

# DATA SHEET

# GLV92C84841 Series

Part of the simpleLED® Program

## SimpleLED® GLV92C84841 SERIES

The LED module consists of 90 5630 middle-power LEDs. It is engineered to provide customers with the flexibility to select the optimal light source for their applications. The LED module complies with IEC62031 Class III, and can be connected with UL Class 2 driver (alternative configurations should be confirmed.).

## PRODUCT DESCRIPTION

Multiple CCTs available (2700K-5000K)

80&90 minimum CRI options

Targeted 3.5 SDCM color binning

LM-80 compliant mid-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, UL8750

Note: All specifications are subject to change without notice.

## SimpleLED® GLV92C84841-JI90 WHITE SERIES

PARAMETER	CONDITIONS
PCB	MCPCB with $\Phi$ 84mm
	UL component file number: E250937
Emitter Type	90 x 5630 mid-power LEDs
	UL component file number: E347623
Circuit Layout	9P x 10S
Connector Type	Wago connector: 2060-401/998-404
	UL component file number: E45171
Thermal Resistance (p-n junction to Ts)	Rth= 16 °C/W
Thermal Resistance (Ts to Tp)	Approx. 0.08°C/W
Thermal Resistance (Ts to the back of Tp)	Approx. 0.12°C/W

**Note:**  $T_j = T_p + (R_{j-s} + R_{s-p}) \times \text{Power of single LED}$

## PRODUCT SELECTION GUIDE

PART NUMBER	CCT	CRI (min.)
GLV92C84841/CW-JI90I27A	2700K	80
GLV92C84841/CW-JI90I30A	3000K	80
GLV92C84841/CW-JI90K30A		90
GLV92C84841/CW-JI90I35A	3500K	80
GLV92C84841/CW-JI90I40A	4000K	80
GLV92C84841/CW-JI90K40A		90
GLV92C84841/CW-JI90I50A	5000K	80

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## BOARD OPTICAL CHARACTERISTICS (@ 700mA, Ts=25 °C)

BOARD	CCT	CRI	FLUX (lm)		EFFICACY (lm/W)	
			MIN.	TYP.	MIN.	TYP.
GLV92C84841/C W-JI90Series	2700K	80	2898	3002	138	148
	3000K	80	2950	3053	140	150
		90	2329	2536	111	125
	3500K	80	3002	3105	1433	153
	4000K	80	3105	3209	148	158
		90	2588	2795	123	138
	5000K	80	3209	3312	153	163

## BOARD OPTICAL CHARACTERISTICS (@ 1050mA, Ts=25 °C)

BOARD	CCT	CRI	FLUX (lm)		EFFICACY (lm/W)	
			MIN.	TYP.	MIN.	TYP.
GLV92C84841/C W-JI90Series	2700K	80	4284	4437	136	146
	3000K	80	4361	4514	138	148
		90	3443	3749	109	123
	3500K	80	4437	4590	141	151
	4000K	80	4590	4743	146	156
		90	3825	4131	121	136
	5000K	80	4743	4896	151	161

## BOARD ELECTRICAL CHARACTERISTICS\*

	Min.	Typ.	Max.
Voltage (V)**	28.0	29.0	30.0
Total Board Power (W) @700mA	19.60	20.30	21.00
Total Board Power (W) @1050mA	29.40	30.45	31.50

## ENVIRONMENTAL CHARACTERISTICS

	Min.	Max.
Storage Temperature	-40°C	100°C
	Min.	Max.
PCB Temperature (T <sub>p</sub> )	-40°C	80°C

### NOTES

\* Based on nominal LED datasheet values (65 mA, T<sub>s</sub> = 25°C). Use for reference only since application temperature and LED driver current have an influence on lumen output and forward voltage. Safe operation only possible by the use of an external constant-current source. The current source used for operation, must have the following protections:

