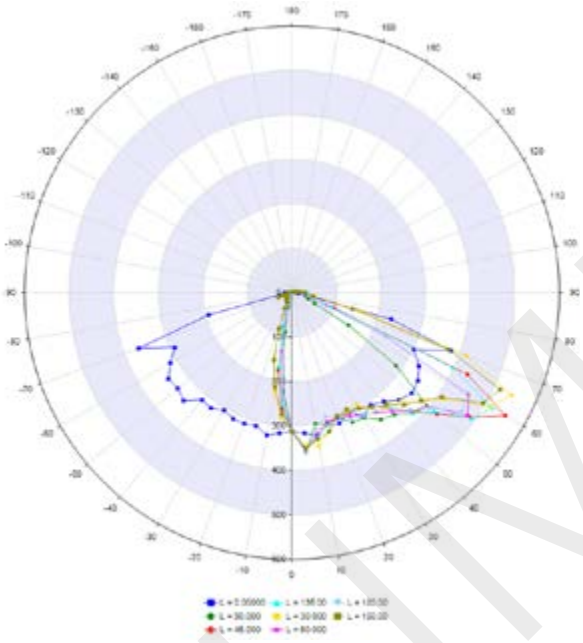
SEMITAS 01 is a 2x2 LED lens array designed for European M road lighting classes. SEMITAS 01 is made of clear PMMA, and optimised for luminaires using a transparent flat cover.

Semitas 01



LIDC of matrix lens solution – without cover glass

Mechanical data

Optical material	Clear PMMA
Dimensions (l x w x h)	50 x 50 x 7.78 mm

Photometric characteristics

Optical efficacy	93.61 %
Beam angle (FWHM 0-180, 90-270)	150.7°, 68.2°
Road application	M classes

Evaluation for ME class street lighting

LED source	Nichia 219C
Output luminous flux	6000–26,000 lm
Road width	7–12 m
Pole height	8–12 m
Arrangement	Single row, bottom & double row, opposing

Technical performance

M road class	M1		M4A		M5–M6	
Pole distance (m)	19	36	37	57	44	69
Height (m)	8	12	8	12	8	12
Lm (cd/m2)	2	2.03	0.75	0.79	0.54	0.56
U0	0.62	0.7	0.55	0.55	0.35	0.39
UI	0.78	0.77	0.62	0.60	0.40	0.40
TI (%)	6	6	11	9	13	10
SR	0.55	0.71	0.55	0.55	0.55	0.77

