

# PRODUCT DATASHEET Tina2 series

### last update 15/10/2012



Ordering number	CA11016_TINA2-RS		
Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status	Tina2 Assembly XP-G Black 16.1 mm 9.7 mm Round PMMA PC Tape Ready	FWHM Efficiency cd/lm Gerber File	15 degrees 93 % 9.000 Available
Ordering number	CP12678_TINA2-D		
Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status	Tina2 Assembly XP-G Black 16.1 mm 9.65 mm Round PMMA PC Glue Ready	FWHM Efficiency cd/lm Gerber File	16 degrees 91 % 7.000 Available
Ordering number	CA11420_TINA2-D		
Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status	Tina2 Assembly XP-G Black 16.1 mm 9.66 mm Round PMMA PC Tape Ready	FWHM Efficiency cd/lm Gerber File	17 degrees 91 % 5.520 Available
Ordering number	CA11017_TINA2-M		
Family Type LED Color Diameter Height Style Optic Material	Tina2 Assembly XP-G Black 16.1 mm 9.7 mm Round PMMA PC	FWHM Efficiency cd/lm Gerber File	30 degrees 88 % 2.800 Available

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	Ordering number	CP12679_TINA2-M		
	Family	Tina2	FWHM	30 degrees
	Туре	Assembly	Efficiency	88 %
Dea	LED	XP-G	cd/lm	2.800
	Color	Black	Gerber File	Available
	Diameter	16.1 mm		, wanabio
	Height	9.65 mm		
	Style	Round		
and a second	Optic Material	PMMA		
	Holder Material	PC		
	Fastening	Glue		
	Status	Ready		
	Ordering number	CA11052_TINA2-O		
	Family	Tina2	FWHM	35+16 degrees
	Туре	Assembly	Efficiency	87 %
	LED	XP-G	cd/lm	3.900
A strange of the stra	Color	Black	Gerber File	Available
	Diameter	16.1 mm		
	Height	9.7 mm		
C	Style	Round		
Column	Optic Material	PMMA		
	Holder Material	PC		
	Fastening	Таре		
	Status	Ready		
	Ordering number	CP12680_TINA2-O		
	0			
	Family	Tina2	FWHM	35+16 degrees
	-	Assembly	FWHM Efficiency	87 %
	Family		Efficiency cd/lm	-
	Family Type	Assembly	Efficiency	87 %
	Family Type LED Color Diameter	Assembly XP-G	Efficiency cd/lm	87 % 3.900
	Family Type LED Color Diameter Height	Assembly XP-G Black 16.1 mm 9.82 mm	Efficiency cd/lm	87 % 3.900
	Family Type LED Color Diameter Height Style	Assembly XP-G Black 16.1 mm 9.82 mm Round	Efficiency cd/lm	87 % 3.900
	Family Type LED Color Diameter Height Style Optic Material	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA	Efficiency cd/lm	87 % 3.900
	Family Type LED Color Diameter Height Style Optic Material Holder Material	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC	Efficiency cd/lm	87 % 3.900
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue	Efficiency cd/lm	87 % 3.900
	Family Type LED Color Diameter Height Style Optic Material Holder Material	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC	Efficiency cd/lm	87 % 3.900
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue	Efficiency cd/lm	87 % 3.900
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status <b>Ordering number</b> Family	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue Ready CA12056_TINA2-W Tina2	Efficiency cd/lm Gerber File FWHM	87 % 3.900 Available 57 degrees
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status <b>Ordering number</b> Family Type	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue Ready CA12056_TINA2-W Tina2 Assembly	Efficiency cd/lm Gerber File FWHM Efficiency	87 % 3.900 Available 57 degrees 88 %
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status <b>Ordering number</b> Family Type LED	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue Ready CA12056_TINA2-W Tina2 Assembly XP-G	Efficiency cd/lm Gerber File FWHM Efficiency cd/lm	87 % 3.900 Available 57 degrees 88 % 1.000
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status <b>Ordering number</b> Family Type LED Color	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue Ready CA12056_TINA2-W Tina2 Assembly XP-G Black	Efficiency cd/lm Gerber File FWHM Efficiency	87 % 3.900 Available 57 degrees 88 %
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status <b>Ordering number</b> Family Type LED Color Diameter	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue Ready CA12056_TINA2-W Tina2 Assembly XP-G Black 16.1 mm	Efficiency cd/lm Gerber File FWHM Efficiency cd/lm	87 % 3.900 Available 57 degrees 88 % 1.000
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status <b>Ordering number</b> Family Type LED Color Diameter Height	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue Ready CA12056_TINA2-W Tina2 Assembly XP-G Black 16.1 mm 9.7 mm	Efficiency cd/lm Gerber File FWHM Efficiency cd/lm	87 % 3.900 Available 57 degrees 88 % 1.000
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status <b>Ordering number</b> Family Type LED Color Diameter Height Style	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue Ready CA12056_TINA2-W Tina2 Assembly XP-G Black 16.1 mm 9.7 mm Round	Efficiency cd/lm Gerber File FWHM Efficiency cd/lm	87 % 3.900 Available 57 degrees 88 % 1.000
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status <b>Ordering number</b> Family Type LED Color Diameter Height Style Optic Material	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue Ready CA12056_TINA2-W Tina2 Assembly XP-G Black 16.1 mm 9.7 mm Round PMMA	Efficiency cd/lm Gerber File FWHM Efficiency cd/lm	87 % 3.900 Available 57 degrees 88 % 1.000
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status <b>Ordering number</b> Family Type LED Color Diameter Height Style Optic Material Holder Material	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue Ready CA12056_TINA2-W Tina2 Assembly XP-G Black 16.1 mm 9.7 mm Round PMMA PC	Efficiency cd/lm Gerber File FWHM Efficiency cd/lm	87 % 3.900 Available 57 degrees 88 % 1.000
	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status Ordering number Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue Ready CA12056_TINA2-W Tina2 Assembly XP-G Black 16.1 mm 9.7 mm Round PMMA PC Tape	Efficiency cd/lm Gerber File FWHM Efficiency cd/lm	87 % 3.900 Available 57 degrees 88 % 1.000
<image/>	Family Type LED Color Diameter Height Style Optic Material Holder Material Fastening Status <b>Ordering number</b> Family Type LED Color Diameter Height Style Optic Material Holder Material	Assembly XP-G Black 16.1 mm 9.82 mm Round PMMA PC Glue Ready CA12056_TINA2-W Tina2 Assembly XP-G Black 16.1 mm 9.7 mm Round PMMA PC	Efficiency cd/lm Gerber File FWHM Efficiency cd/lm	87 % 3.900 Available 57 degrees 88 % 1.000

