

GLV93RE7451 Series

DATA SHEET

GLV93RE7451 SERIES

The LED module consists of 12 LUXEON 5050 LEDs. It is engineered to provide customers with the flexibility to select the optimal light source for their applications. The LED module complies with EN62031.

FEATURES & BENEFITS

- 5 Year Warranty
- High-Reliability LED Sources
- Rugged Construction
- Wide Operational Temperature Range
- Multiple Configurable Options
- Flexible Optic Options
- Wide Range Drive Current
- Multiple White CCT's Available
- Very Short Lead-time
- CE Certified
- UL-recognized Components

TYPICAL APPLICATIONS

- High Bay
- Street
- Car park
- Tunnel
- Canopy
- Outdoor wall mount
- Area
- Flood

APPLIED STANDARDS

EN62031



GENERAL CHARACTERISTICS

PARAMETER	CONDITIONS
PCB	MCPCB
Emitter Type	12 x Luxeon 5050
	UL component file number: E352519
Circuit Layout	6 Parallel x 2 Series
Connector Type	AVX 9296002202906
	UL component file number: 94V-O

PERFORMANCE SPECIFICATIONS

NOMINAL CCT	MINIMUM CRI	LUMINOUS FLUX (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT (mA)	PART NUMBER
		MIN	TYP			
3000K	70	6252	6864	146	960	GLV93RE7451/CN-LM612730
4000K	70	6696	7320	156	960	GLV93RE7451/CN-LM612740
5000K	70	6696	7320	156	960	GLV93RE7451/CN-LM612750
5700K	70	6696	7320	156	960	GLV93RE7451/CN-LM612757
2700K	80	5508	6048	129	960	GLV93RE7451/CN-LM612827
3000K	80	5676	6240	133	960	GLV93RE7451/CN-LM612830
4000K	80	6252	6600	140	960	GLV93RE7451/CN-LM612840
5000K	80	6252	6600	140	960	GLV93RE7451/CN-LM612850
2700K	90	4824	5148	110	960	GLV93RE7451/CN-LM612927
3000K	90	4992	5148	113	960	GLV93RE7451/CN-LM612930
4000K	90	5316	5676	121	960	GLV93RE7451/CN-LM612940

Notes:

1. Correlated color temperature is hot targeted at $T_j=85^\circ\text{C}$.
2. Luminous flux and CRI are based upon mounted package on highly reflective surface at $T_j=25^\circ\text{C}$. Typical CRI is approximately 2 points higher than the minimum CRI specified, but this is not guaranteed.
3. Lumileds maintains a tolerance of ± 2 on CRI and $\pm 7\%$ on luminous flux measurements.

ELECTRICAL CHARACTERISTICS*

PAREMETER	MIN	TYP	MAX
Voltage	47V	49V	53V
Current	660mA	960mA	1440mA
Power	31.02W	47.04W	76.3W

NOTES:

Safe operation is only possible by the use of external constant current sources.

The current source used for operation, must ensure the following protection:

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

Proper current derating must be observed to maintain junction temperature below the maximum.

Lumileds maintains a tolerance of $\pm 1\%$ on forward voltage measurements.

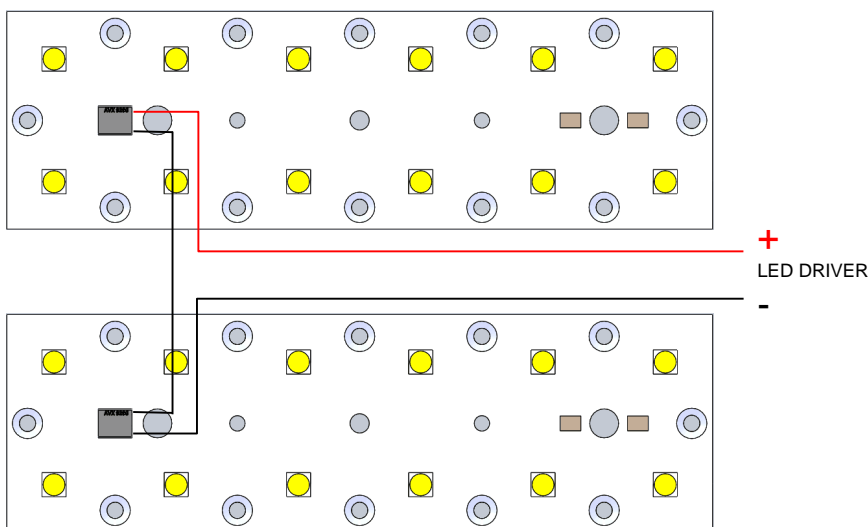
* For 24V LED version only.