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

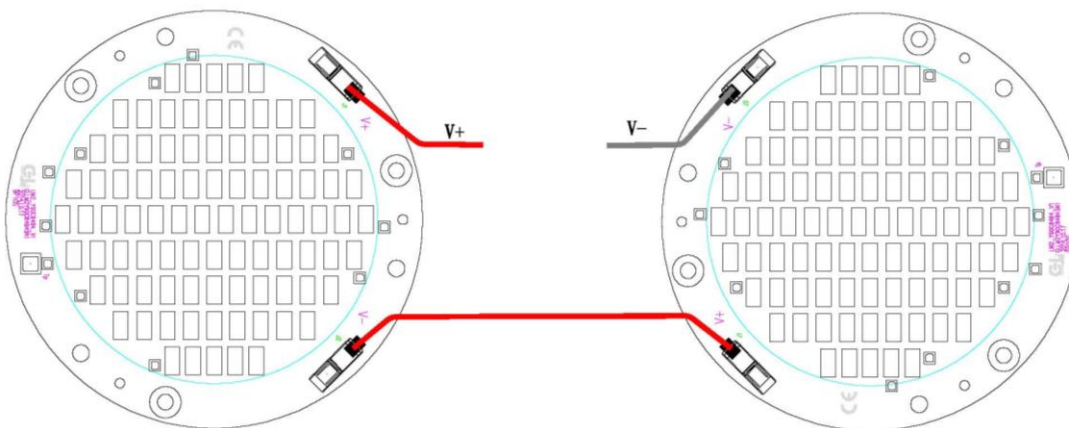
\*\*LED SUPPLIER maintains a tolerance of ±0.1V on forward voltage measurements.

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

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

## INTERCONNECTIVITY OPTIONS

Board-to-Board wiring options and drawings.



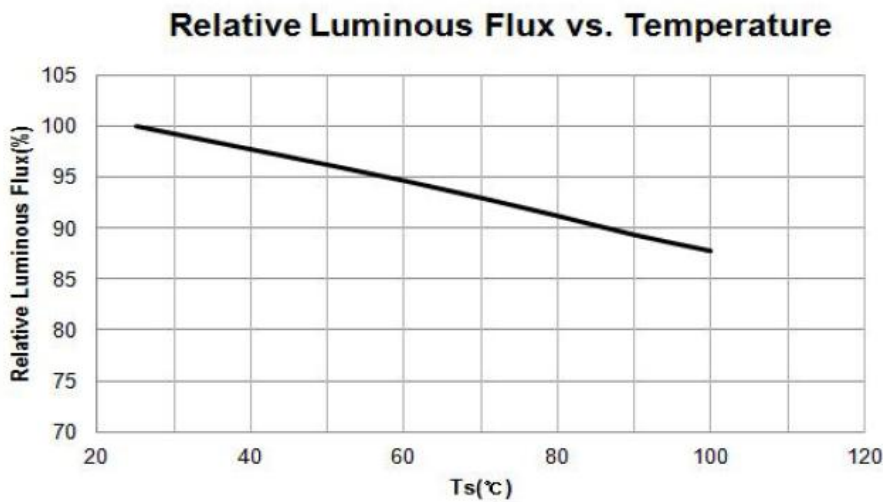
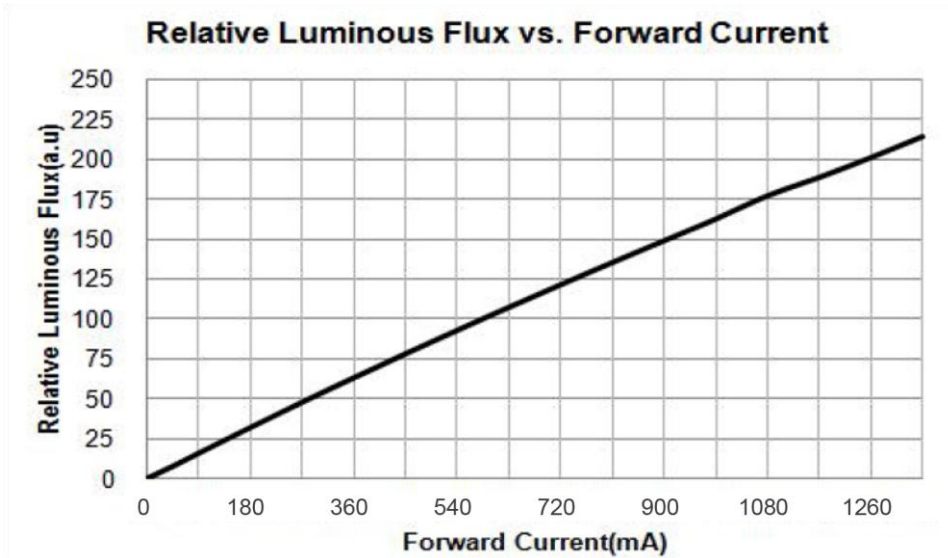
GLV92C84841/CW-JI90

