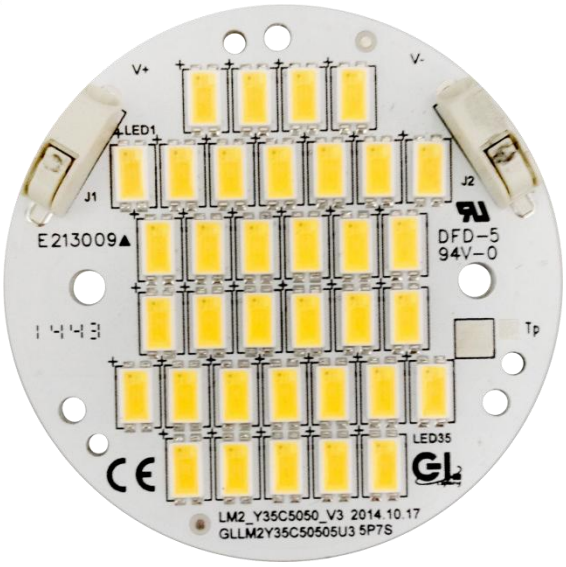
FUTURE Lighting Solutions
Making LED Lighting Solutions Simple™

CIRCULAR LIGHT ENGINE



DATA SHEET
GLV92C50501 Series

Part of the simpleLED® Program

20141204v1

SimpleLED® GLV92C50501 SERIES

The light engine series consist of 35pcs Samsung LM561B Middle power LEDs. It is engineered to provide customers with the flexibility to select the optimal light source for their applications. The module series is complied with IEC62031 Class III, it can connect with UL Class II driver (please confirm with us if any other applications).

PRODUCT DESCRIPTION

Multiple CCTs available (27000K-5000K)

80& 90 minimum CRI options

Up to 1730 lm per board

3.5 step MacAdam color binning

LM-80 compliant middle-power LEDs

3-Year Warranty

TARGET APPLICATIONS

Down Lighting
Recessed Lighting
Flood Lighting
Low Bay
High Bay
Area Lighting

APPLIED STANDARDS

IEC 62031, IEC 60068-2, UL

Note: All specifications are subject to change without notice.

SimpleLED® GLV92C50501-JE35 WHITE SERIES

PARAMETER	CONDITIONS
PCB (MCPCB) Size	MCPCB; Dia 50mm
	UL component file number: E250937
Source Type	35pcs Samsung 5630B
	UL component file number: E347623
Circuit Layout	5P x 7S
Connector Type	Wago connector: 2060-401/998-404
	UL component file number: E45171

PRODUCT SELECTION GUIDE

PART NUMBER	CCT	CRI (min.)
GLV92C50501/CW-JE35I27A	2700K	80
GLV92C50501/CW-JE35I30A	3000K	80
GLV92C50501/CW-JE35K30A		90
GLV92C50501/CW-JE35I35A	3500K	80
GLV92C50501/CW-JE35I40A	4000K	80
GLV92C50501/CW-JE35K40A		90
GLV92C50501/CW-JE35I50A	5000K	80

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BOARD OPTICAL CHARACTERISTICS (@ 500mA, Ts=25 ℃)

BOARD	CCT	CRI	FLUX (LM)		EFFICACY (LM/W)	
		MIN.	MIN.	TYP.	MIN.	TYP.
GLV92C50501/CW-JE35	2700K	80	1470	1522	131	150
	3000K	80	1496	1548	133	152
		90	1286	1338	114	131
	3500K	80	1522	1575	135	155
	4000K	80	1575	1627	140	160
		90	1417	1470	126	144
	5000K	80	1627	1680	145	165

BOARD ELECTRICAL CHARACTERISTICS* (@ 500mA, Ts=25 ℃)

	Min.	Typ.	Max.
Voltage (V)**	18.9	20.3	22.4
Total Board Power (W)	9.45	10.15	11.2
Driver Current (mA)***	500	500	500

