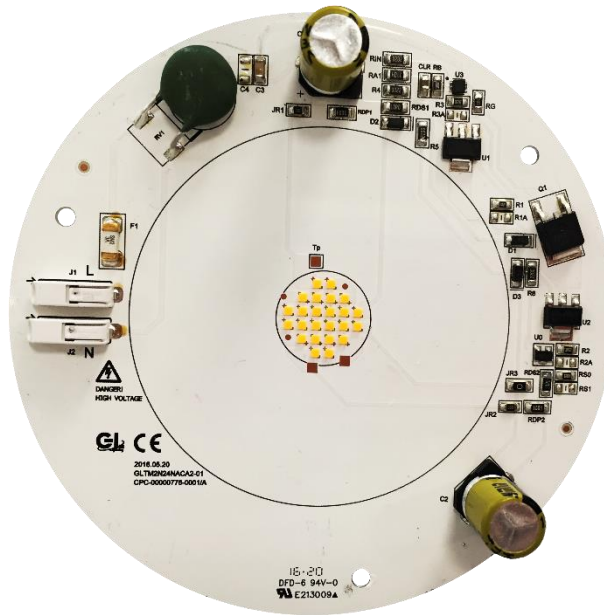




DATA SHEET

AC Direct CSP Series

AC Direct CSP SERIES

The AC Direct CSP series of products do not need the standard converter essential for conventional general lighting products. This will also allow for a much smaller form factor from an overall fixture design allowing for higher creativity in the fixture; It is made up of flip chip LEDs and has small LES, more flexible when design and can meet various requirement from mechanical.

PRODUCT DESCRIPTION

Connects directly to AC line voltage

Multiple CCTs available (2700K-6500K)

CRI80&90 options

3 step MacAdam color binning

Small light emitting surface

Flicker Percent<30%

Triac Dimming

UL file number: E476040

5 year warranty at $T_p \leq 70^\circ\text{C}$

TARGET APPLICATIONS

Down light

Spot Light

Ceiling lighting

...

APPLIED STANDARDS

EN 62031

EMC: EN 55015 EN 61547 EN 61000-3-2 EN 61000-3-3 EN 61000-4-4 EN 61000-4-5

EMI: EN55015 EN61000-3-2 EN61000-3-3

EMS: EN61547

EMF: EN62493

UL 8750

Energy Star surge protection requirements

Note: All specifications are subject to change without notice.

GLV74CA2A21/CW-DA10TSE124 WHITE SERIES

PARAMETER	CONDITIONS
PCB	MCPCB with Φ 102mm
	UL component file number: E213009
Emitter Type	24 x CSP emitter 1.34*1.34mm LEDs
	UL component file number: E347623
Circuit Layout	24S
Connector Type	Wago connector: 2060-451/998-404
Thermal Resistance (p-n junction to chip point)	Rth= 2 K/W
Thermal Resistance (Ts to Tp)	Approx. 0.0200°C/W
Thermal Resistance (Ts to the back of Tp)	Approx. 0.0399°C/W

PRODUCT SELECTION GUIDE

PART NUMBER (without cover)	PART NUMBER (with cover)	CCT	CRI (min.)
GLV74CA2A21/CW-DA10TSE124827	GLV74CA2A21/CW-DA10TSE124827P	2700K	80
GLV74CA2A21/CW-DA10TSE124927	GLV74CA2A21/CW-DA10TSE124927P		90
GLV74CA2A21/CW-DA10TSE124830	GLV74CA2A21/CW-DA10TSE124830P	3000K	80
GLV74CA2A21/CW-DA10TSE124930	GLV74CA2A21/CW-DA10TSE124930P		90
GLV74CA2A21/CW-DA10TSE124835	GLV74CA2A21/CW-DA10TSE124835P	3500K	80
GLV74CA2A21/CW-DA10TSE124840	GLV74CA2A21/CW-DA10TSE124840P	4000K	80
GLV74CA2A21/CW-DA10TSE124850	GLV74CA2A21/CW-DA10TSE124850P	5000K	80
GLV74CA2A21/CW-DA10TSE124857	GLV74CA2A21/CW-DA10TSE124857P	5700K	80
GLV74CA2A21/CW-DA10TSE124865	GLV74CA2A21/CW-DA10TSE124865P	6500K	80

Note: All specifications are subject to change without notice.

