 CY For canopy lighting with batwing light distribution, suitable for symmetrical tunnel lighting

STRADA-IP-24

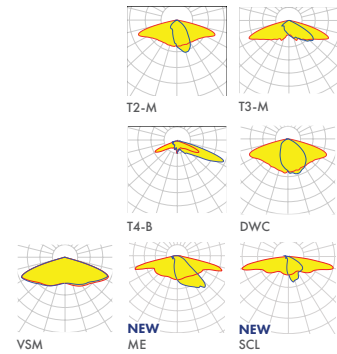


Ingress protected lens array for flat 5050 size LEDs to boost energy efficiency.

- **Industry standard redefined** – same dimensions and screw holes as the 2X6 lens family
- **High performing** – excellent beam quality built on the STRADA legacy
- **Versatile** – Extreme efficiency when under-driving or extreme output at max power

Compatibility: Optimised for flat high power 5050 size LED packages such as:

- CREE J/R5050
- LUMILEDS LUXEON 5050 square
- NICHIA 48x series
- OSRAM DURIS S8
- OSRAM OSCONIQ S 5050
- SAMSUNG LH502C
- SEOUL DC 5050 6V



THEIA

Low glare outdoor lighting optic with ingress protection for urban environments

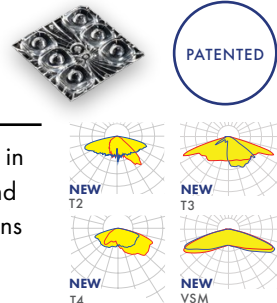
Compatibility: Optimised for 3030 size mid-power and compatible up to 3535 size flat LED packages



STRADA-2X3

50 x 50 mm lens family in 2X3 format for street and area lighting applications

Compatibility: Flat 5050 size LED packages

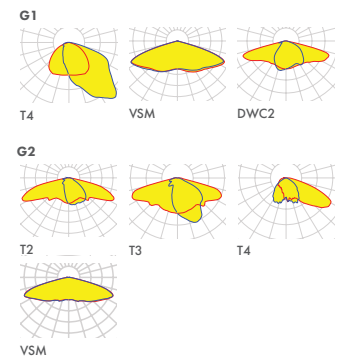


STELLA

Ø90 mm ingress protected silicone lenses.

Compatibility:

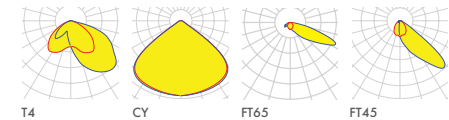
- G1: - T4 and DWC2, up to 23 mm LES size.
- VSM up to 30 mm LES size.
- Optimized for 23 mm LES size.
- G2: - Compatible with up to 30 mm LES size.
- Same footprint as with original STELLA, but with more space inside for Zhaga compliant COB connectors.
- 3rd party connectors available from B+W, BJB, TE and IDEAL.



JENNY

35 x 35 mm single lenses and 8X1 arrays made from silicone.

Compatibility: Up to 7070 size LED packages.

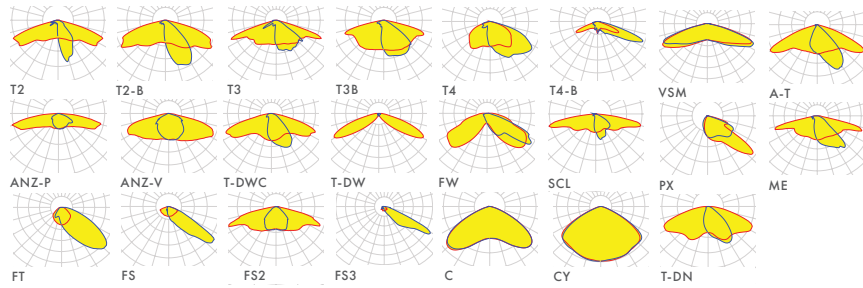


STRADA

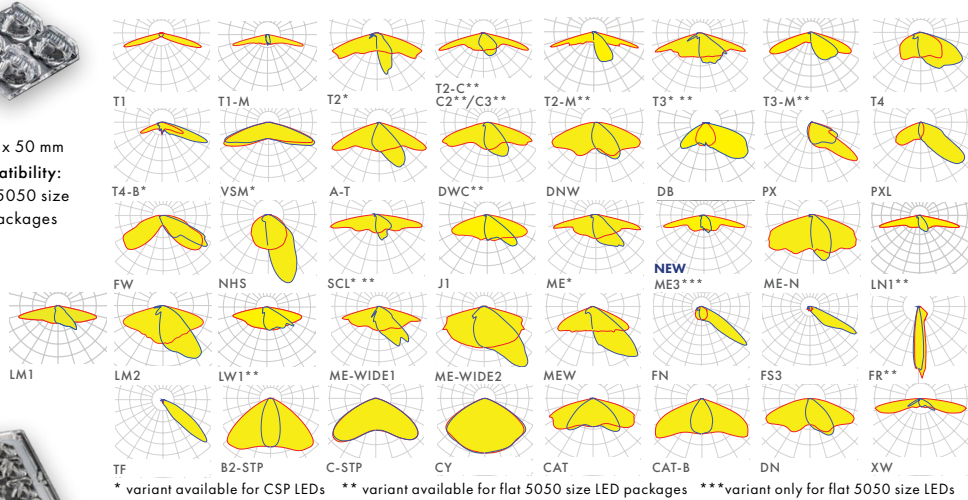
The most versatile modular product family especially designed for street lighting.