ENVIRONMENTAL CHARACTERISTICS

PAREMETER	MIN	MAX
Storage Temperature	-20C	+77C
PCB Temperature (Tp)	-20C	+70C
IP Classification	IP00	

INTERCONNECTIVITY OPTIONS

Board-to-Board wiring options and drawings.



PAREMETER	MIN	MAX
Unit Connections (In Series)	1	4

SPECTRAL POWER DISTRIBUTION

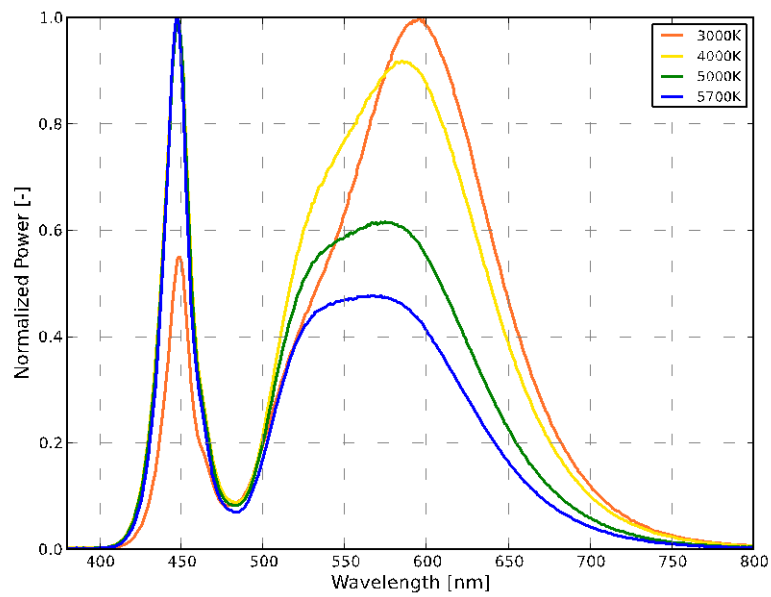


Figure 1a. Typical normalized power vs. wavelength for L150-xx70502400000 at test current, $T_j=25^{\circ}\text{C}$.

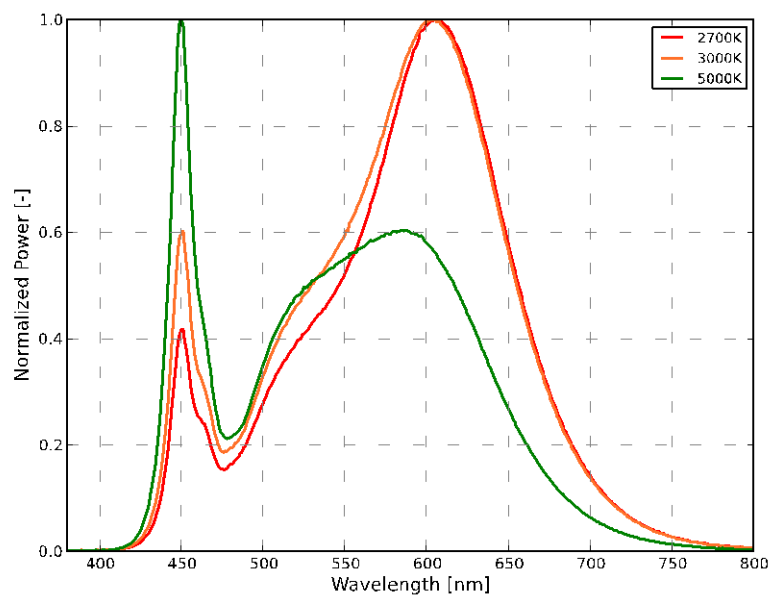


Figure 1b. Typical normalized power vs. wavelength for L150-xx80502400000 at test current, $T_j=25^{\circ}\text{C}$.