BOARD OPTICAL CHARACTERISTICS (Ts=25 °C)

BOARD	CCT	CRI	FLUX (lm)		EFFICACY (lm/W)	
			MIN.	TYP.	MIN.	TYP.
GLV74CA2A21/C W-DA10TSE124 Series	2700K	80	944	1023	94	102
		90	785	944	78	94
	3000K	80	944	1023	94	102
		90	785	944	78	94
	3500K	80	1023	1103	102	110
	4000K	80	1023	1103	102	110
	5000K	80	1103	1182	110	118
	5700K	80	1023	1103	102	110
	6500K	80	1023	1103	102	110

BOARD OPTICAL CHARACTERISTICS (Ts=25 °C)*

BOARD	CCT	CRI	FLUX (lm)		EFFICACY (lm/W)	
			MIN.	TYP.	MIN.	TYP.
GLV74CA2A21/C W-DA10TSE124 Series	2700K	80	865	937	86	94
		90	719	865	72	86
	3000K	80	865	937	86	94
		90	719	865	72	86
	3500K	80	937	1010	94	101
	4000K	80	937	1010	94	101
	5000K	80	1010	1083	101	108
	5700K	80	937	1010	94	101
	6500K	80	937	1010	94	101

* The data is based on plastic protective cover efficiency 91.6%

BOARD ELECTRICAL CHARACTERISTICS

	Min.	Typ.	Max.
Voltage (V)	108	120	132
Total Board Power (W)	-	10±10%	-

TECHNICAL CHARACTERISTICS*

Input Frequency	Vac(V)	Iin(A)	PF	THD (%)	Pin(W)	Flicker Percent (%)	Flicker Index	Surge Protection
50/60Hz	108	0.084	0.977	21.24	8.9	16.88	0.06	1KV
	115	0.085	0.988	12.43	9.69	15.89	0.05	
	120	0.084	0.992	6.65	10.02	16.76	0.05	
	125	0.082	1.00	3.27	10.24	16.20	0.05	
	132	0.078	0.992	5.32	10.32	14.79	0.04	

* sample testing data.