ENVIRONMENTAL CHARACTERISTICS

	Min.	Max.
Storage Temperature	-40ºC	100ºC
	Max.	
PCB Temperature (T_c)	80ºC	

NOTES

*Data stated @1050 mA, T_j = 25ºC. Use for reference only since application temperature and LED driver current have influence on lumen output. Safe operation only possible by the use of external constant current sources. The current source used for operation, must have the following protections

- Short-circuit protection
- Overload protection
- Over-temperature protection

**LED SUPPLIER maintains a tolerance of ±0.1V on forward voltage measurements.

***Proper current de-rating must be observed to maintain junction temperature below the maximum.

Different CCTs available upon request. Contact your local sales representative.

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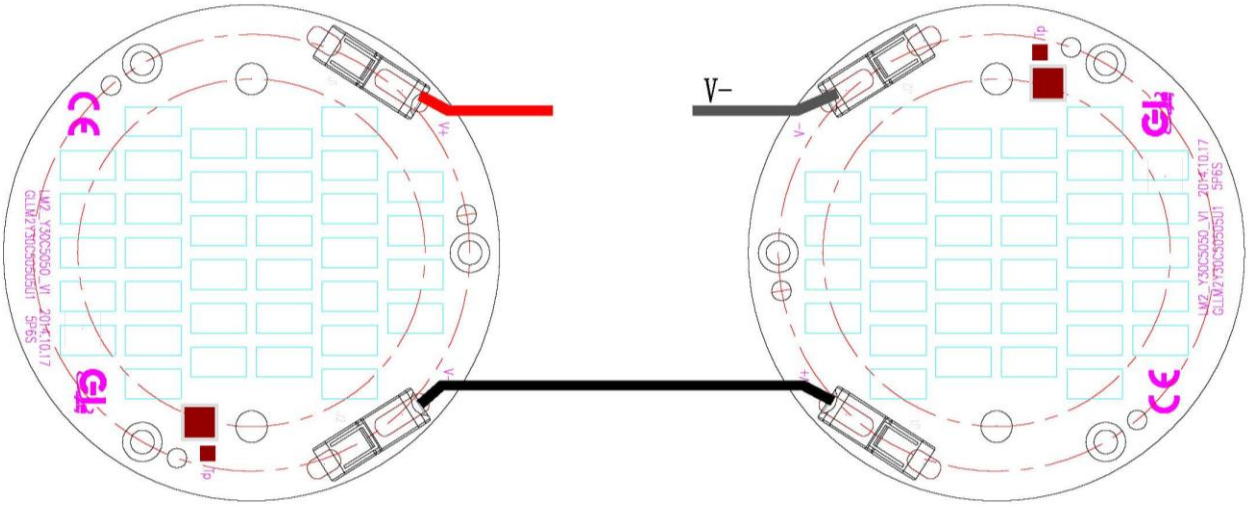
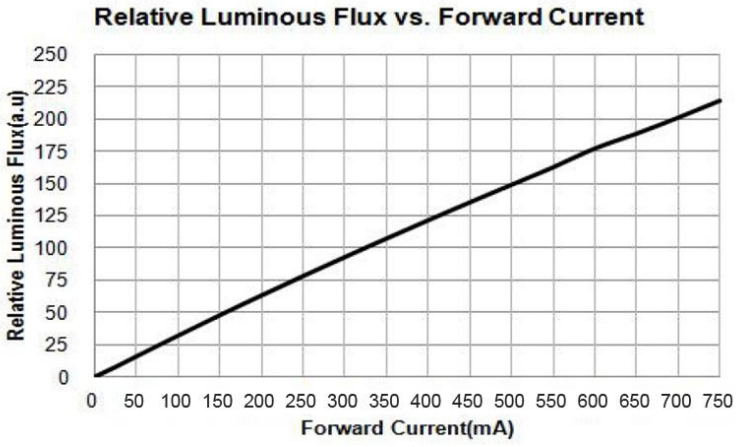
INTERCONNECTIVITY OPTIONS