Maximum connection units

5PCS in series

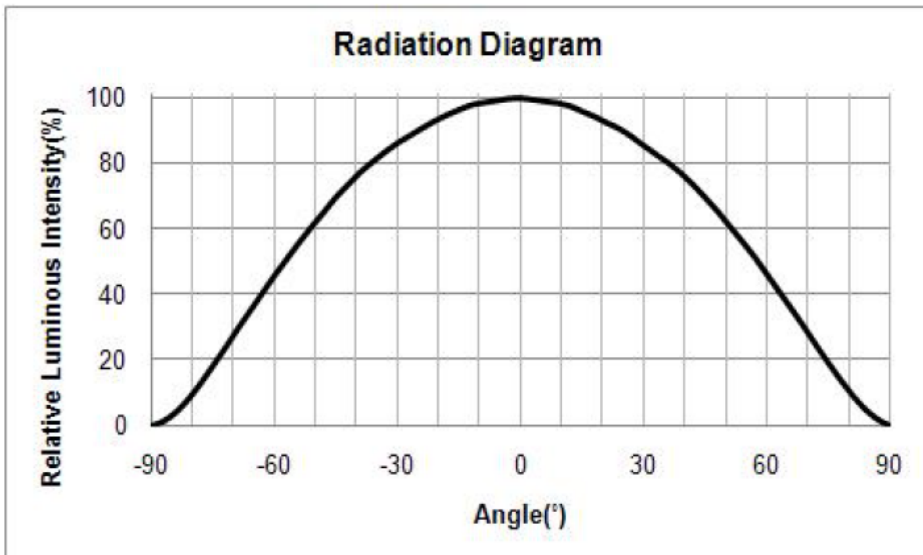
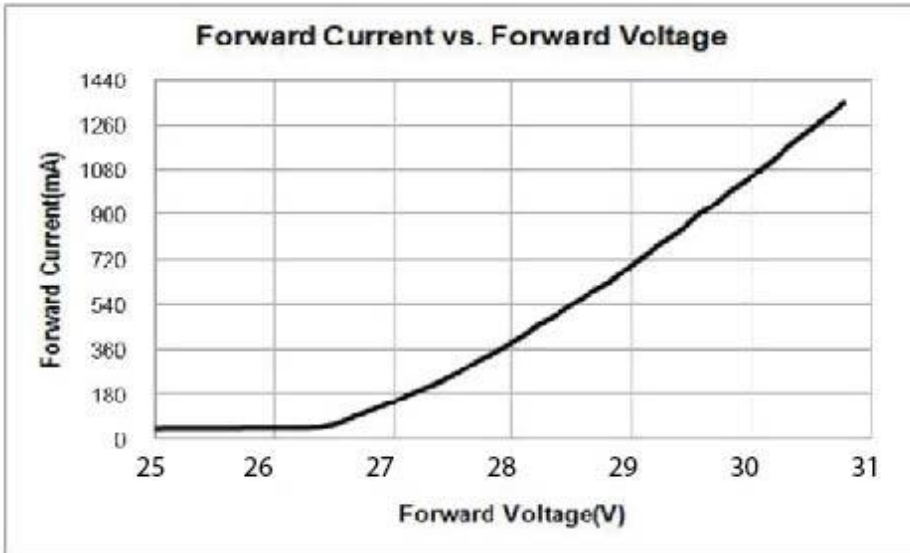
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## TYPICAL CHARACTERISTICS GRAPHS