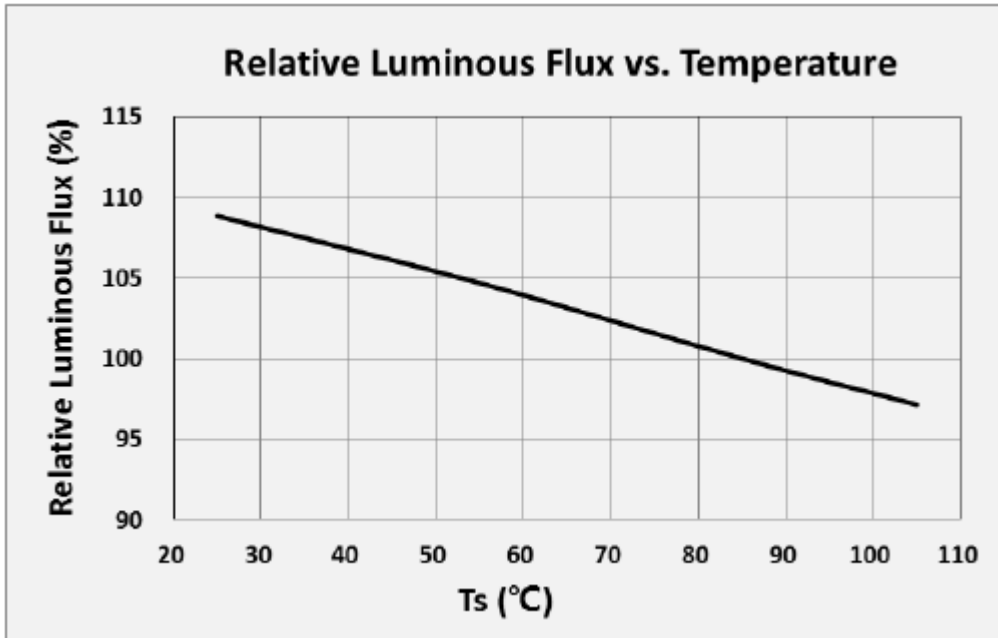
TECHNICAL CHARACTERISTICS

Input Frequency	PFC	THD	Surge Protection
50/60Hz	>0.95	<30%	1KV

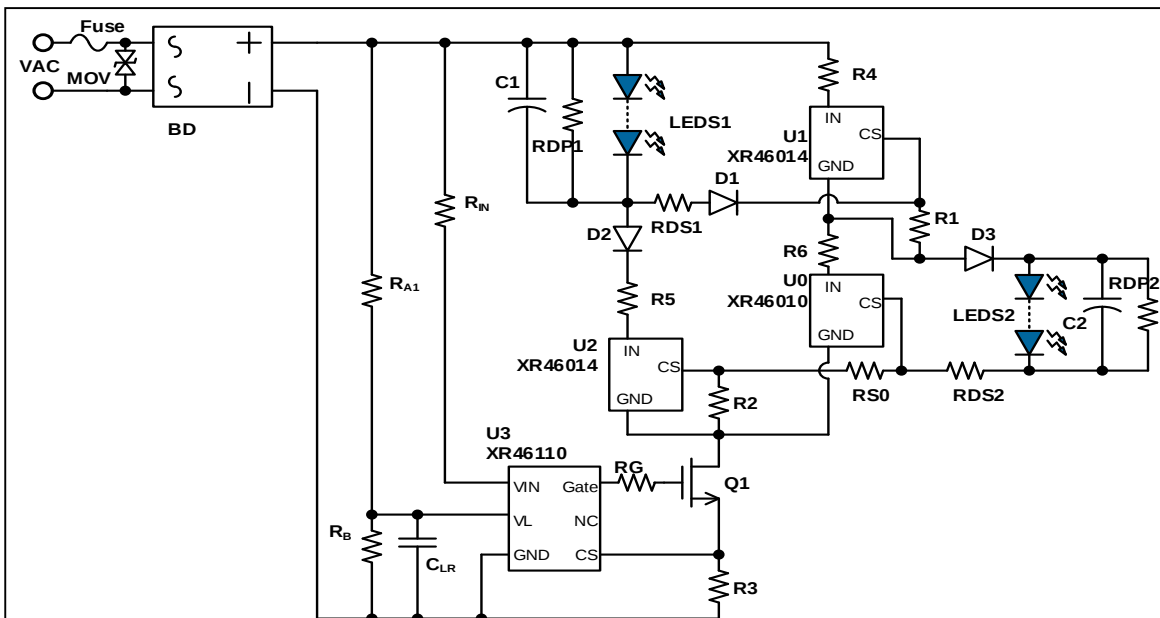
ENVIRONMENTAL CHARACTERISTICS

	Storage Temperature	PCB Temperature (T _p)
Min.	-40°C	-40°C
Max.	85°C	80°C

TEMPERATURE CHARACTERISTICS

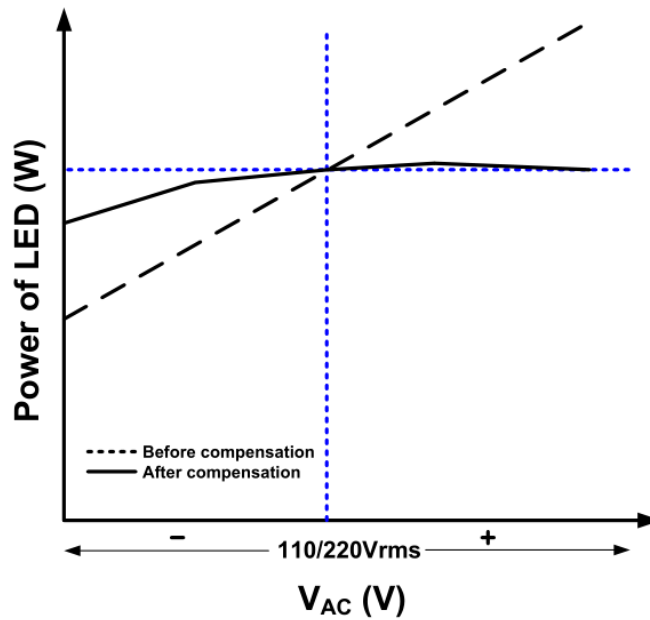