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Family	Tina2
Туре	Assembly
LED	XP-G
Color	Black
Diameter	16.1 mm
Height	9.65 mm
Style	Round
Optic Material	PMMA
Holder Material	PC
Fastening	Glue
Status	Ready

Ordering number CP12681\_TINA2-W

FWHM Efficiency cd/lm Gerber File 57 degrees 88 % -Available

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.

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### **GENERAL INFORMATION**

- Product series especially designed & optimized for XP-G 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%208N%20UL94\_Yellow%20Card.pdf http://ledil.fi/sites/default/files/Documents/Technical/Material/PMMA%208N%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

- Fastening to PCB with appropriate adhesive. By clicking link below you can find Ledil recommended glue options.

http://www.ledil.com/datasheets/DataSheet\_GLUES.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 boar 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.

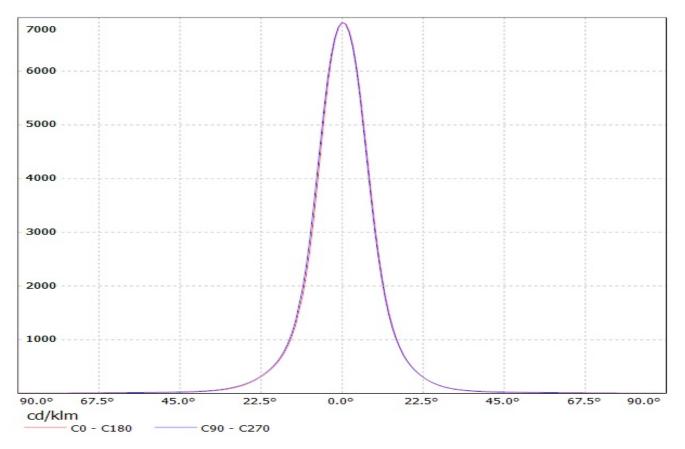
Further note that optical components shall not be cleaned with any chemicals - only micro fiber cloth may be used to remove fingerprints or other traces from handling. NOTE 1: We advise customer to ensure the suitability and sufficiency of the bond in the end product. For example, mechanical stress, vibration and holes on the surface of the circuit boar weaken the strength of the glue.

NOTE 2: All surfaces where glue 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.