LIGHT OUTPUT CHARACTERISTICS

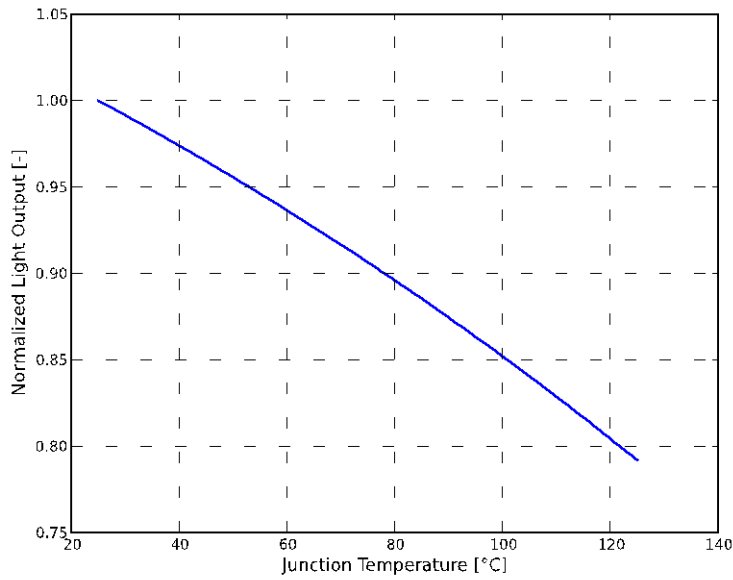


Figure 2. Typical normalized light output vs. junction temperature for L150-xxxx502400000 at test current.

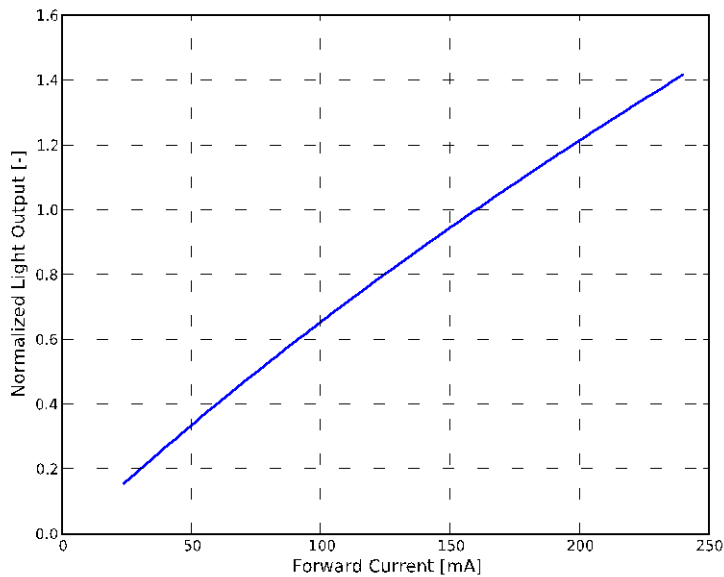


Figure 3. Typical normalized light output vs. forward current for L150-xxxx502400000, $T_j=25^{\circ}\text{C}$.

