integrating lighting technologies | LCE LED & COMPONENTS EXPERT

ZHAGA Associate Member

DotMAX

R3D86

Star LED module XHP50

5 YEARS WARRANTY

CC CONSTANT CURRENT

FEATURES

- PCB dimension: 20x21mm
- Up to 1021 lm
- Up to 117 lm/W
- CRI 90
- Max Electrical Insulation 60V
- Max 10 LED boards in series @6V
- Connection type: Solder Pads
- Lifetime > 98000h @ Ts=85°C 1400mA

APPLICATIONS

Downlight | Commercial | Indoor | Spotlight | Wall Washer

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6V LEDs Version

Code	CCT	CRI	Current [mA]	Voltage [V]	Power [W]	Total Lumen [lm]	Lm/W	Energy Efficiency
R3D86313090	3000K	90	1400	5.6-6.2	8.7	885	102	F
R3D86314090	4000K					1021	117	F
R3D86315090	5000K					1021	117	F

Flux tolerance +/- 10%
Vf Tolerance +/- 5%

Ask for more information about available LED and other options.

12V LEDs Version

Code	CCT	CRI	Current [mA]	Voltage [V]	Power [W]	Total Lumen [lm]	Lm/W	Energy Efficiency
R3D86313090	3000K	90	700	11.2-12.4	8.7	885	102	F
R3D86314090	4000K					1021	117	F
R3D86315090	5000K					1021	117	F

Flux tolerance +/- 10%
Vf Tolerance +/- 5%

Ask for more information about available LED and other options.

LED and board features	
LED number	1
LED type	XHP50
Circuit	S1
Material	Copper core
Solder	White
Power	
Abs. Max Input current CC	1500mA @6V/12V
Mechanical Data	
L x H	21.2x20mm
Thickness	3.6mm
Conditions	
Max. temp. (Tp)	+95°C
Max. temp. (Tc)	+85°C
Operating temp. Range	-35°C +60°C

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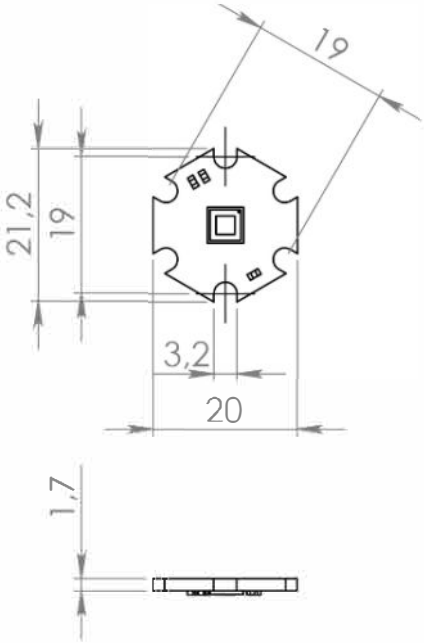
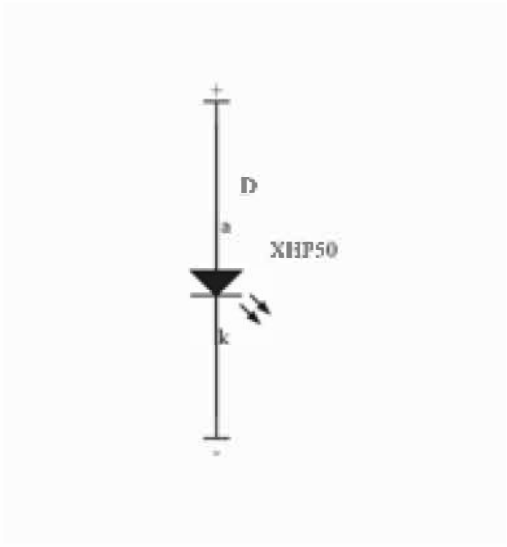
MECHANICAL DRAWING



ELECTRICAL CIRCUIT



ASSEMBLY AND SAFETY INFORMATION

nstal..at on must be carried out under observat on of the relevant regulat ons and standards. The LED modules are designed for operation w th n a casing or lumina re. Installation must be carried out n a voltage free state (i.e. disconnect on from the mains).
The following advice must be observed, non observance can result in the destruction of the LED assembly modules, fire and/or other hazards.

- Consider safety regulations acc. EN 60598 in the luminaire design, especially when the operating LED driver is not galvan c isolated.
  - n mode of operation regard to sufficient isolation.
  - Live parts must not be touched in operation mode. Danger in life!
- ESD (electrostatic discharge) protection measures must be observed when handling and nstall ng the LED modules.
- Adequate anti static electricity measures, includ ng the use of conductive shoes, ion zers, work bench grounding, w rist straps, floor ng 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
  - avo d shear and compressive forces during handling and instal..at on
  - do not damage circuit paths
  - avo d any pressure on the light emit ng surface
- Safe operation only possible by the use of external constant current sources (max. see table "Electr cal Characteristics").
- Operation only with power supply units that feature the following protection:
  - Short circuit protection
  - Overload protect on
  - Overheat ng protect on
- The module can be f xed with M3 screws. Fixation only with flat or cyl nder head screws (M3) (no countersank screws) Max. torque: 1.2 Nm (M3)
- Please ensure the correct polarity of the leads pr or to commissioning. Reversed polar ty can destroy the modules.
- For interconnection the LED modules s equ pped w th push in term nals (WAGO 2060).
- Safety regulations acc. to EN 60598 (or further standards) has to be observed if the maximum output voltage exceeds the permitted touchable value.
- The following points must be observed when connecting LED modules in parallel:
  - All LED strings that are wired n para..e. must contain the same number of LEDs (symmetr cal load ng).
  - Owing to differing forward biases, there can be a difference of up to 10% in brightness between modules connected n para..el.
- To ensure problem free operation, the specified maximum temperature at the tp po nt (see "Operating Life") must be observed (and measured in accordance with EN 60598 1). To satisfy th s po nt, t may be necessary to put measures n place to ensure any heat is diss pated from the PCB to the environment.
- In the event of outdoor appl cations or applications in damp locations, care must be taken to protect LED assembly modules against humidity, splashes and jets of water. Any corros on damage result ng from humidity or contact w th condensat on wi.. not be recognized as a defect or manufacturing fault. LED assembly modules are not specia..y protected against foreign bodies or dust. Depending on the type of applicat on, further protection must be ensured to prevent dust and fore gn bod es from entering.
- Due to the manufacturing process, the PCBs of the LED assembly modules can have sharp edges and corners. Care must therefore be taken dur ng handling and installat on to avoid injury.
- For optimal load of used constant current driver the modules can only be connected in ser es. The quant ty of LED modules is l mited by the sum of forward voltage and the capacity of used constant current driver. Safety regulations acc. to EN 60598 has to be observed if the sum of forward voltage exceed the permitted touchable value.
- Operat ng LED modules in the presence of certain chemica. substances or in chemically enriched (aggressive) environments can impair module functionality or even cause total module fa lure.
- The photobiological safety of the LED modules must be classified nto risk groups in accordance with IEC / TR 62778:_ r sk group 1 (except HB, 6500 K, > 500 mA: risk group 2

APPLIED STANDARDS

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

IEC /TR 62778
Appl cat on of IEC 62471 for the assessment of blue light hazard to light sources and luminaires