ELECTRICAL CIRCUIT DIAGRAM



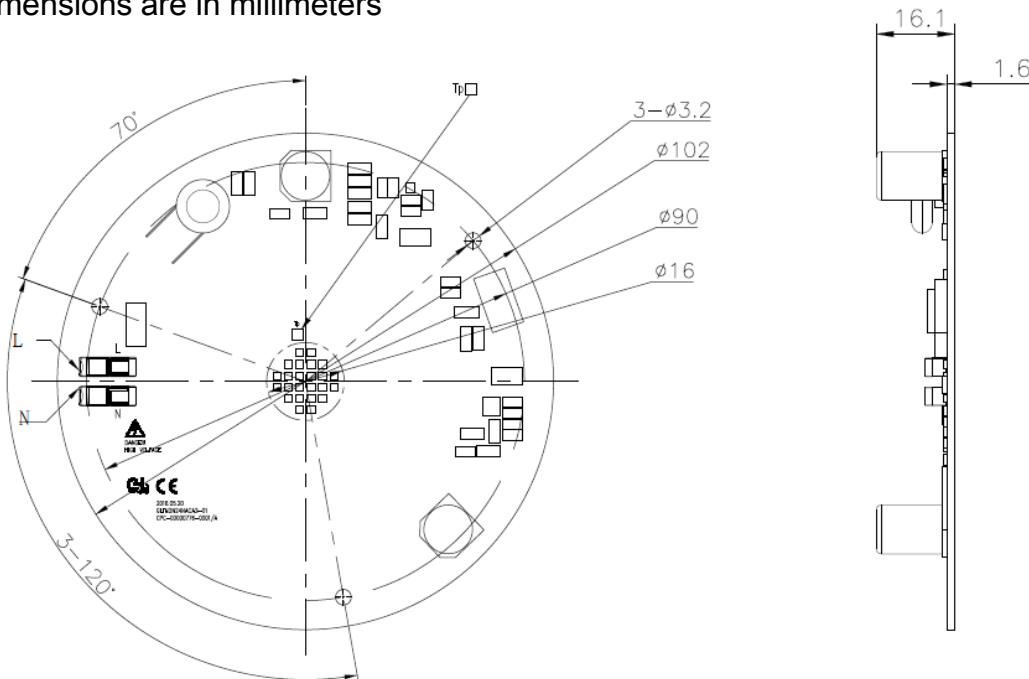
Note: All specifications are subject to change without notice.

POWER CHARACTERISTICS



MECHANICAL DIMENSIONS OF BOARD

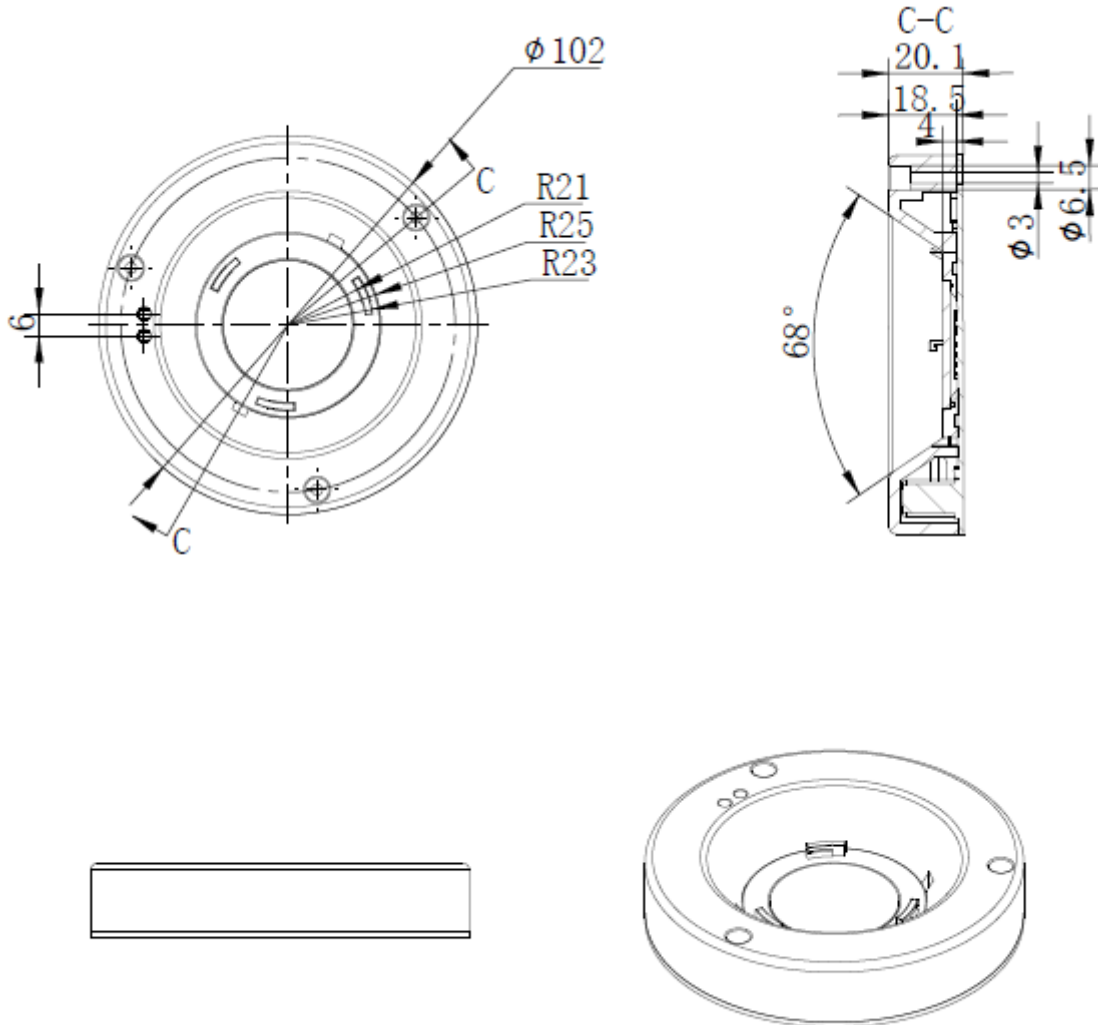
All dimensions are in millimeters



Note: All specifications are subject to change without notice.