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## TYPICAL CHARACTERISTICS GRAPHS



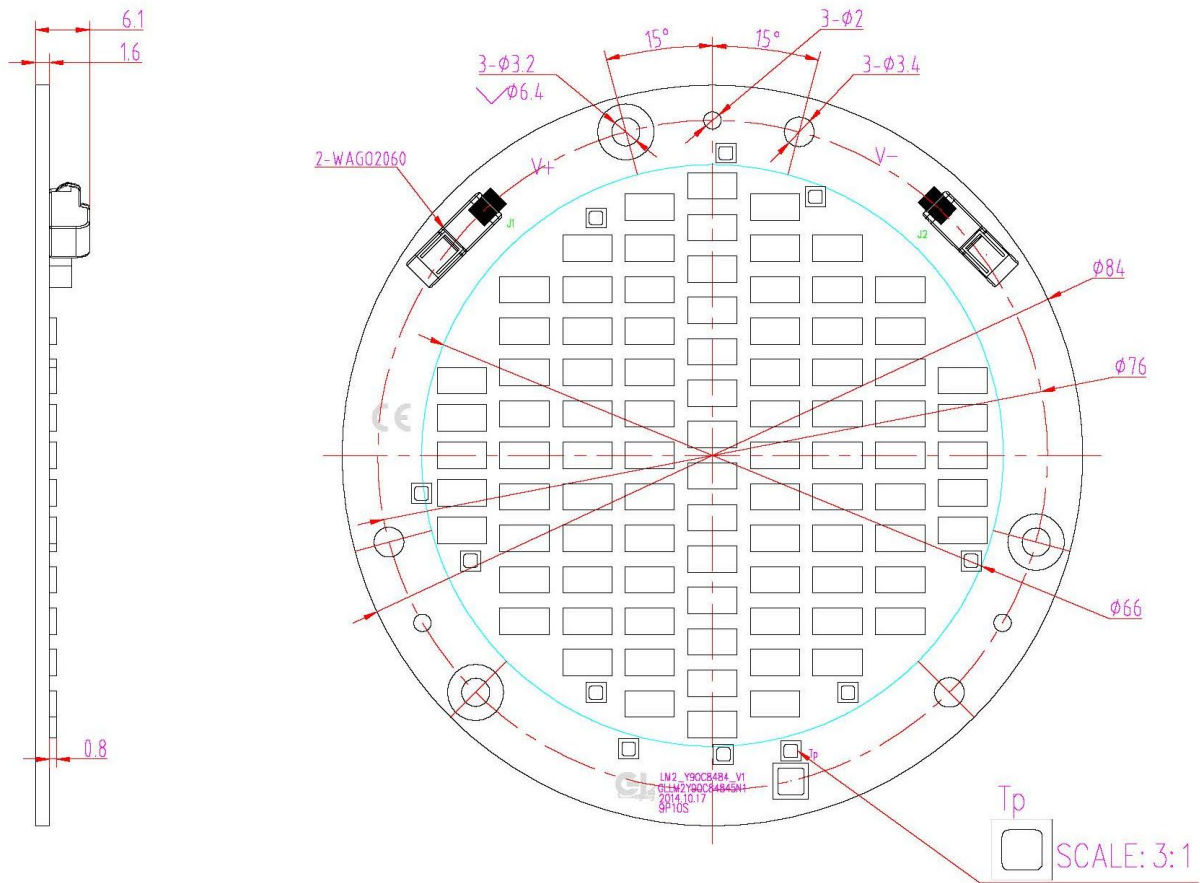
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## MECHANICAL DIMENSIONS

All dimensions are in millimeters



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## 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

In order to obtain an LED lifetime B50L70 of 50,000 hours , the maximum allowed solder pad temperature  $T_s$  is 82°C at a board current of 700mA,1050mA.