Achieved values for specific M road class with Nichia 219C

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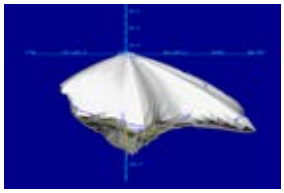
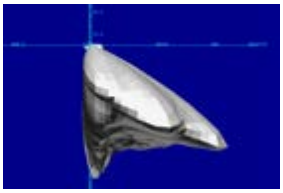
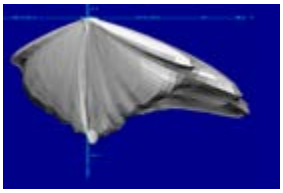
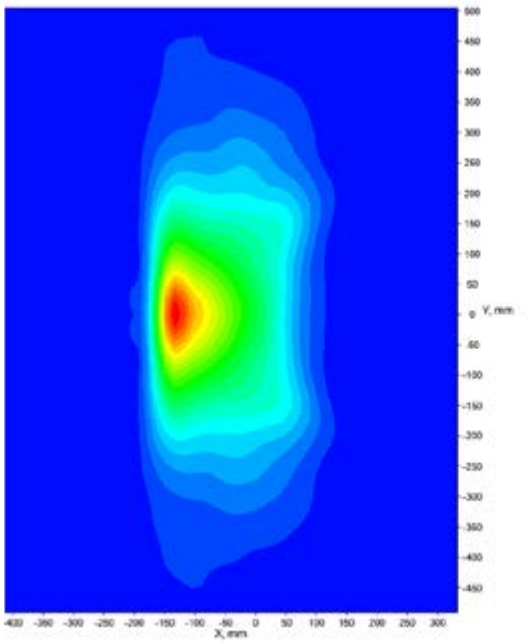
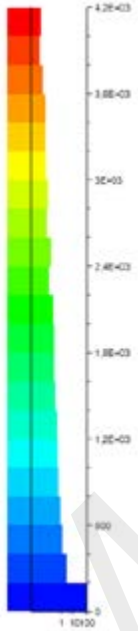
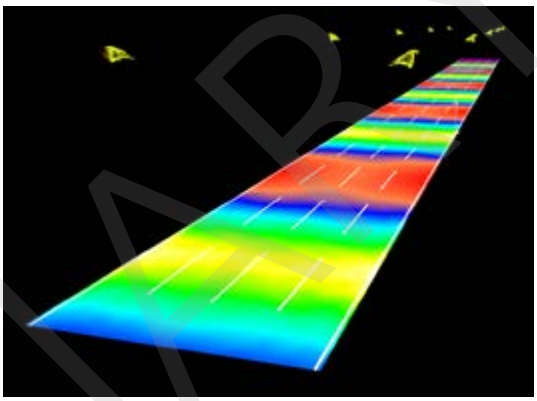
Optical performance