MECHANICAL DIMENSIONS OF COVER

All dimensions are in millimeters



GLVA1PCA21	
Size	$\Phi 102\text{mm}$
Efficiency	91.6%

Note: All specifications are subject to change without notice.

ADDITIONAL INFORMATION

Installation by qualified electrician only

For safety reasons, the AC light engine must be operated with protection cover or safety glass

Suitable only for operation with line voltages

Suitable for luminaire of protection class 1, grounding is mandatory to comply with safety standards

The AC light engine needs to be mounted to a heat sink

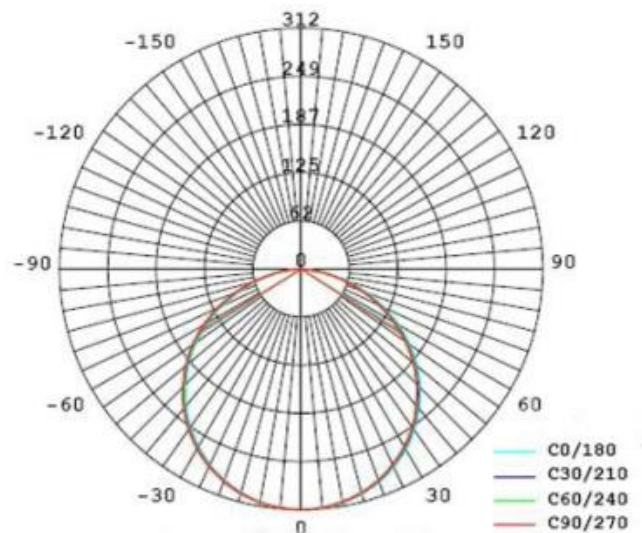
For optimal cooling a thermal interface material should be applied between AC light engine and heat sink

It is highly recommended to use **an electrically isolated** thermal interface material (TIM*). The TIM needs to enable adequate heat transfer, during installation it has to be taken care not to create air inclusions between surfaces. For this purpose it is recommended to use a heat sink with even and clean surfaces.

* 3M 8810 Thermal Conductive Adhesive Tapes are recommended

RADIATION CHARACTERISTICS (120VAC 10W Module)

luminous intensity unit: cd



Average beam angle(50%): 115.4°

Note: All specifications are subject to change without notice.

PART NUMBERING & ORDERING INFORMATION

1. PRODUCT SERIES GLV74CA2A21 – Circular MCPCB dia.102mm	4. PRODUCT WATTAGE 10– 10W	7. LED NUMBER 24– 24 LEDs
2. CONNECTOR TYPE CW – Wago connector 2060-451/998-404	5. DIMMING T – Triac dimming	8. CCT 827 – CRI80 2700K ANSI 927 – CRI90 2700K ANSI 830 – CRI80 3000K ANSI 930 – CRI90 3000K ANSI 835 – CRI80 3500K ANSI 840 – CRI80 4000K ANSI 850 – CRI80 5000K ANSI 857 – CRI80 5700K ANSI 865 – CRI80 6500K ANSI
3. INPUT VOLTAGE DA - IML low flicker solution for 120Vac ±10%	6. LED TYPE SE1 – LM102A LED, 1P	9. COVER P – Protective cover

Part Number :

GLV74CA2A21 / CW – DA 10 T SE1 24 827 P
1 2 3 4 5 6 7 8 9

Note: All specifications are subject to change without notice.

DIMMER COMPATIBILITY

Brands	Model	Dimmer Type	Min Flux(%)
Cooper	DAL06P	Leading	0.98
Cooper	TAL06P	Leading	0.00
Cooper	SAL06P	Leading	0.40
Leviton	IP106-1LZ	Leading	2.16
Leviton	6602	Leading	0.00
Leviton	6633	Leading	0.00
Leviton	6681	Leading	0.00
Leviton	6683	Leading	0.00
Leviton	6672	Leading	2.18
Leviton	6674	Leading	2.63
Leviton	6631	Leading	0.00
LUTRON	DV-600P-IV	Leading	0.00
LUTRON	AY-600P-IV	Leading	0.00
LUTRON	DV-600PR-WH	Leading	0.00
LUTRON	DV-600PR-LA	Leading	0.00
LUTRON	TG-600PR-LA	Leading	0.50
LUTRON	CTCL-153P	Leading	0.00
LUTRON	MACL-153MH-WH	Leading	2.69
LUTRON	DVELV-300P	Trailing	3.14