FORWARD CURRENT CHARACTERISTICS

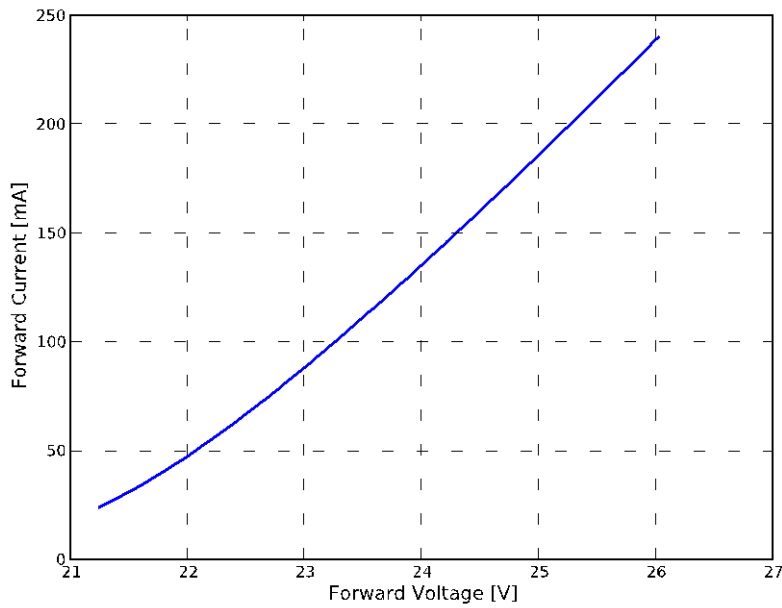


Figure 4. Typical forward current vs. forward voltage for L150-xxxx502400000, $T_j=25^{\circ}\text{C}$.

RADIATION PATTERN CHARACTERISTICS

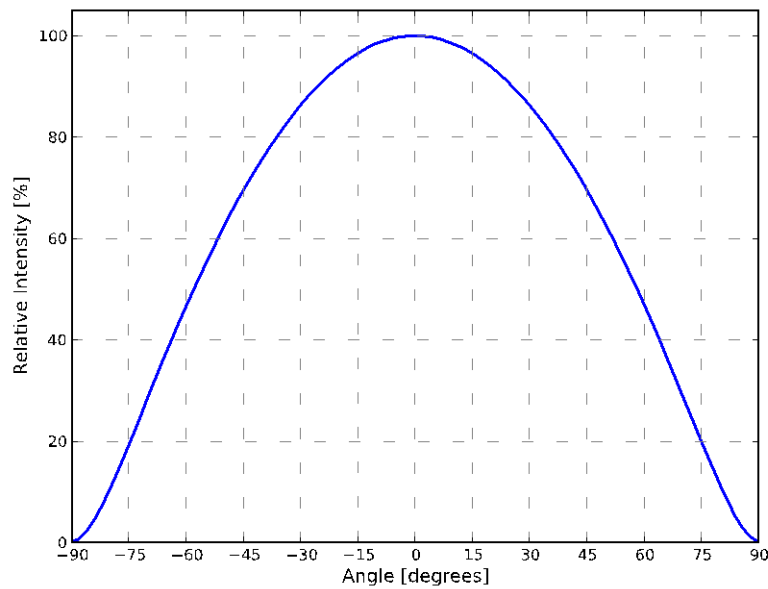


Figure 5. Typical radiation pattern for L150-xxxx502400000 at test current, $T_j=25^{\circ}\text{C}$.

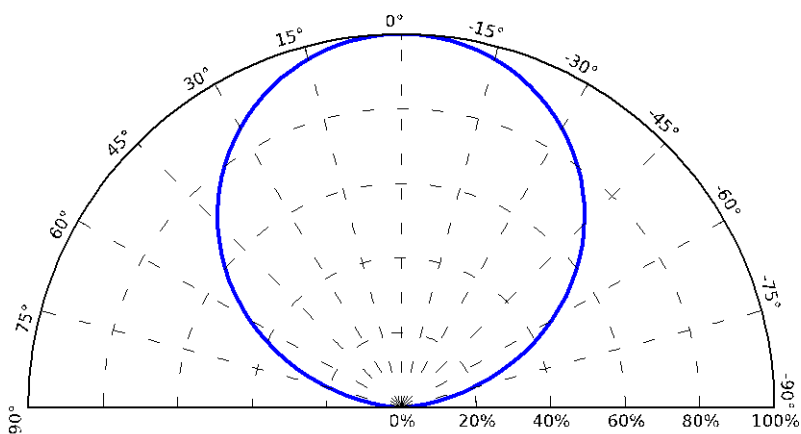


Figure 6. Typical polar radiation pattern for L150-xxxx502400000 at test current, $T_j=25^{\circ}\text{C}$.

