

PRODUCT DATASHEET CA12378_TINA2-W

TINA2-W

~45° wide beam. Assembly with holder, installation tape and location pins.

SPECIFICATION:

Dimensions	Ø 16.0 mm
Height	9.5 mm
Fastening	tape, pin
ROHS compliant	yes 🛈



MATERIALS:

Component TINA2-W-XP TINA2-HLD-BLK TINA-TAPE3

Туре	
Single lens	
Holder	
Таре	

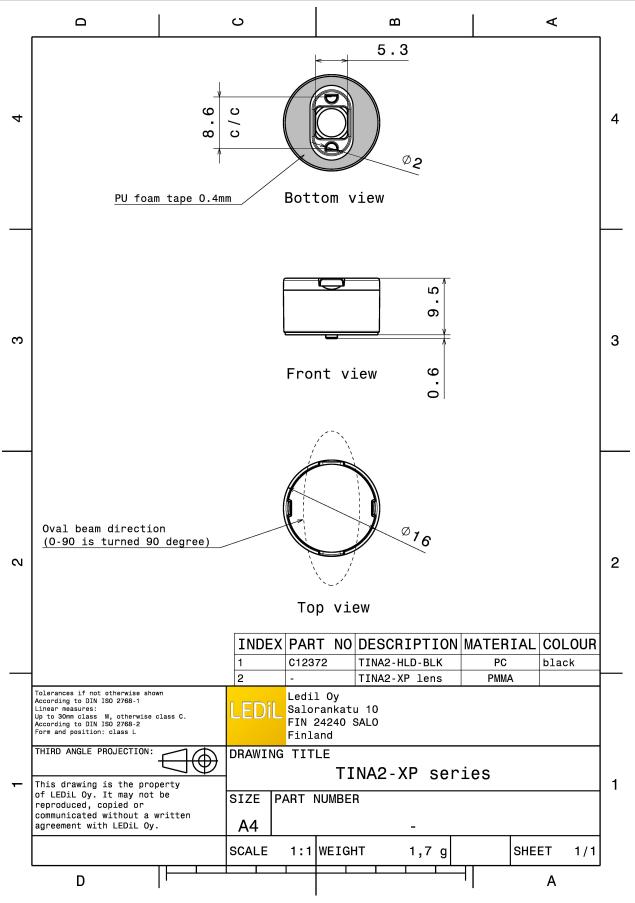
Material	Colour	Finish
PMMA	clear	
PC	black	
Acrylic foam	black	

ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
CA12378_TINA2-W	Single lens	4140	230	230	8.3
» Box size:					



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See also our general installation guide: <u>www.ledil.com/installation_guide</u>



OPTICAL RESULTS (MEASURED):