3D LIDCs

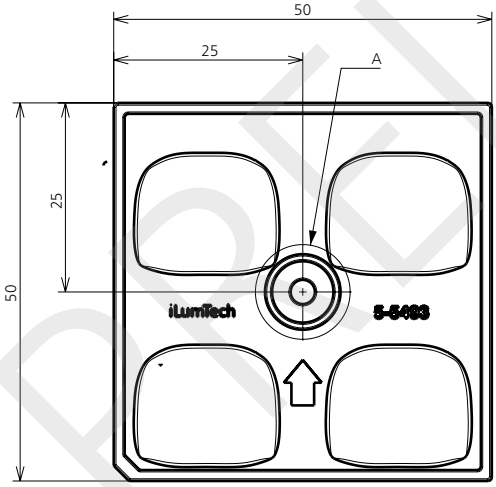
Illuminance zone map



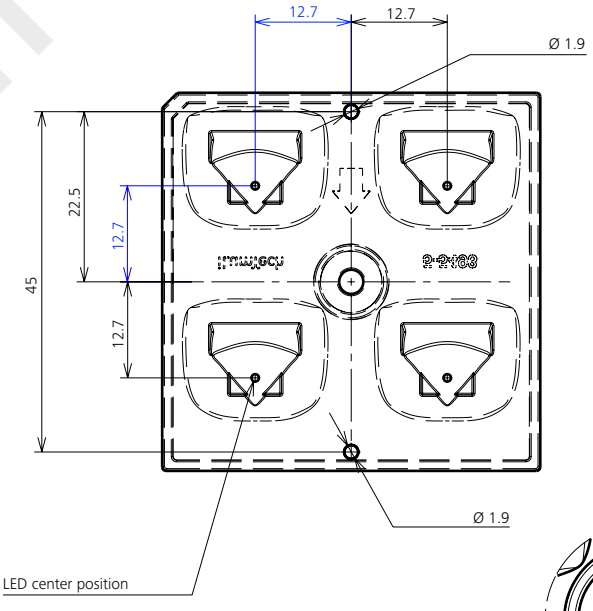
Example M class road scenario

Dimensions

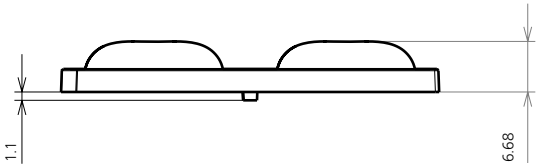
Top view
Scale: 1:1

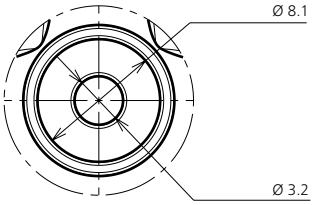


Bottom view
Scale: 1:1



Front view
Scale: 1:1





Detail A
Scale: 2:1

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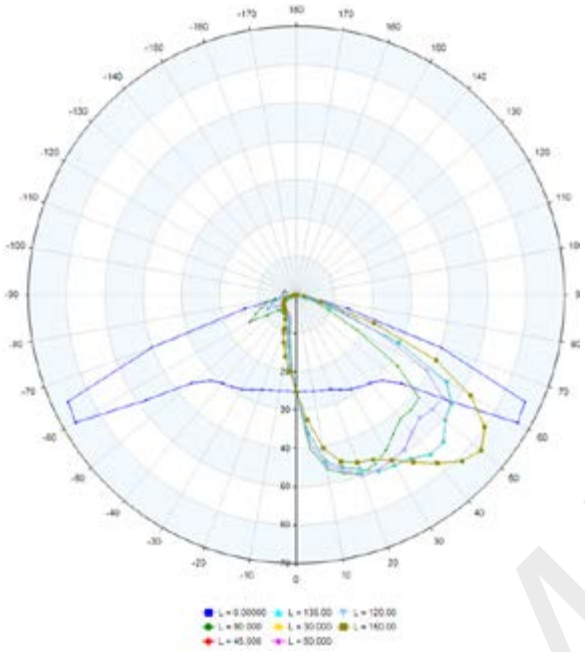
SEMITAS 05 is a 2x2 LED lens array designed for European P road lighting classes (sidewalks, bike paths, emergency strips, pedestrian zones, parks). SEMITAS 05 is made of clear PMMA, and optimised for luminaires using a transparent flat cover.

Semitas 05



LIDC of matrix lens solution – without cover glass

Mechanical data

Optical material	Clear PMMA
Dimensions (l x w x h)	50 x 50 x 8.35 mm

Photometric characteristics

Optical efficacy	95.6 %
Beam angle (FWHM 0-180, 90-270)	151.8°, 64.3°
Road application	P classes

Evaluation for P class residential lighting

LED source	Nichia 219C
Output luminous flux	500–3200 lm
Road width	4–6 m
Pole height	4–6 m
Arrangement	Single row, bottom

Technical performance

P road class	P2	P3	P4	P5	P6
Pole distance (m)	28	28	26	27	28
Height (m)	5	5	4.5	5	5
Em (lx)	10.59	7.59	5.28	3.11	2
Emin (lx)	2.04	1.62	1.05	0.77	0.43

Achieved values for specific P class residential lighting with Nichia 219C

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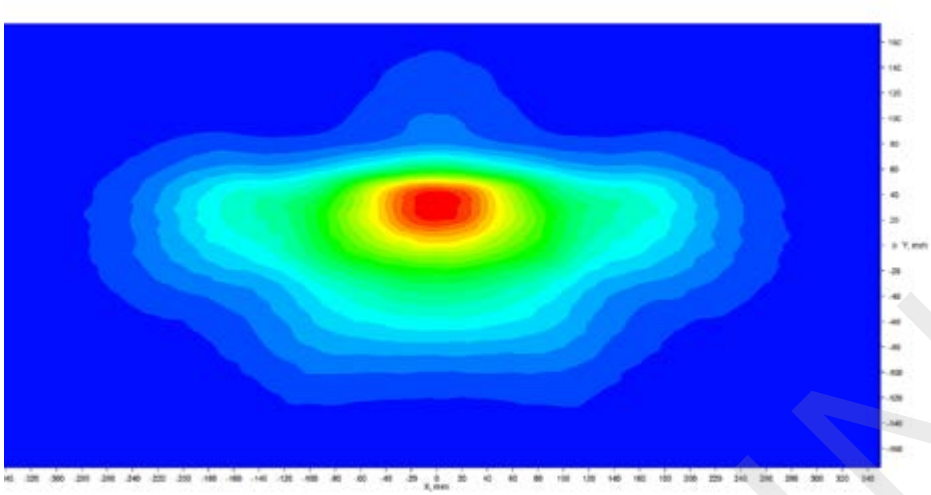
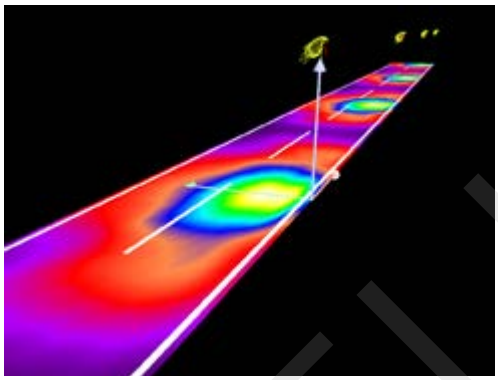
Optical performance