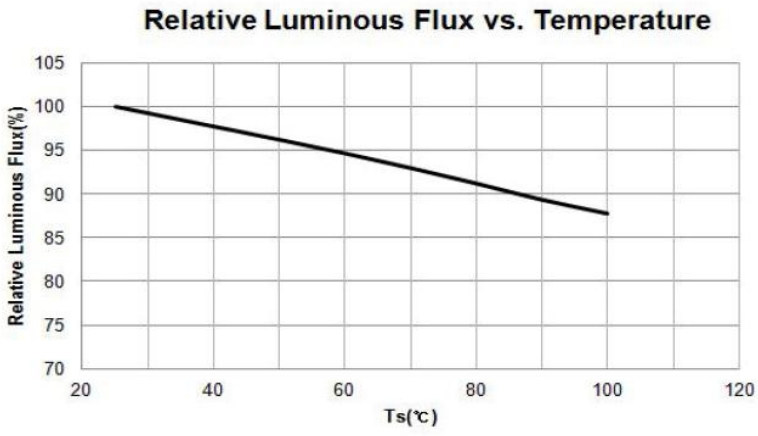
Board-to-Board wiring options and drawings.



GLV92C84841/CW-JI90	
Maximum connection units	**8PCS**

TYPICAL CHARACTERISTICS GRAPHS





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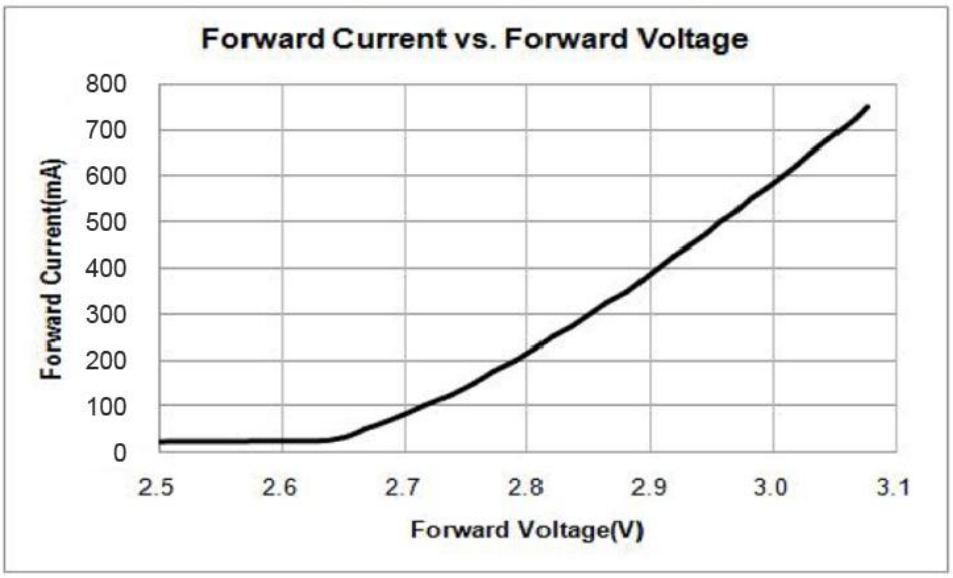