		90 ⁴ 990
	VD40	
	XD16	75
FWHM / FWTM	40.0° / 61.0°	
Efficiency	83 %	60 ⁴
Peak intensity	1.8 cd/lm	
LEDs/each optic	1	
Light colour	White	се.
Required compone	INTS:	
		30 ⁴ 35 ⁵ 3 ⁶
	EDS	20 ⁴ 20
LED	LUXEON CZ	
FWHM / FWTM	39.0° / 61.0°	
Efficiency	92 %	
Peak intensity	2.2 cd/lm	
LEDs/each optic	1	
Light colour	White	er er
Required compone		
		30"
A		10
UMIL	.EDS	90 ⁴
LED	LUXEON TX	
FWHM / FWTM	49.0° / 68.0°	
	88 %	
Efficiency	00 /0	
Peak intensity	1.6 cd/lm	
Peak intensity LEDs/each optic	1.6 cd/lm 1	
Peak intensity LEDs/each optic Light colour	1.6 cd/lm 1 White	
Peak intensity LEDs/each optic	1.6 cd/lm 1 White	
Peak intensity LEDs/each optic Light colour	1.6 cd/lm 1 White	
Peak intensity LEDs/each optic Light colour	1.6 cd/lm 1 White	
Peak intensity LEDs/each optic Light colour	1.6 cd/lm 1 White	
Peak intensity LEDs/each optic Light colour Required compone	1.6 cd/lm 1 White ints:	
Peak intensity LEDs/each optic Light colour Required compone	1.6 cd/lm 1 White ints:	
Peak intensity LEDs/each optic Light colour Required compone	1.6 cd/lm 1 White Ints: NVSxx19B/NVSxx19C	
Peak intensity LEDs/each optic Light colour Required compone	1.6 cd/lm 1 White ints: NVSxx19B/NVSxx19C 52.0° / 70.0°	
Peak intensity LEDs/each optic Light colour Required compone	1.6 cd/lm 1 White ints: NVSxx19B/NVSxx19C 52.0° / 70.0° 87 %	
Peak intensity LEDs/each optic Light colour Required compone NICHIA LED FWHM / FWTM Efficiency Peak intensity	1.6 cd/lm 1 White ints: NVSxx19B/NVSxx19C 52.0° / 70.0° 87 % 1.4 cd/lm	
Peak intensity LEDs/each optic Light colour Required compone NICHIA LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	1.6 cd/lm 1 White ints: NVSxx19B/NVSxx19C 52.0° / 70.0° 87 % 1.4 cd/lm 1	
Peak intensity LEDs/each optic Light colour Required compone MICHIA LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1.6 cd/lm 1 White ints: NVSxx19B/NVSxx19C 52.0° / 70.0° 87 % 1.4 cd/lm 1 White	
Peak intensity LEDs/each optic Light colour Required compone WICHIA ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	1.6 cd/lm 1 White ints: NVSxx19B/NVSxx19C 52.0° / 70.0° 87 % 1.4 cd/lm 1 White	
Peak intensity LEDs/each optic Light colour Required compone NICHIA LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1.6 cd/lm 1 White ints: NVSxx19B/NVSxx19C 52.0° / 70.0° 87 % 1.4 cd/lm 1 White	
Peak intensity LEDs/each optic Light colour Required compone MICHIA LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1.6 cd/lm 1 White ints: NVSxx19B/NVSxx19C 52.0° / 70.0° 87 % 1.4 cd/lm 1 White	



OPTICAL RESULTS (MEASURED):