LEDiL REFLECTOR COMPATIBILITY

Product Number	Family	Diameter (mm)	Height (mm)
F13839_ANGELINA-XW-B	ANGELINA	82	31
C11979_LENA-S	Lena	111	80
C11980_LENA-W	Lena	111	80
C12154_LENA-M	Lena	111	80
C12597_LENINA-S	Lenina	74	40
C12598_LENINA-M	Lenina	/	/
C12599_LENINA-W	Lenina	74	40
C12948_LENA-WAS	Lena	111	37
C12958_LENINA-XW	Lenina	74	40
C13101_LENA-X-WAS	Lena	111	37
C14346_ANGELETTE-WAS	Angelette	97.2*83.4	84.1
CN12293_LENA-S	Lena	111	85.6
CN12294_LENA-M	Lena	111	85.6
CN12295_LENA-W	Lena	111	85.6
CN12296_LENA-S-DL	Lena	111	85.6
CN12297_LENA-M-DL	Lena	111	85.6
CN12298_LENA-W-DL	Lena	111	85.6
CN12644_LENINA-S	Lenina	74	45.6
CN12645_LENINA-M	Lenina	74	45.6

LEDiL REFLECTOR COMPATIBILITY

Product Number	Family	Diameter (mm)	Height (mm)
CN12646_LENINA-W	Lenina	74	45.6
CN12647_LENINA-S-DL	Lenina	74	47.7
CN12648_LENINA-M-DL	Lenina	74	47.7
CN12649_LENINA-W-DL	Lenina	74	47.7
CN12706_LENINA-S	Lenina	74	46.3
CN12707_LENINA-M	Lenina	74	46.3
CN12708_LENINA-W	Lenina	74	46.3
CN12709_LENINA-S-DL	Lenina	74	48.4
CN12710_LENINA-M-DL	Lenina	74	48.4
CN12711_LENINA-W-DL	Lenina	74	48.4
CN12716_LENINA-M	Lena	111	86.3
CN12717_LENINA-W	Lena	111	86.3
CN12721_LENINA-S-DL	Lena	111	87.6
CN12722_LENINA-M-DL	Lena	111	87.6
CN12723_LENINA-W-DL	Lena	111	87.6
CN12962_LENINA-XW	Lenina	74	45.6
CN12965_LENINA-XW	Lenina	74	46.3
CN12975_LENINA-XW-DL	Lenina	74	47.7
CN12979_LENINA-XW-DL	Lenina	74	48.4
CN13162_LENINA-WAS	Lena	111	38.2

LEDiL REFLECTOR COMPATIBILITY

Product Number	Family	Diameter (mm)	Height (mm)
CN13164_LENA-WAS	Lena	111	/
CN13172_LENA-WAS-DL	Lena	111	40.3
CN13174_LENA-WAS-DL	Lena	111	/
CN13370_LENA-X-WAS	Lena	111	39.1
CN13372_LENA-X-WAS-DL	Lena	111	42
CN13457_LENA-X-WAS-DL	Lena	111	40.3
CN13461_LENA-X-WAS	Lena	111	38.2
CN13649_LENA-SS	Lena	111	87.6
CN13650_LENA-SS-DL	Lena	111	87.6
CN14060_LENA-S	Lena	/	/
CN14061_LENA-M	Lena	111	84.4
CN14063_LENA-WAS	Lena	111	37.01
CN14064_LENA-SS	Lena	111	84.4
CN14065_LENA-S-DL	Lena	111	86
CN14066_LENA-M-DL	Lena	111	86
CN14078_LENA-WAS-DL	Lena	111	39.11
CN14079_LENA-X-WAS	Lena	111	37.01
CN14080_LENA-X-WAS-DL	Lena	111	39.11
CN14081_LENA-SS-DL	Lena	111	86
CN14093_LENINA-S	Lenina	74	44.4