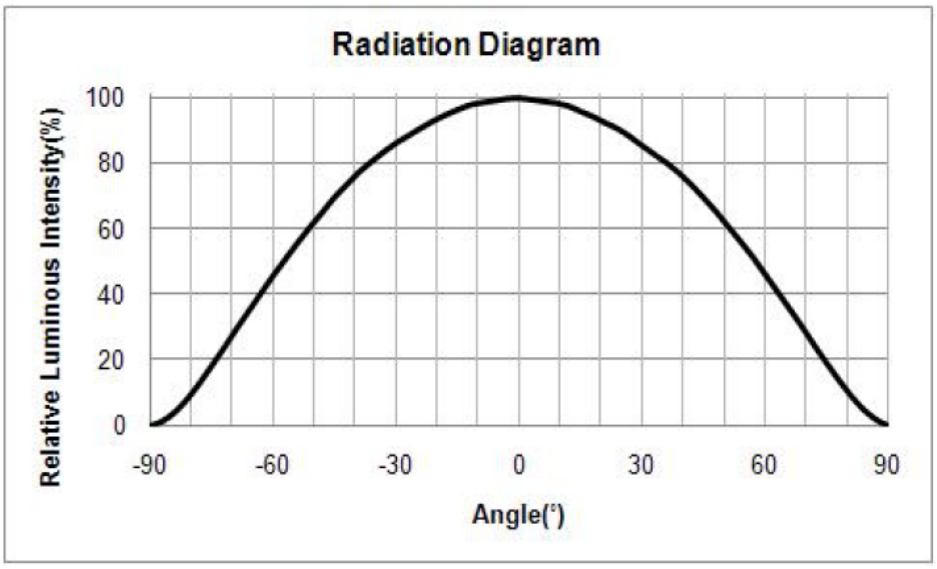

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LIFETIME/LUMEN MAINTENANCE INFORMATION

	MIN	TYP	MAX	UNIT
Lumen maintenance B50L70 (@105ºC, 180mA)	92.7%	95.6%	96.8%	6000hrs

	NOMINAL	LIFE	MAX
T_c (ºC)	50	80	100
Current per channel (mA)	180	180	180
L70(hrs)	156000	51000	16000