ØNICHI			90* 90*
LED	NWSx229A		
FWHM / FWTM	55.0° / 77.0°		73.
Efficiency	84 %		
Peak intensity	1 cd/lm		60°
LEDs/each optic	1		
Light colour	White		97° (6°
Required component			
			15° 0° 15°
OSRAM Opto Semiconductors			90 ⁴
LED	OSLON Square EC		21 ⁶
FWHM / FWTM	52.0° / 72.0°		
Efficiency	85 %		60° 400 60°
Peak intensity	1.2 cd/lm		
LEDs/each optic	1		
Light colour	White		95* 45*
Required component	nts:		
			30° 12200 36°
			15° 0° 15°
OSDVW			7
OSRAM Opto Semiconductors			90 ¹⁴ 90 ¹⁴
OSRAM Opto Semiconductors LED	OSLON Square EC		30 ⁴ 70 ⁵
Opto Semiconductors	50.0° / 73.0°		32 35 36 36 20
opto Semiconductors LED FWHM / FWTM Efficiency			60 60 22 22 24 25 25 25 25 25
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	50.0° / 73.0°		80°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	50.0° / 73.0° 84 % 1.1 cd/lm 1		50 ⁴ 50 ⁴ 50 ⁴
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	50.0° / 73.0° 84 % 1.1 cd/lm 1 White		g*
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	50.0° / 73.0° 84 % 1.1 cd/lm 1 White		6. 6. 9. 9. 9. 9.
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	50.0° / 73.0° 84 % 1.1 cd/lm 1 White		91 [*] 91 [*] 75 61 [*] 60 60 60 60 60 60 60
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	50.0° / 73.0° 84 % 1.1 cd/lm 1 White		gr
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	50.0° / 73.0° 84 % 1.1 cd/lm 1 White		25° Cr 25
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	50.0° / 73.0° 84 % 1.1 cd/lm 1 White		34 th 35 th 12 th 34 th
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	50.0° / 73.0° 84 % 1.1 cd/lm 1 White nts:		24 ⁴ 25 ⁷ (4 ⁴ 15 ⁴ 34 ⁴
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Opto Semiconductors LED	50.0° / 73.0° 84 % 1.1 cd/lm 1 White nts:		34 th 35 th 12 th 34 th
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Opto Semiconductors LED FWHM / FWTM	50.0° / 73.0° 84 % 1.1 cd/lm 1 White nts: OSLON SSL 150 53.0° / 70.0°		34 th 35 th 12 th 34 th
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Opto Semiconductors LED FWHM / FWTM Efficiency	50.0° / 73.0° 84 % 1.1 cd/lm 1 White nts: OSLON SSL 150 53.0° / 70.0° 84 %		34 th 35 th 12 th 34 th
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	50.0° / 73.0° 84 % 1.1 cd/lm 1 White hts: OSLON SSL 150 53.0° / 70.0° 84 % 1.2 cd/lm		34 th 35 th 12 th 34 th
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Opto SERAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	50.0° / 73.0° 84 % 1.1 cd/lm 1 White nts: OSLON SSL 150 53.0° / 70.0° 84 % 1.2 cd/lm 1		34 th 35 th 12 th 34 th
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	50.0° / 73.0° 84 % 1.1 cd/lm 1 White hts: OSLON SSL 150 53.0° / 70.0° 84 % 1.2 cd/lm 1 White		6 ^t 60 5 ^t 25 6 ^t 60 5 ^t 25 6 ^t 6 ^t 6 ^t 5
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	50.0° / 73.0° 84 % 1.1 cd/lm 1 White hts: OSLON SSL 150 53.0° / 70.0° 84 % 1.2 cd/lm 1 White		6 ^t 60 5 ^t 25 6 ^t 60 5 ^t 25 6 ^t 6 ^t 6 ^t 5
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	50.0° / 73.0° 84 % 1.1 cd/lm 1 White hts: OSLON SSL 150 53.0° / 70.0° 84 % 1.2 cd/lm 1 White		6 ^t 60 5 ^t 25 6 ^t 60 5 ^t 25 6 ^t 6 ^t 6 ^t 5
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	50.0° / 73.0° 84 % 1.1 cd/lm 1 White hts: OSLON SSL 150 53.0° / 70.0° 84 % 1.2 cd/lm 1 White		6 ^t 60 5 ^t 25 6 ^t 60 5 ^t 25 6 ^t 6 ^t 6 ^t 5



OPTICAL RESULTS (MEASURED):

OSRAM Opto Semiconductors				
Opto Semiconductors				
LED	SFH 4170S			
FWHM / FWTM	38.0° / 61.0°			
Efficiency	%			
LEDs/each optic	1			
Light colour	IR			
Required compone				
required compone				
OSRAM				
Opto Semiconductors				
	SFH 4180S			
FWHM / FWTM	34.0° / 60.0°			
Efficiency	%			
LEDs/each optic	1			
Light colour	IR			
Required compone	nts:			
OSRAM				
Opto Semiconductors				
LED	SFH 4715S			
FWHM / FWTM	36.0° / 80.0°			
Efficiency	%			
LEDs/each optic	1			
Light colour	White			
Required compone	nts:			
SEOUL				7
SEOUL SEMICONDUCTOR			90*	90*
LED	Z5M3			
FWHM / FWTM	50.0° / 72.0°		25*	
Efficiency	86 %		ent	400
	/ •			
Peak intensity				
Peak intensity	1.3 cd/lm 1			
Peak intensity LEDs/each optic	1.3 cd/lm		45*	000
Peak intensity LEDs/each optic Light colour	1.3 cd/lm 1 White		8.	
Peak intensity LEDs/each optic	1.3 cd/lm 1 White			
Peak intensity LEDs/each optic Light colour	1.3 cd/lm 1 White		e.	00 OT
Peak intensity LEDs/each optic Light colour	1.3 cd/lm 1 White			00