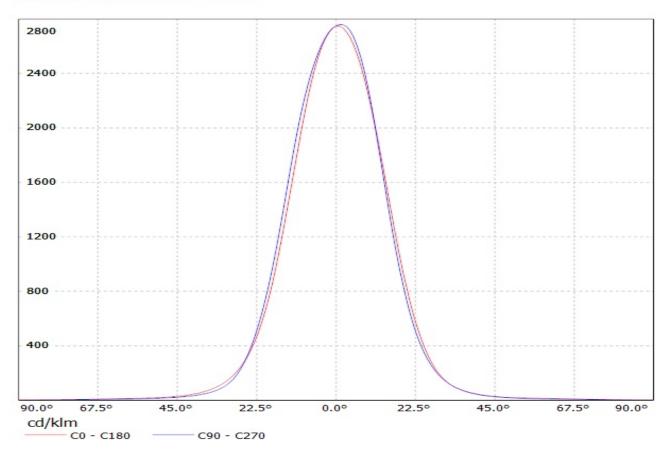
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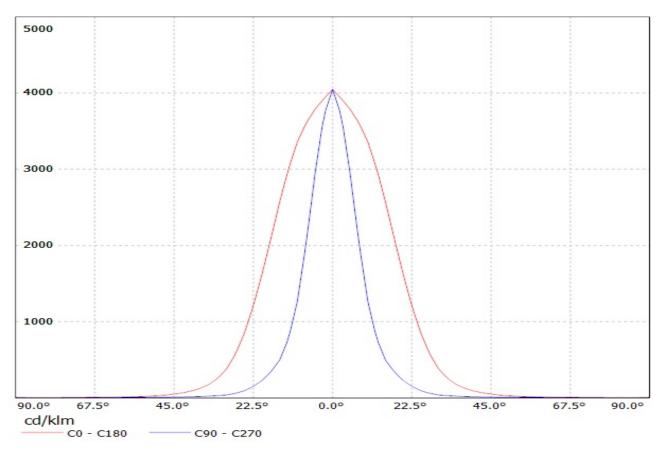
#### Luminaire: LEDIL OY CP12678\_TINA2-D (XP-G) Efficiency=91% Lamps: 1 x Cree XP-G (92Im@250mA)

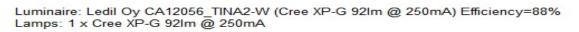


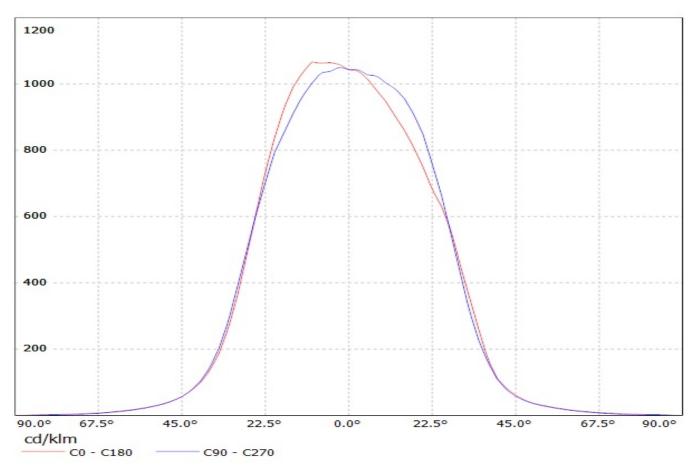
#### Luminaire: LEDIL OY CP12679\_TINA2-M (XP-G) Efficiency=87% Lamps: 1 x Cree XP-G (92Im@250mA)



