

DecoMAX

R2293

RGBW power LED star



5 YEARS WARRANTY

CC CONSTANT CURRENT



FEATURES

- PCB diameter: 20mm
- Up to 530 lm
- Up to 71 lm/W
- CRI 70, 80
- Max Electrical Insulation 60V
- Lifetime > 60000h @ 350mA 85°C
- White and Dynamic White available on request

APPLICATIONS



Indoor



Commercial



Color Mixing



Decorative



Architectural

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Code	CCT	CRI	Current [mA]	Voltage [V]					Power [W]	Total Lumen [lm]					Lm/W	Energy Efficiency
				R	G	B	W	Tot		R	G	B	W	Tot		
R22930IRGBW	RC3W+ 3000K	80	500	2,3	3,3	3,2	2,95	11,75	5,88	66	117	45	137	365	62	C
			700	2,4	3,4	3,3	3,05	12,15	6,5	69	142	61	187	476	56	C
	RC3W+ 4000K		500	2,3	3,3	3,2	2,95	11,75	5,88	66	117	45	167	395	67	C
			700	2,4	3,4	3,3	3,05	12,15	6,5	69	142	61	208	500	59	C
	RC3W+ 5000K		500	2,3	3,3	3,2	2,95	11,75	5,88	66	117	45	190	418	71	C
			700	2,4	3,4	3,3	3,05	12,15	6,5	69	142	61	238	530	62	C

*Flux tolerance +/- 10%
*Voltage tolerance +/- 5%

Ask for more information about available LED and other colors.

LED and board features	
LED number	-
LED type	CREE XQE2RED or similar CREE XQE2GRN or similar CREE XQE2BLU or similar CREE XQE2 or similar for White
Circuit	1S
Material	MCPCB
Solder	White (Black on request)
Connections	
Cable	Solid wires AWG 24 to 18 (0,2-0,8mm ²) Stranded wires AWG 22 to 20 (0,32-0,51mm ²)
Power	
Abs. Max. input current CC	1000mA @ LED
Mechanical Data	
Diameter	19,9 mm
Thickness	2,5 mm
Conditions	
Max. temp. (T _a)	190°C
Max. temp. (T _c)	185°C
Operating temp. Range	-25°C - 55°C

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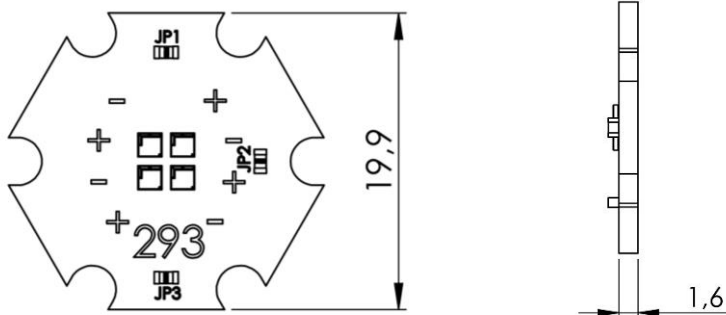
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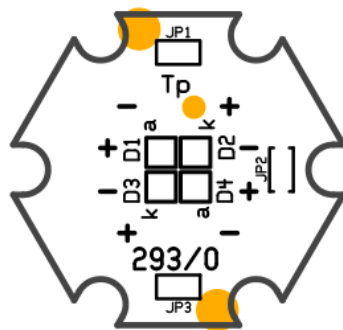


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MECHANICAL DRAWING



CIRCUIT CONFIGURATION



Circuit Configuration	
RGBW	All Jumper Not Connected
Dynamic White	2 Jumper connected
All White	All Jumper connected
Colours Position	
D1	RED
D2	GREEN
D3	BLUE
D4	WHITE

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Accessories: LedLink Optics lens

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CE ROHS COMPLIANT Pb Free

CC CONSTANT CURRENT



Specifications: AFD series	
View Angle (FWHM)	15°/20°
Material	PMMA 8N
Type	Single
Efficiency	> 90%
Operating Temperature	-40°C~+170°C
Specifications: ANW series	
View Angle (FWHM)	10°/20°/30°
Material	PMMA 8N
Type	Single
Efficiency	> 90%
Operating Temperature	-40°C~+170°C

ASSEMBLY AND SAFETY INFORMATION

Installation must be carried out under observation of the relevant regulations and standards. The LED modules are designed for operation within a casing or luminaire. Installation must be carried out in a voltage-free state (i.e. disconnected 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.

- o Consider safety regulations acc. EN 60598 in the luminaire design, especially when the operating LED driver is not galvanically isolated.
 - In mode of operation regard to sufficient isolation.
 - Live parts must not be touched in operation mode. Danger in life
- o ESD (electrostatic discharge) protection measures must be observed when handling and installing the LED modules. See VS's application notes on ESD protection.
- o Adequate anti-static electricity measures, including the use of conductive shoes, ionizers, work bench grounding, wrist straps, flooring and stools should be used.
- o LED assembly modules must not be subjected to any undue mechanical stress, e.g.:
 - do not treat as bulk cargo
 - avoid shear and compressive forces during handling and installation
 - do not damage circuit paths
 - avoid any pressure on the light emitting surface
- o Safe operation only possible by the use of external constant current sources (max. see table 'Electrical Characteristics').
- o Operation only with power supply units that feature the following protection:
 - Short circuit protection
 - Overload protection
 - Overheating protection
- o The module can be fixed with M3 screws. Fixation only with flat or cylinder head screws (M3) (no countersunk screws) Max. torque: 1.2 Nm (M3)
- o Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- o For interconnection the LED module is equipped with push-in terminals (WAGO 2050).
- o Safety regulations acc. to EN 60598 (or further standards) has to be observed if the maximum output voltage exceeds the permitted touchable value.
- o 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 biases, there can be a difference of up to 10% in brightness between modules connected in parallel.
- o To ensure problem-free operation, the specified maximum temperature at the tip point (see 'Operating Life') must be observed (and measured in accordance with EN 60598 1). To satisfy this point, it may be necessary to put measures in place to ensure any heat is dissipated from the PCB to the environment.
- o In the event of outdoor applications or applications in damp locations, care must be taken to protect LED assembly 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 assembly modules are not specially protected against foreign bodies or dust. Depending on the type of application, further protection must be ensured to prevent dust and foreign bodies from entering.
- o Due to the manufacturing process, the PCBs of the LED assembly modules can have sharp edges and corners. Care must therefore be taken during handling and installation to avoid injury.
- o For optimal load of used constant current driver the modules can only be connected in series. 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 EN 60598 has to be observed if the sum of forward voltage exceeds the permitted touchable value.
- o Operating LED modules in the presence of certain chemical substances or in chemically enriched (aggressive) environments can impair module functionality or even cause total module failure.
- o The photobiological safety of the LED modules must be classified into risk groups in accordance with IEC/TR 62778: L_{ns} < 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
Application of IEC 62777 for the assessment of blue light hazard to light sources and luminaires