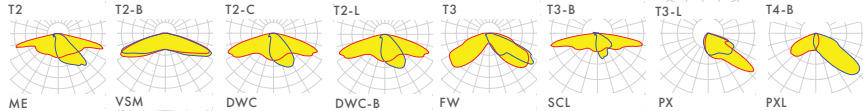
SQ
- 25 x 25 mm
Compatibility:
up to 7070 size
LED packages



2X2
- 50 x 50 mm
Compatibility:
up to 5050 size
LED packages

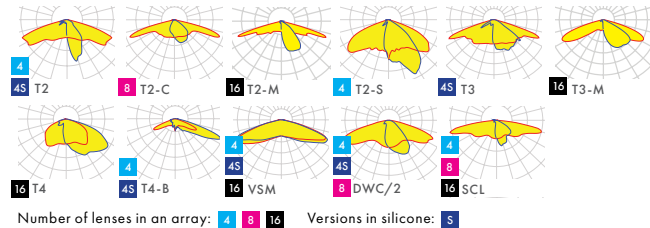


IP-2X6
- 173 x 71.4 mm
- ingress protected
Compatibility:
up to 5050 size LED packages



MX/S
- 90 x 90 mm
- ingress protected

Compatibility:
- MX: up to 7070 size LED packages
- MXS: also for up to 9 mm COBs
- 8MX: for flat 5050 size LED packages
- 16MX: for CSP LEDs

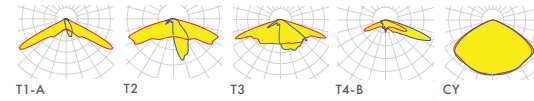


STRADELLA

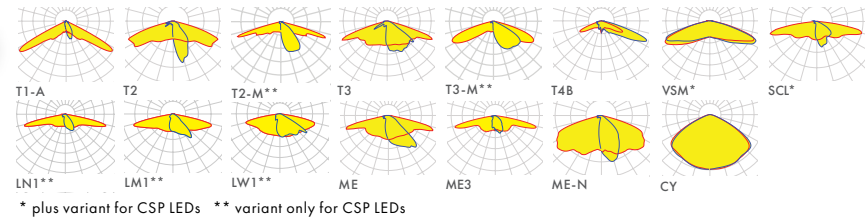
Cost-efficient product family of single lenses and dense lens arrays.



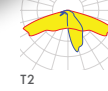
SINGLE
- 14 x 14 mm



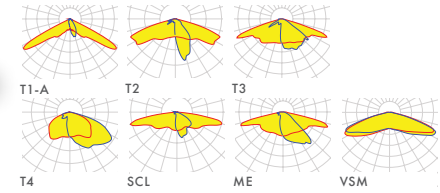
8
- 50 x 50 mm



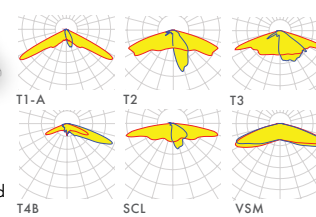
IP-16
- 100 x 60 mm
- ingress protected



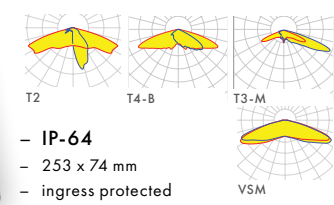
16
- 50 x 50 mm



IP-28
- 100 x 100 mm
- ingress protected



IP-64
- 253 x 74 mm
- ingress protected

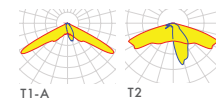


SITARA

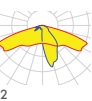
Cost-efficient product family of single lenses and 2X2 lens arrays with ingress protection.



SINGLE
- 14 x 14 mm



2X2
- 50 x 50 mm
- ingress protected

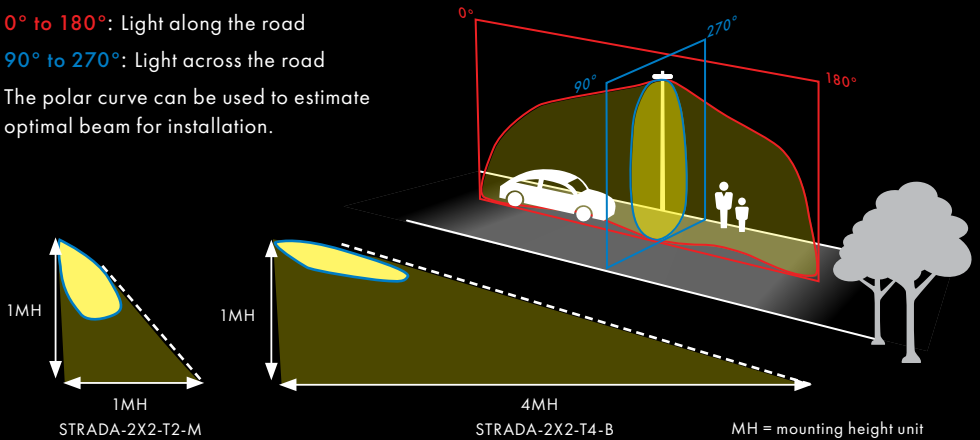


How to read polar curves

0° to 180°: Light along the road

90° to 270°: Light across the road

The polar curve can be used to estimate optimal beam for installation.



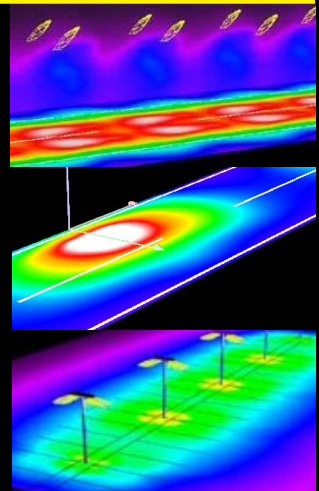
Technical support

- Simulations to show optic performance in real applications
- Guides and tips for installations
- Thermal analysis for luminaire designs

Contact our tech support experts:

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