		90* 90*
LED	XB-D	
FWHM / FWTM	40.0° / 64.0°	75*
Efficiency	89 %	
Peak intensity	1.9 cd/lm	60°
LEDs/each optic	1	
Light colour	' White	45*
Required components:	White	1220
Required components.		
		1600
		30° 2000 36° 36° 15°
		91 ⁶ 91 ⁶
LED	XE-G	
FWHM / FWTM	54.0° / 66.0°	75.
Efficiency	92 %	400
Peak intensity	1.4 cd/lm	60°
LEDs/each optic	1	
Light colour	White	er* er*
Required components:		
		1220
		36
CREE ÷		90 ⁴ 90 ⁴
	XO E HI	
LED	XQ-E HI 42.0° / 64.0°	
LED FWHM / FWTM	42.0° / 64.0°	54 54 59 40 40
LED FWHM / FWTM Efficiency	42.0° / 64.0° 92 %	
LED FWHM / FWTM Efficiency Peak intensity	42.0° / 64.0° 92 % 1.9 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	42.0° / 64.0° 92 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 64.0° 92 % 1.9 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	42.0° / 64.0° 92 % 1.9 cd/lm 1	25 60 60 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 64.0° 92 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 64.0° 92 % 1.9 cd/lm 1	25 60 60 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	42.0° / 64.0° 92 % 1.9 cd/lm 1 White	75°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 64.0° 92 % 1.9 cd/lm 1 White	3°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	42.0° / 64.0° 92 % 1.9 cd/lm 1 White	30, 30,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	42.0° / 64.0° 92 % 1.9 cd/lm 1 White	25 64 64 60 150 150 150 150 150 150 150 15
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	42.0° / 64.0° 92 % 1.9 cd/lm 1 White	25 40 50 50 50 50 50 50 50 50 50 5
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	42.0° / 64.0° 92 % 1.9 cd/lm 1 White	25 40 50 50 50 50 50 50 50 50 50 5
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	42.0° / 64.0° 92 % 1.9 cd/lm 1 White S LUXEON C 44.0° / 65.0° 91 %	25 40 50 50 50 50 50 50 50 50 50 5
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	42.0° / 64.0° 92 % 1.9 cd/lm 1 White S LUXEON C 44.0° / 65.0° 91 % 1.8 cd/lm	25 40 50 50 50 50 50 50 50 50 50 5
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CONTINUES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	42.0° / 64.0° 92 % 1.9 cd/lm 1 White S LUXEON C 44.0° / 65.0° 91 % 1.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	42.0° / 64.0° 92 % 1.9 cd/lm 1 White S LUXEON C 44.0° / 65.0° 91 % 1.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	42.0° / 64.0° 92 % 1.9 cd/lm 1 White S LUXEON C 44.0° / 65.0° 91 % 1.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	42.0° / 64.0° 92 % 1.9 cd/lm 1 White S LUXEON C 44.0° / 65.0° 91 % 1.8 cd/lm 1	