Ledil LENS COMPATIBILITY

Product Number	Family	Diameter (mm)	Height (mm)	FWHM (degrees)
CS14130_HB-IP-2X6-W	HighBay	173 + 71.4	11.4	60
CS14891_HB-IP-2X6-M	HighBay	173 + 71.4	11.39	28
CS14895_HB-IP-2X6-RS	HighBay	173 + 71.4	11.39	14
CS14597_HB-IP-2X6-O	HighBay	173x71.4	12.2	30+115
CS14263_HB-IP-2X6-WWW	HighBay	71.4 x 173	11.39	97
CS15020_STRADA-IP-2X6-VSM	Strada	173 + 71.4	9	137
CS14055_STRADA-IP-2X6-T2	Strada	71.4x173	9.17	Asymmetric
CS14143_STRADA-IP-2X6-T3	Strada	71.4x173	8.5	Asymmetric

PART NUMBERING & ORDERING INFORMATION

<p>1. PRODUCT SERIES GLV93RE7451 Rectangular MCPCB 146.6mm x 45mm</p>	<p>4. CIRCUIT TYPE 6 - 12 LEDs, 6 Parallel X 2 Series</p>																					
<p>2. CONNECTOR TYPE CN – AVX 9296002202906</p>	<p>5. NUMBER OF LED 12 - 12 LEDs</p>																					
<p>3. LED TYPE LM - LUXEON® 5050 24V LQ - LUXEON® 5050 6V</p>	<p>6. LED CRI & CCT</p> <table border="0"> <tr> <td>70 CRI</td> <td>80 CRI</td> <td>90 CRI</td> </tr> <tr> <td>727 - 2700K ANSI</td> <td>827 - 2700K ANSI</td> <td>927 - 2700K ANSI</td> </tr> <tr> <td>730 - 3000K ANSI</td> <td>830 - 3000K ANSI</td> <td>930 - 3000K ANSI</td> </tr> <tr> <td>740 - 4000K ANSI</td> <td>835 - 3500K ANSI</td> <td>935 - 3500K ANSI</td> </tr> <tr> <td>750 - 5000K ANSI</td> <td>840 - 4000K ANSI</td> <td>940 - 4000K ANSI</td> </tr> <tr> <td>757 - 5700K ANSI</td> <td>850 - 5000K ANSI</td> <td></td> </tr> <tr> <td>765 - 6500K ANSI</td> <td>865 - 6500K ANSI</td> <td></td> </tr> </table>	70 CRI	80 CRI	90 CRI	727 - 2700K ANSI	827 - 2700K ANSI	927 - 2700K ANSI	730 - 3000K ANSI	830 - 3000K ANSI	930 - 3000K ANSI	740 - 4000K ANSI	835 - 3500K ANSI	935 - 3500K ANSI	750 - 5000K ANSI	840 - 4000K ANSI	940 - 4000K ANSI	757 - 5700K ANSI	850 - 5000K ANSI		765 - 6500K ANSI	865 - 6500K ANSI	
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Part Number :

GLV93RE7451 / CN – LM 6 12 730

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PRODUCT LABELING

Every PCB is marked with specific numbers. Each marking consists of the following items (example):

Customer Part Number:

GLAYY17872-1

General Luminaire Part ID:

GLV93RE7451/CN-LM612***

Order number – Follow-up number:

50033721-3

MPN LED – BIN code:

L150-3070502400000

Safety & Certification Markings:



Custom QR Code:



The font size used for marking is 1.5.

THERMAL CONSIDERATIONS

The light engines must operate under proper environmental conditions and the operating ambient air temperature must NOT exceed a certain maximum which cause the LEDs to exceed the maximum junction temperature as stated in the LED datasheet.

A heat sink can be used when operating the light engines. The objective is to maintain the junction temperature below the maximum ratings according to the LED datasheet while also not exceeding the maximum PCB temperature.