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

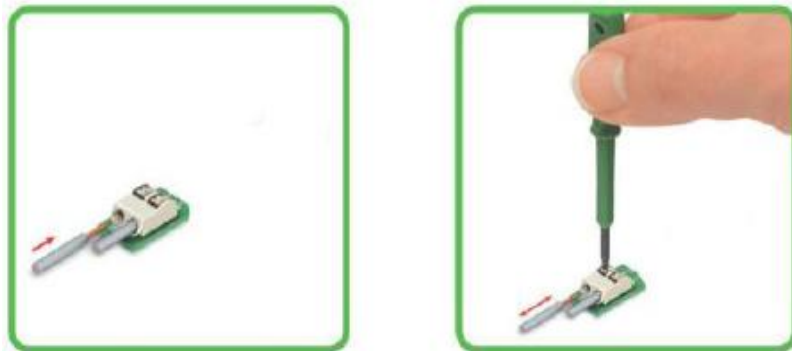


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## Assembly and Safety Information

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 LED 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 LED module must not be bent to avoid damaging the LEDs.
- Use wire size AWG 24-18 to connect the PCB to the constant-current power supply.
- Conductors must be inserted at a 0° angle to the PCB.
- Wires must be stripped to 6-7 mm (solid & stranded).



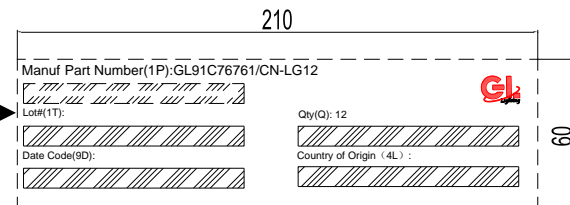
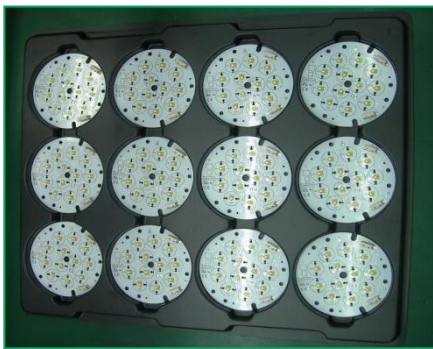
1. Insert solid conductors via push-in termination.
2. Insert/remove fine-stranded conductors by lightly pressing on the push-button

- 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.
- 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.

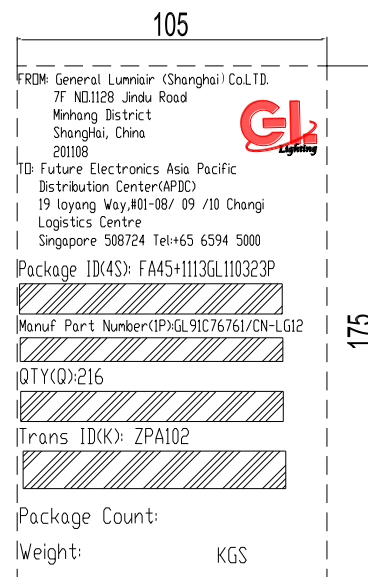
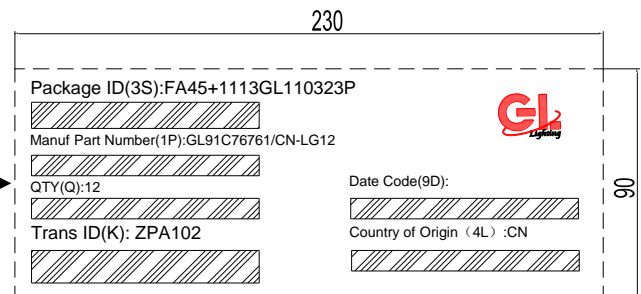
## PACKAGING INFORMATION

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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