	S	
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	LUXEON IR Compact 51.0° / 64.0° 84 % 1 White	
)S	2014
LED	LUXEON Rubix	
ED FWHM / FWTM	47.0° / 68.0°	75
Efficiency	93 %	400
Peak intensity	1.7 cd/lm	60.6
LEDs/each optic	1	
Light colour	White	ge a
Required components:	Wine	1200
required components.		
		1630
		36 ⁴ 15 ⁵ 0 ⁶ 15 ⁵ 36 ⁵
	S	90° 90°
LED	LUXEON Rubix	
FWHM / FWTM	47.0° / 68.0°	75.
Efficiency	93 %	
		60° X 60°
Peak intensity	1.7 cd/lm	
	1.7 cd/lm 1	
LEDs/each optic	1	e ⁻
LEDs/each optic Light colour		g 0% g.
LEDs/each optic Light colour	1	gr (120
LEDs/each optic Light colour	1	gy 129
LEDs/each optic Light colour	1	er 22:9
Peak intensity LEDs/each optic Light colour Required components:	1	er 1200 30° 25° 0° 25° 0° 25°
LEDs/each optic Light colour Required components:	1 Blue	20° 000 000 0° 000 0
LEDs/each optic Light colour Required components:	1 Blue	1230 2609 2609 260 260 260 260 260 260 260 260
LEDs/each optic Light colour Required components:	1 Blue S LUXEON Rubix	200 200 200 200 200 200 200 200 200 200
LEDs/each optic Light colour Required components:	1 Blue S LUXEON Rubix 45.0° / 68.0°	1230 2609 2609 260 260 260 260 260 260 260 260
LEDs/each optic Light colour Required components:	1 Blue S LUXEON Rubix 45.0° / 68.0° 93 %	1239 30° 1250 0° 1250 0° 125° 90° 90° 90° 90° 90° 90° 90° 90
LEDs/each optic Light colour Required components: UED FWHM / FWTM Efficiency Peak intensity	1 Blue S LUXEON Rubix 45.0° / 68.0°	1239 30° 1250 0° 1250 0° 125° 90° 90° 90° 90° 90° 90° 90° 90
LEDs/each optic Light colour Required components: UDMILED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	1 Blue S LUXEON Rubix 45.0° / 68.0° 93 % 1.7 cd/m 1	1233 24 127 0 129 129 129 129 129 129 129 129
LEDs/each optic Light colour Required components: UDMILED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1 Blue S LUXEON Rubix 45.0° / 68.0° 93 % 1.7 cd/m	1239 30° 1250 0° 1250 0° 125° 90° 90° 90° 90° 90° 90° 90° 90
LEDs/each optic Light colour Required components: LUMILED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	1 Blue S LUXEON Rubix 45.0° / 68.0° 93 % 1.7 cd/m 1	1233 24 127 0 129 129 129 129 129 129 129 129
LEDs/each optic Light colour Required components: Control LUMILED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1 Blue S LUXEON Rubix 45.0° / 68.0° 93 % 1.7 cd/m 1	21 20 20 20 20 20 20 20 20 20 20 20 20 20
LEDs/each optic Light colour Required components: LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1 Blue S LUXEON Rubix 45.0° / 68.0° 93 % 1.7 cd/m 1	



	DS	90* 90*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 43.0° / 62.0° 93 % 2 cd/lm 1 White	200 200 200 200 200 200 200 200
Ø NICHIΛ		30*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	NCSxE17A 29.0° / 56.0° 90 % 3 cd/lm 1 White	75 64 67 102 200 200 200 200 200 200 200 200 200
OSRAM Opto Semiconductors		
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	SFH 4770S 32.0° / 61.0° 88 % 1 White	
OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Synios P2720 1 mm 31.0° / 60.0° 92 % 2.7 cd/lm 1 White	304 202 202 202 202 202 202 202 2



OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Synios P2720 1/2 mm 30.0° / 58.0° 92 % 2.8 cd/lm 1 White	6. 6. 60 70 70 70 70 70 70 70 70 70 70 70 70 70
Required components:		200 - 15° - 30°
OSRAM Opto Semiconductors		50*
LED	Synios P2720 1/4 mm	20 20
FWHM / FWTM	31.0° / 60.0°	
Efficiency	92 %	60°
Peak intensity	2.6 cd/lm	
LEDs/each optic	1	
Light colour	White	93* e3*
Required components:		20 ¹⁰ 20 ¹⁰ 20 ¹⁰ 30 ¹⁰
SAMSUN	IG	90*
LED	LH181B	
FWHM / FWTM	43.0° / 61.0°	75
Efficiency	93 %	60°
Peak intensity	2 cd/lm	
LEDs/each optic	1	
Light colour	White	et / 1230 et
Required components:		36 ⁵ 200 30 ⁴



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.

PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

The measured data in the provided downloadable LEDiL Product Datasheets and Mechanical 2D-Drawings is rounded and provided as reference for planning. LEDiL Oy's optical specifications have been verified by conducting performance testing of the products in accordance with the company's quality system. The reported data are averaged results of multiple measurements with typical variation. LEDiL Oy reserves the right to without prior notification make changes and improvements to its products.

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LEDiL Oy

Joensuunkatu 13 FI-24240 SALO Finland

LEDiL Inc. 228 West Page Street Suite D Sycamore IL 60178 USA

Ledil Optics Technology (Shenzhen) Co., Ltd. # 405 , Block B Casic Motor Building Shenzhen 518057 P.R.CHINA

Local sales and technical support www.ledil.com/ where_to_buy

Shipping locations Salo, Finland Hong Kong, China

Distribution Partners www.ledil.com/ where_to_buy