

LightMAX

R0970

32 LED module for flood lighting

5 YEARS WARRANTY

CE ROHS COMPLIANT Pb Free 05
CC CONSTANT CURRENT



FEATURES

- PCB dimension: 120x50mm
- Up to 5650 lm
- Up to 184 lm/W
- CRI 80
- Electrical Insulation 300V
- Up to 20 LED boards in series
- Connection type: WAGO SMD 4mm 1P 2060
- Long lifetime up to 80000h
- NTC available on request

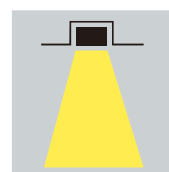
APPLICATIONS



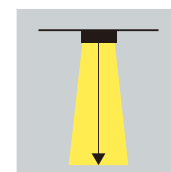
Street



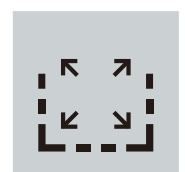
Industrial



Downlight



High Bay



Area

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LV 3030HE 3V LED Version

Code	CCT	CRI	Current [mA]	Voltage [V]	Power [W]	Total Lumen [lm]	Lm/W	Energy Efficiency
R0970013080	3000K	80	700	11,1	7,7	1335	173	D
			1050	11,4	11,9	2003	168	D
			1400	11,6	16,2	2675	165	D
R0970014080	4000K		700	11,1	7,7	1426	185	C
			1050	11,4	11,9	2120	178	C
			1400	11,6	16,2	2825	174	C
R0970015080	5000K		700	11,1	7,7	1426	185	C
			1050	11,4	11,9	2120	178	C
			1400	11,6	16,2	2825	174	C

Flux tolerance +/- 10%
Vf Tolerance +/- 0,5Volt

Ask for more information about available LED and other options.

HV 3030 6V LED Version

Code	CCT	CRI	Current [mA]	Voltage [V]	Power [W]	Total Lumen [lm]	Lm/W	Energy Efficiency
R0947013080	3000K	80	700	22,2	15,5	2671	172	D
			1050	22,8	23,9	4006	167	D
			1400	23,3	32,6	5350	164	D
R0947014080	4000K		700	22,2	15,5	2853	184	C
			1050	22,8	23,9	4240	177	C
			1400	23,3	32,6	5650	173	C
R0947015080	5000K		700	22,2	15,5	2853	184	C
			1050	22,8	23,9	4240	177	C
			1400	23,3	32,6	5650	173	C

Flux tolerance +/- 10%
Vf Tolerance +/- 0,5Volt

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LED and board features	
LED number	32
LED type	3030
Circuit	S4P8
Material	Aluminium
Solder	White
Connections	
Cable	AWG 24-18
Connector	WAGO SMD 4mm 1P 2060
Power	
Abs. Max Input current CC HA 3V	2400mA
Abs. Max Input current CC 6V olt	1600mA
Mechanical Data	
H x L	50x120mm
Thickness	6.1mm
Conditions	
Max. temp. (Tp)	90°C
Max. temp. (Tc)	85°C
Operating temp. Range	-35°C +80°C

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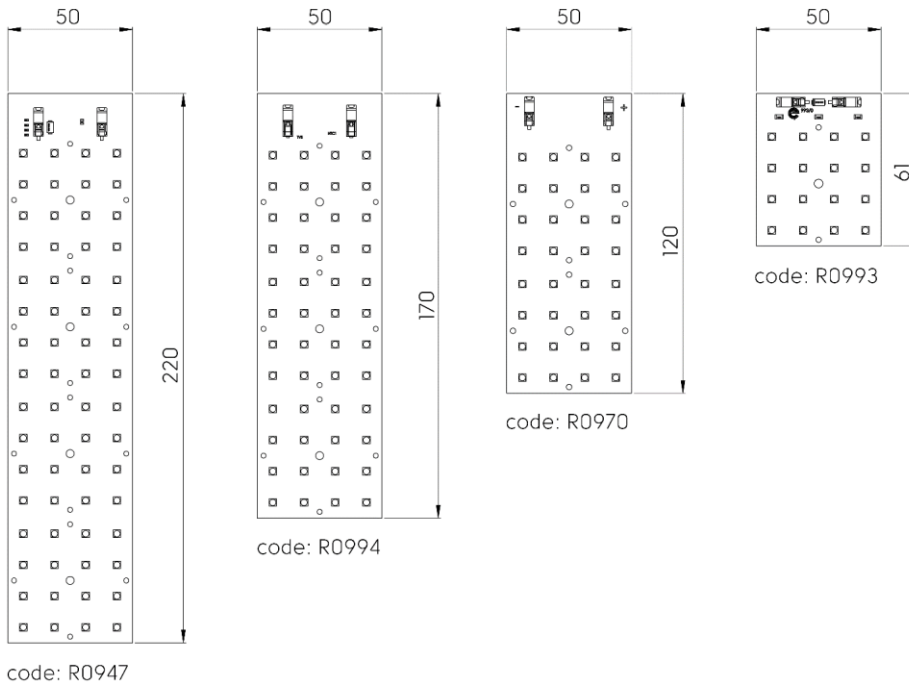
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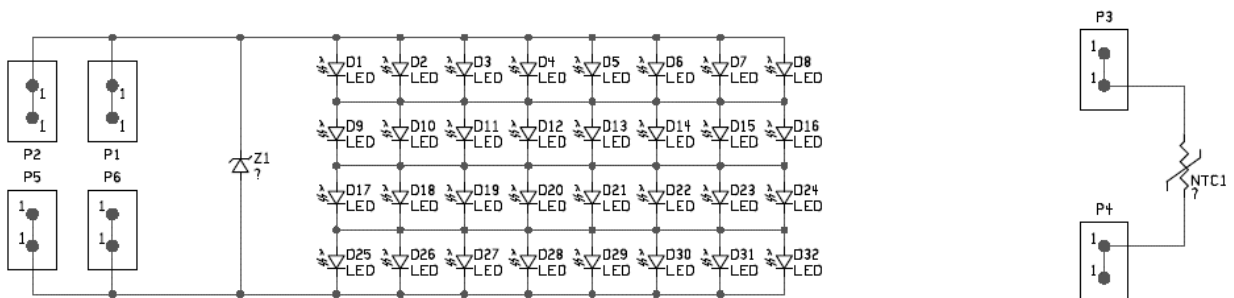
CC CONSTANT CURRENT