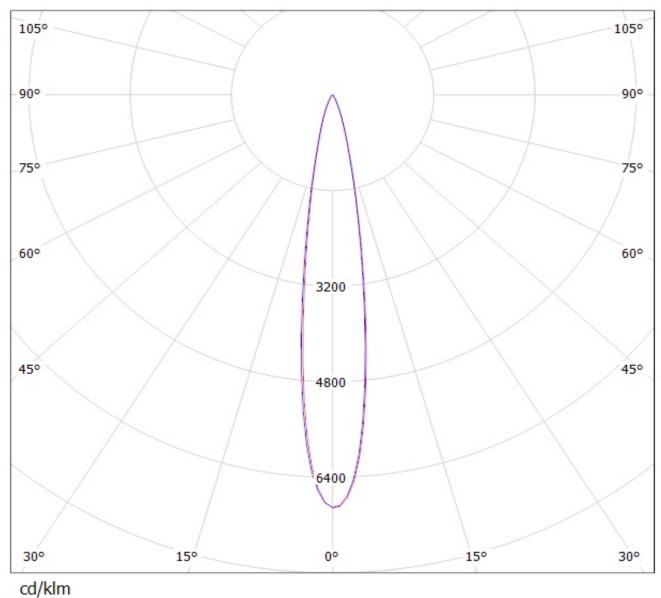






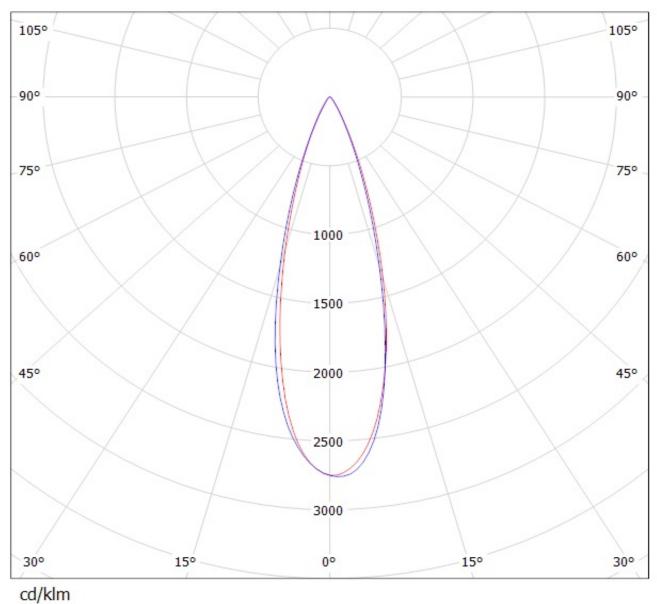


## Luminaire: LEDIL OY CP12678\_TINA2-D (XP-G) Efficiency=91% Lamps: 1 x Cree XP-G (92Im@250mA)



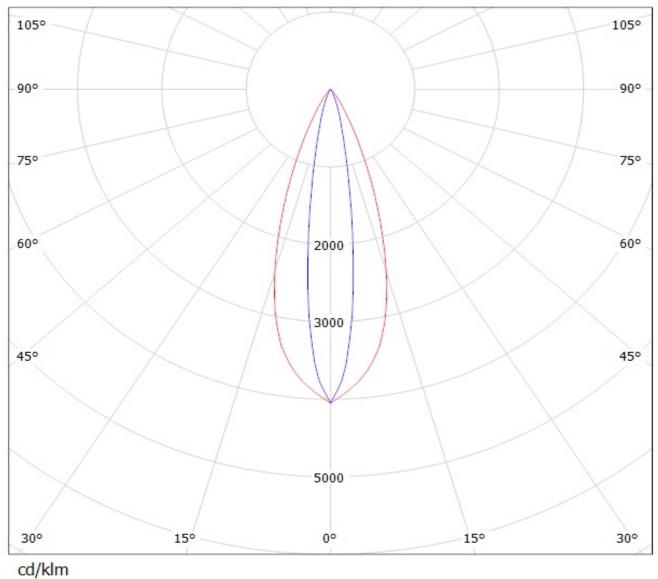
\_\_\_\_\_ C0 - C180 \_\_\_\_\_ C90 - C270

## Luminaire: LEDIL OY CP12679\_TINA2-M (XP-G) Efficiency=87% Lamps: 1 x Cree XP-G (92Im@250mA)



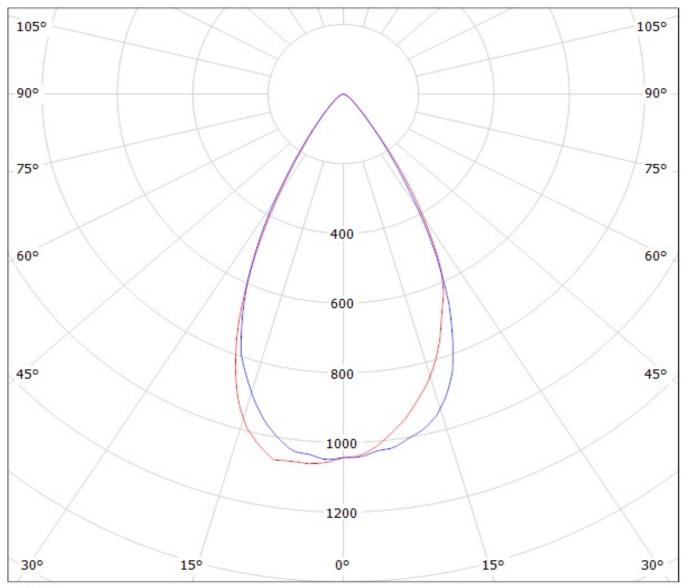
\_\_\_\_\_ C0 - C180 \_\_\_\_\_ C90 - C270

## Luminaire: LEDIL OY CP12680\_TINA2-O (XP-G) Efficiency=87% Lamps: 1 x Cree XP-G (92Im@250mA)



\_\_\_\_\_ C0 - C180 \_\_\_\_\_ C90 - C270

Luminaire: Ledil Oy CA12056\_TINA2-W (Cree XP-G 92Im @ 250mA) Efficiency=88% Lamps: 1 x Cree XP-G 92Im @ 250mA



cd/klm \_\_\_\_\_ C0 - C180

C90 - C270