If the light engine is mounted on a heat sink the following advice must be followed:

- The surface where the light engine will be mounted on must be flat
- Avoid bending of the PCB to avoid damaging the LEDs and the solder connections
- Use a thermal interface material in between the PCB and heat sink

For an optimal lifetime performance the light engine must be placed in an environment where the air should be able to flow freely around the luminary. The heat transport is done by conduction to the heat sink and by radiation to the air. It's not recommended to expose the module to direct sunlight or any other heat source.

Thermal Measurement

For an optimal lifetime performance the T_p point of the PCB must never exceed 77 degrees Celsius.

The maximum value must be determined under operating conditions in a thermally stable state and under worst-case conditions for the current application.

ASSEMBLY AND SAFETY INFORMATION

Installations must be carried out under observation of the relevant regulations and standards. The following guidelines must be followed:

- Installations 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
- Before installing onto a heat sink, the PCB needs to be connected with thermal interface material and fixed with screws. To maintain PCB clearances, do not use heat conducting paste. The fixing/cooling surface must be cleaned before installing the PCB to remove all dirt, dust and grease.

The light engine must not be bent to avoid damaging the LEDs. Use all screw holes to attach the light engine to the heat sink in order to provide proper heat transfer

- The TIM material can be ordered separately. Contact your local sales representative
- Use wire size AWG 24-18 for connecting the PCB to the current source power supply
- Conductors must be inserted at a 0° angle with respect to the PCB
- Wires must be stripped to a length of 6-7mm (solid & stranded)



- 1) Insert solid conductors via push-in termination.
 - 2) Inserting/removing fine-stranded conductors by lightly pressing on the push-button
- A parallel connection of the light engines is not allowed
 - Applying pressure on the LEDs will influence the reliability of the LEDs. Precautions should be taken to avoid pressure on the LEDs
 - Do not stack the PCBs on top of each other. Since the LED materials are soft this can cause LED catastrophic failures
 - It is recommended to avoid using chemicals in the LED system. Gas molecules from chemicals, even in small amounts, may damage the LEDs.
 - Using corrugated boxes as packaging is only allowed if the sulfur concentration used in the corrugated box is less than 850ppm
 - Please ensure the correct polarity of the leads. Reverse polarity connection may damage the LEDs
 - For outdoor or damp locations, care must be taken to protect the LED PCB against moisture
 - The photobiological safety of the LED modules must be classified into risk groups in accordance with EN 62471.
 - Risk group 2 (Exempt for CCT's $\leq 3000\text{K}$)

All above specifications must be met 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






PACKING (TRAY)	SIZE	TRAY	PCB QTY
TRAY	445*540*50mm	1	24



Manuf Part Number(IP):GL193R17451/CN-LM612

 Binning Information(B):

 Date Code(D):1712

 Qty(Q):24

 Lot#(LT):

 Country of Origin (C):CHINA


PACKING (CARTON)	SIZE	TRAY	PCB QTY
OUTTER	545*450*205mm	4	96



FROM: General Luminaire (Shanghai) Co., Ltd.
 7F NO.125 Jinda Road
 Minhang District
 Shanghai, CHINA
 201108
 TO: Future Electronics Asia Pacific
 Distribution Centre (APO)
 19 Loyang Way, #01-08/09/10 Changi
 Logistics Centre
 Singapore, 505221 TEL:65 6808 3339
 Package ID(GS):A2L5+1712GL70321-1P

 Manuf Part Number(IP):GL193R17451/CN-LM612

 Binning Information(B):

 Trans ID(K):CBB14E

 QTY(Q):96

 Package Count: OF
 Weight: KGS
 Made In China



COMPANY INFORMATION

About General Luminaire Lighting Solutions

General Luminaire is an LED luminaire and light engine OEM/ODM specialist and for more than 15 years, has been a leader in the emerging, rapidly-growing market of high efficiency LED lighting technologies.

In addition to cutting edge R&D, exemplified by numerous patents, General Luminaire designs and manufactures innovative electronics and LED lighting technologies for some of the biggest names in the LED industry.

General Luminaire designs, develops and delivers optimal electronics and LED solutions for a myriad of commercial applications.

We are committed to environmental stewardship and corporate social responsibly, ensuring that our products are leading the way to a brighter and greener future.

Visit generalluminaire.com for additional information or ask your sales representative for more information.