LEDiL REFLECTOR COMPATIBILITY

Product Number	Family	Diameter (mm)	Height (mm)
CN14094_LENINA-M	Lenina	74	44.4
CN14095_LENINA-W	Lenina	74	44.4
CN14096_LENINA-XW	Lenina	74	44.4
CN14097_LENINA-XW-DL	Lenina	74	46.15
CN14098_LENINA-W-DL	Lenina	74	46.15
CN14099_LENINA-M-DL	Lenina	74	46.15
CN14100_LENINA-S-DL	Lenina	74	46.15
CN14421_ANGELETTE-WAS	Angelette	97.2*83.4	/
CN14577_LENENA-S-DL	Lena	/	/
CN14578_LENENA-M-DL	Lena	/	/
CN14579_LENENA-W-DL	Lena	/	/
CN14580_LENENA-WAS-DL	Lena	/	/
CN14581_LENENA-X-WAS-DL	Lena	/	/
CN14582_LENINA-S-DL	Lenina	/	/
CN14583_LENINA-M-DL	Lenina	/	/
CN14584_LENINA-W-DL	Lenina	/	/
CN14585_LENINA-XW-DL	Lenina	/	/
F13325_ANGELINA-S	ANGELINA	82	31
F13379_ANGELA-S	ANGELINA	119.5	74.27
	ANGELA		

LEDiL REFLECTOR COMPATIBILITY

Product Number	Family	Diameter (mm)	Height (mm)
F13380_ANGELA-M	ANGELINA	119.5	74.5
	ANGELA		
F13381_ANGELA-W	ANGELINA	119.5	74.5
	ANGELA		
F13401_ANGELINA-M	ANGELINA	82	31
F13402_ANGELINA-W	ANGELINA	82	31
F13659_ANGELINA-S-B	ANGELINA	82	31
F13660_ANGELINA-M-B	ANGELINA	82	31
F13661_ANGELINA-W-B	ANGELINA	82	31
F13662_ANGELA-S-B	ANGELINA	119.5	74.5
	ANGELA		
F13663_ANGELA-M-B	ANGELINA	119.5	74.5
	ANGELA		
F13664_ANGELA-W-B	ANGELINA	119.5	74.5
	ANGELA		
F13839_ANGELINA-XW-B	ANGELINA	82	31
F13840_ANGELA-XW	ANGELINA	119.5	74.5
	ANGELA		
F13841_ANGELA-XW-B	ANGELINA	119.5	74.5
	ANGELA		

LEDiL REFLECTOR COMPATIBILITY

Product Number	Family	Diameter (mm)	Height (mm)
F14532_ANGELETTE-S	Angelette	110	57.3
F14533_ANGELETTE-M	Angelette	110	57.3
F14534_ANGELETTE-WW	Angelette	110	57.3
F14616_ANGELETTE-S-B	Angelette	110	57.3
F14617_ANGELETTE-M-B	Angelette	110	57.3
F14618_ANGELETTE-WW-B	Angelette	110	57.3
F14619_ANGELETTE-S-PLAIN	Angelette	110	57.3
F14620_ANGELETTE-M-PLAIN	Angelette	110	57.3
F14621_ANGELETTE-M-B-PLAIN	Angelette	110	57.3
F14622_ANGELETTE-WW-PLAIN	Angelette	110	57.3
F14623_ANGELETTE-WW-B-PLAIN	Angelette	110	57.3
F14624_ANGELETTE-S-B-PLAIN	Angelette	110	57.3
FC13977_ANGELINA-RZ-S-B	ANGELINA	82	31
FC13978_ANGELINA-RZ-M-B	ANGELINA	82	31
FC13979_ANGELINA-RZ-W-B	ANGELINA	82	31
FC13980_ANGELA-RZ-S-B	ANGELA	119.5	74.5
FC13982_ANGELINA-RZ-XW-B	ANGELINA	82	31
FC13983_ANGELA-RZ-XW-B	ANGELA	119.5	74.5
FC13987_ANGELA-RZ-M-B	ANGELA	119.5	74.5
FC13988_ANGELA-RZ-W-B	ANGELA	119.5	74.5

LEDiL REFLECTOR COMPATIBILITY

Product Number	Family	Diameter (mm)	Height (mm)
FC13991_ANGELA-RZ-S	ANGELINA	119.5	74.5
FCN13691_ANGELINA-S	ANGELINA	82	36.04
FCN13692_ANGELINA-M	ANGELINA	82	36.04
FCN13693_ANGELINA-W	ANGELINA	82	36
FCN13697_ANGELA-S	ANGELA	119.5	79.31
FCN13698_ANGELA-M	ANGELA	119.5	79.31
FCN13704_ANGELA-W	ANGELA	119.5	79.31
FCN13912_ANGELINA-XW	ANGELINA	/	/
FCN14691_ANGELA-XW	ANGELA	119.5	/
FN13323_STELLA-A	STELLA	70	22
FN14074_STELLA-HB	STELLA	90	19.5
FN14253_STELLA-A	STELLA	90	22
FN14637_OLIVIA-S	Olivia	70	22.6
FN14645_STELLA-T4	STELLA	90	26.9
FN14720_STELLA-FRESNEL	STELLA	90	23
FN14828_OLIVIA-M	Olivia	70	22.6
FN14976_STELLA-DWC2	STELLA	90	19.25
FN15186_STELLA-HB	STELLA	90	19.5
FN15187_STELLA-T4	STELLA	90	26.9
FN15188_STELLA-FRESNEL	STELLA	90	23
FP15073_ZORYA-SC-50	Zorya	56	29.1