3D LIDCs

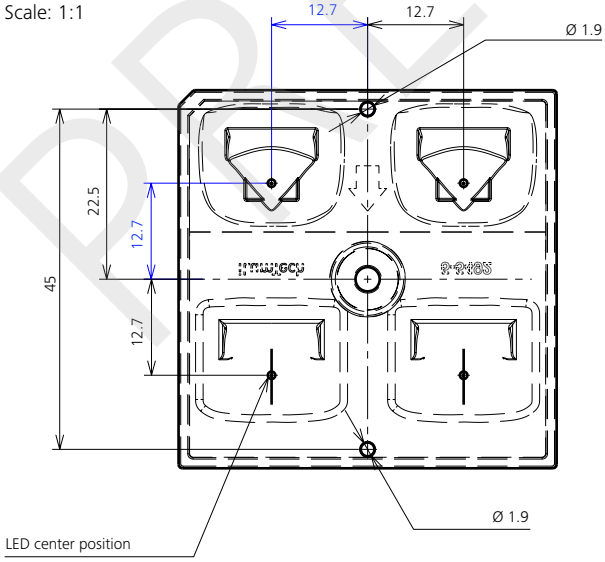


Illuminance zone map



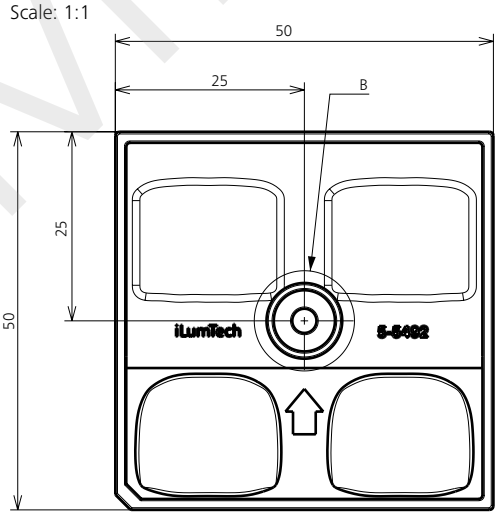
Example P class residential lighting scenario

Bottom view
Scale: 1:1

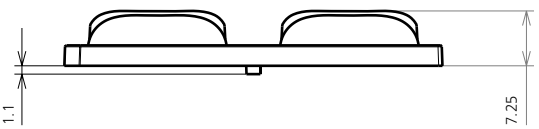


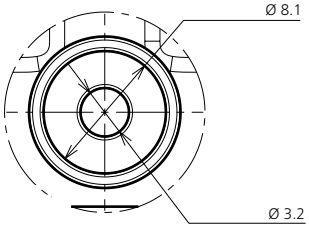
Dimensions

Top view
Scale: 1:1



Front view
Scale: 1:1





Detail B
Scale: 2:1

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