FLOOD LIGHTING SERIES - DRAWINGS



→ You can check the R0970 Mechanical Drawing [CLICKING HERE](#).

ELECTRICAL CIRCUIT



ASSEMBLY AND SAFETY INFORMATION

The LED modules are designed to be incorporated in a final appliance. Installation must be carried out under observation of the relevant regulations and standards. Installation must be carried out in a voltage-free state (i.e. disconnected from the mains). Additionally, the following advice must be observed; non-observance can result in electrical, mechanical and/or fire hazards.

- ESD (electrostatic discharge) protection measures must be observed when handling and installing the LED modules.
- Transient protection measures (as per IEC 61000-4-5), especially for outdoor applications, must be observed (e.g. SPD).
- Adequate anti-static electricity measures, including the use of conductive shoes, ionizers, work bench grounding, wrist straps, flooring and stools should be used.
- LED assembly modules must not be subjected to any undue mechanical stress, e.g.:
 - Do not treat as bulk cargo.
 - Avoid sharing and compressive forces during handling and installation.
 - Do not damage circuit paths.
 - Avoid any pressure on the light emitting surface.
- Safe operation is only possible using proper external sources (e.g: constant current sources - I_{max}. see table "Electrical Characteristics").
- Operate only with power supply units that feature the following protection:
 - Short-circuit protection
 - Overload protection
 - Overheating protection
- The module can be fixed with M3 screws. They are recommended to be fixed only with flat or cylinder head screws (M3) (no countersunk screws – if not differently specified). Max. torque: 1.2 Nm (M3)
- Please ensure the correct polarity of the leads prior to applying power. Reversed polarity can destroy the modules.
- For interconnection, the LED modules are usually equipped with push-in terminals. Custom connectors are available upon request during the project bidding stage.
- General Safety regulations acc. to IEC/EN 60598-1 (or specific standards related to different lighting applications) must be observed.
- The following points must be observed when connecting LED modules in parallel:
 - All LED strings that are wired in parallel must contain the same number of LEDs (symmetrical loading).
 - Owing to differing forward voltage, there can be a difference of up to 10% in brightness between modules connected in parallel.
 - For this installation setup, please notify us when placing your order.
- To ensure problem-free operation, the specified maximum temperature at the tp point (see "Operating Life") must be observed (and measured in accordance with IEC 62717 – Annex H).
- In the event of outdoor applications or applications in damp locations, care must be taken to protect LED modules against humidity, splashes and jets of water. Any corrosion damage resulting from humidity or contact with condensation will not be recognized as a defect or manufacturing fault. LED modules are not specifically protected against foreign bodies or dust. Depending on the type of application, further protection must be provided to prevent ingress.
- Due to the manufacturing process, the PCBs of the LED modules can have sharp edges and corners. Care must therefore be taken during handling and installation to avoid injury.
- Constant current drivers require for an optimal usage that the modules are connected in series. For this type of usage, there must be ensured that the quantity of LED modules is limited by the sum of forward voltage and the capacity of used constant current driver. Safety regulations acc. to IEC/EN 60598 must be observed if the sum of forward voltage exceeds the permitted touchable value.
- There is a list of chemical substances (as sulfur) that has been proved to make the LED module damaged. Also, in chemically enriched (aggressive) environments the LED module functionality can be compromised, or they can even cause total module failure. Keep attention to this aspect before installing the LED module.
- The photobiological safety of the LED modules must be classified into risk groups in accordance with IEC/EN 62471 and IEC/EN 62471-7.

APPLIED STANDARDS

IEC / EN 62031
LED modules for general lighting – Safety specifications

IEC 62717
LED modules for general lighting - Performance requirements

IEC/EN 60598-1
Luminaires – Part 1: General requirements and tests

IEC/EN 62471
Photobiological safety of lamps and lamp systems

IEC 61000-4-5
Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test