PART NUMBERING & ORDERING INFORMATION

1. PRODUCT SERIES

GLV92C50501

Circular MCPCB with 35LEDs

2. CONNECTOR TYPE

CW – Wago connector 2060-401/998-404

3. LED TYPE

JE- Samsung LM561B LED 5P

4. NUMBER OF LED

35 – 35 LEDs

5. CCT

I27 – CRI80 2700K ANSI

I30 – CRI80 3000K ANSI

K30 – CRI90 3000K ANSI

I35 – CRI80 3500K ANSI

I40 – CRI80 4000K ANSI

K40 – CRI80 4000K ANSI

I50 – CRI80 5000K ANSI

6. FLUX BIN

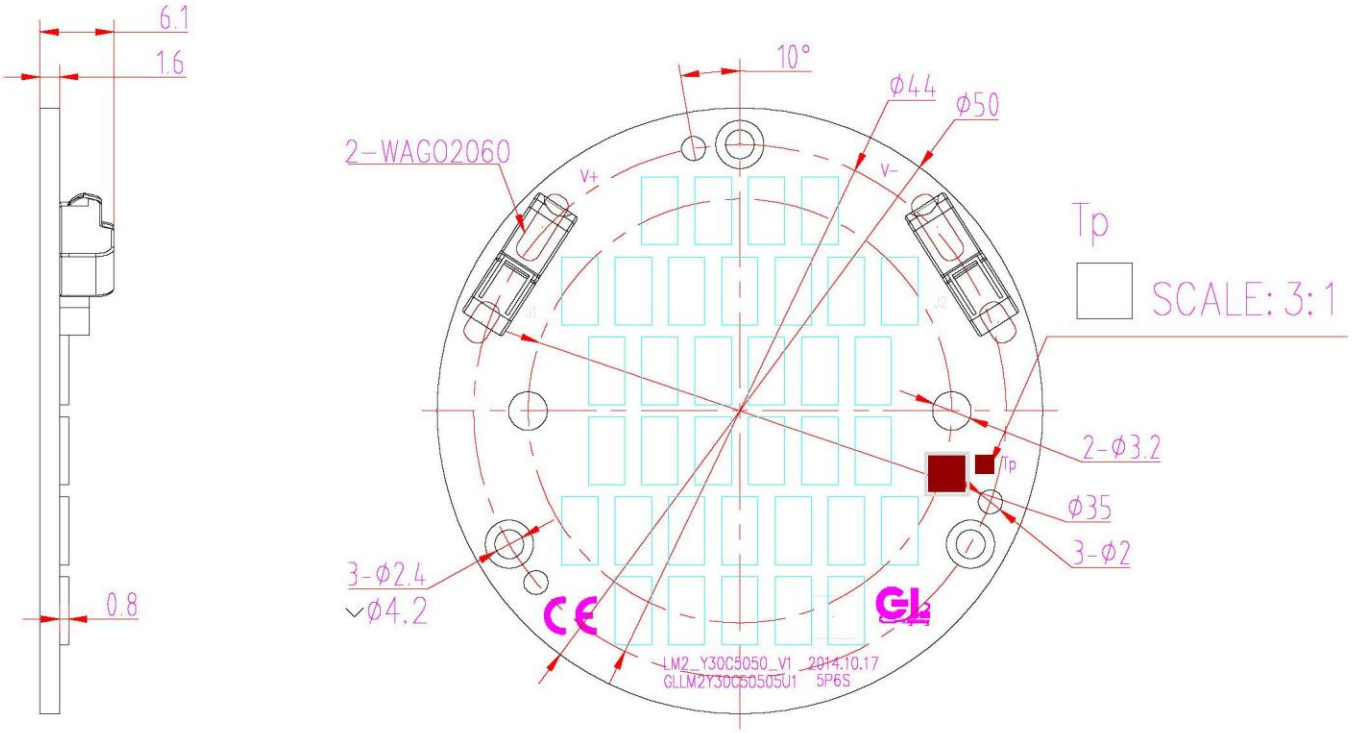
A – S0 Bin

Part Number :

GLV92C50501 / CW – JE 35 I30 A

1 2 3 4 5 6

MECHANICAL DIMENSIONS



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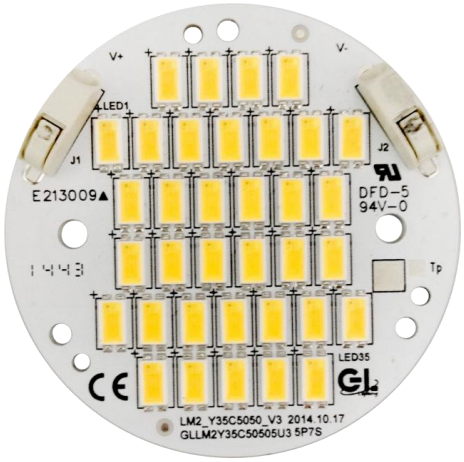
THERMAL CONSIDERATIONS

The light engine 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).

A heat sink can be used with the light engines 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 light engine 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 light engine 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



To maintain the lifetime of the LEDs following the LM-80 standard, the maximum allowed solder pad temperature T_s is 85ºC. This temperature is based on the 50,000 hours of lifetime following the standard.

The maximum allowed temperature at the T_c point of the board is 105ºC. This temperature is not based on the LM-80 standard but is for warranty purposes only.

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Assembly and Safety Information

Installation must be done according to relevant regulations and standards. The following guidelines should be respected:

•Installation must be carried out in a voltage-free state;
•The device/module contains components that are sensitive to electrostatic discharge and may only be installed in the factory and on site if appropriate EOS/ESD protection measures have been taken;
•A thermal interface material should be applied to the base of the PCB before fixing it onto a heat sink with screws. The fixing/cooling surface must be cleaned prior to installing the PCB to remove all dirt, dust and grease. The light engine must not be bent to avoid damaging the LEDs.
•The adhesive film can be ordered separately. Contact your local sales representative.
•Use wire size AWG 24-18 to connect the PCB to the constant-current power supply.
•Conductors must be inserted at a 0º angle to the PCB.
•Wires must be stripped to 6-7 mm (solid & stranded).