THERMAL CONSIDERATIONS

The LED module must be operated in environmental conditions where the ambient air temperature does NOT exceed a value which would cause the LEDs to exceed their maximum junction temperature (per the LED Supplier datasheet) or cause the maximum board temperature (T_p) to be exceeded.

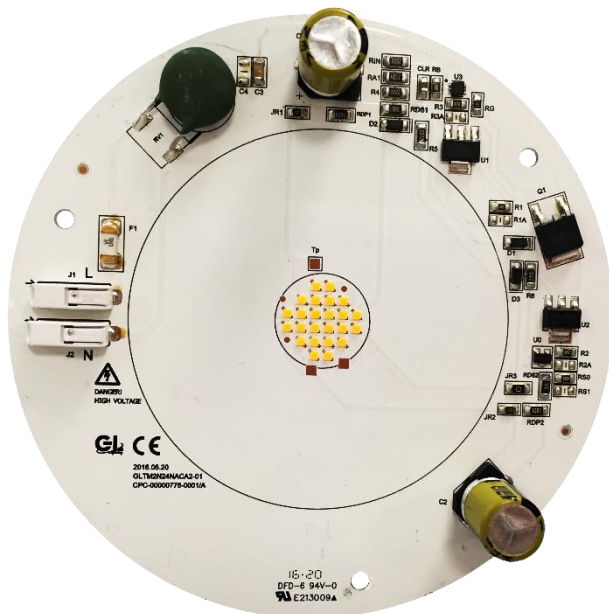
A heat sink can be used with the LED module in order to maintain the LED junction temperature and the PCB temperature below their maximum ratings however, the following recommendations should be followed:

- The mounting surface for the LED module must be flat;
- Avoid bending of the PCB to avoid damaging the LEDs and the solder connections;
- Use a thermal interface material between the PCB and the heat sink.

For optimal lifetime performance, the LED module must be placed in an environment where air can flow freely around the luminaire, promoting heat transfer from conduction to the heat sink and from radiation to the air. It is not recommended to expose the module to direct sunlight or any other heat source.

Thermal Measurement

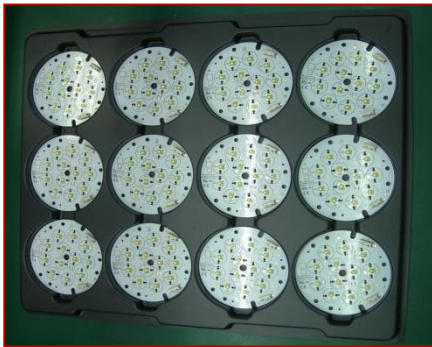
The maximum allowed temperature at the T_p point of the board is 70°C. This temperature is not based on the LM-80 standard but is for warranty purposes only.



Note: All specifications are subject to change without notice.

PACKAGING INFORMATION

INNER PACKING	SIZE	TRAY	QTY
TYPE	345*295*11mm	1	20



210	
Manuf Part Number(1P):GL91C76761/CN-LG12	
Lot#(1T):	
Date Code(9D):	
Country of Origin (4L) :	
Qty(Q): 12	60

INNER PACKING	SIZE	TRAY	QTY
TYPE 1	350*300*250mm	15	300

PRODUCT LABELLING



230	
Package ID(3S):FA45+1113GL110323P	
Manuf Part Number(1P):GL91C76761/CN-LG12	
QTY(Q):12	
Trans ID(K): ZPA102	
Date Code(9D):	90
Country of Origin (4L) :CN	



105	
FROM: General Luminaire (Shanghai) Co.LTD. 7F NO1128 Jindu Road Minhang District Shanghai, China 201108	
TO: Future Electronics Asia Pacific Distribution Center(APDC) 19 Jiyang Way,#01-08/ 09 /10 Changi Logistics Centre Singapore 508724 Tel:+65 6594 5000	
Package ID(4S): FA45+1113GL110323P	
Manuf Part Number(1P):GL91C76761/CN-LG12	
QTY(Q):216	175
Trans ID(K): ZPA102	
Package Count:	
Weight:	KGS

Note: All specifications are subject to change without notice.