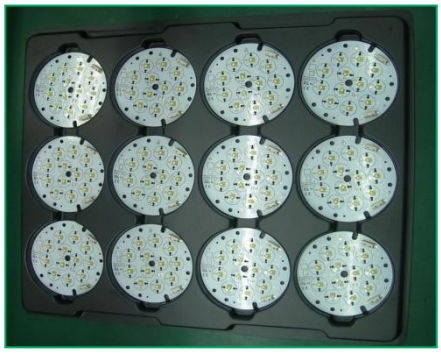
1. Insert solid conductors via push-in termination.
2. Insert/remove fine-stranded conductors by lightly pressing on the push-button

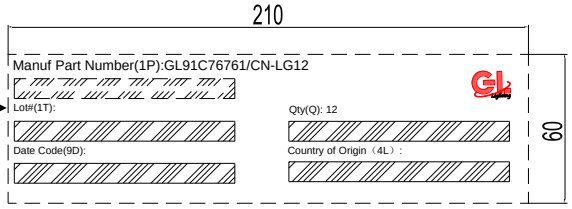
•The pressure on the LEDs will influence their reliability. Precautions should be taken to avoid such pressure.
•Do not stack PCBs on each other. LED materials are soft and this could lead to catastrophic failure of the LEDs.
•Chemicals can be harmful to the LEDs used on the module. It is recommended not to use chemicals anywhere in an LED system. The fumes from even small amounts of chemicals may damage the LEDs. The list of harmful chemicals can be viewed in application brief AB203 for the LED (http://philipslumileds.com/).
•Using corrugated boxes as packaging is only allowed if the sulfur used in the box is less than 850 ppm.
•Please ensure the correct polarity of the leads.
•For outdoor or damp locations, care must be taken to protect the LED PCB against moisture. There is the possibility of coating the board. Please contact your local sales representative for more information.

All of the above guidelines must be followed in order to qualify for the 3-year warranty. There is the possibility to extend to a 5-year warranty, please contact your local sales representative.

PACKAGING INFORMATION

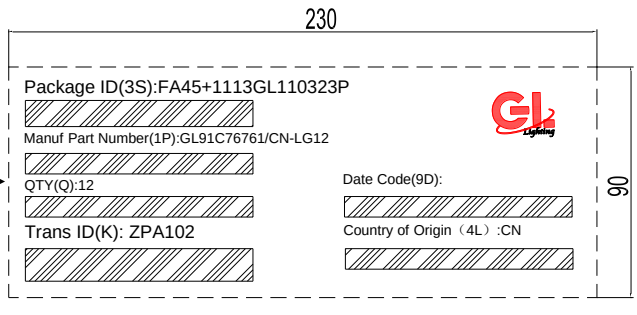
INNER PACKING	SIZE	TRAY	QTY
TYPE	345*295*11mm	1	20

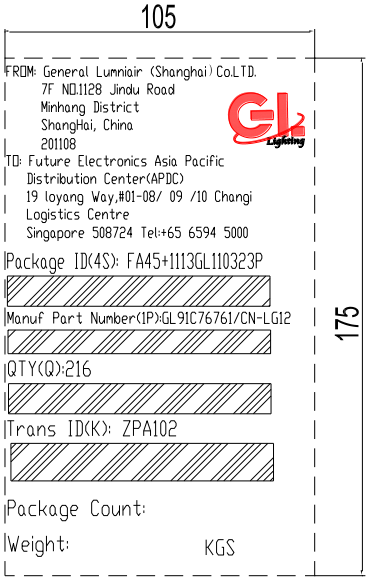




INNER PACKING	SIZE	TRAY	QTY
TYPE 1	350*300*250mm	15	300

PRODUCT LABELLING





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