

SpecialRED

R5276

LED module for horticulture lighting



5 YEARS
WARRANTY

CC CONSTANT
CURRENT



FEATURES

- PCB dimension: 232x110mm
- Mid-Power LED platform
- 3 + 1 channels
- Max Electrical Insulation 250V cascadable
- Connection type: Molex S-Poke 4mm 2pole
- Lifetime > 60000h

APPLICATIONS



SpecialRED

R5276

LED module for horticulture lighting



5 YEARS
WARRANTY

CC CONSTANT
CURRENT

Code	LED	LED qty	IF [mA] LED	VF [V]	Id set	Color-Peak Wavelength λ_p (nm)	Typ. PPF (μ mole/s)	Total PPF (μ mole/s)	
R52760IHORT	4000K	20	150	24	300mA s8p2	-	0,78	16	
	Blue	16		16	600mA s5p4	450	0,78	12	
	Hyper Red/ Deep Red	54		20	900mA s9p6	660	0,72	39	
	LED options								
	UVA 3535 Power	0	700	3,2	-	420	na	0	
	Far Red/Cherry RED	0	150	2,2	-	740	0,30	0	
	Lime	0	150	3,2	-	-	0,90	0	
	Blue 5%	0	150	3,2	-	-	0,59	0	
	Blue 10%	0	150	3,2	-	-	0,72	0	
	Blue 15%	0	150	3,2	-	-	0,73	0	
	Blue 20%	0	150	3,2	-	-	0,74	0	
Blue 30%	0	150	3,2	-	-	0,76	0		

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

Ask for more information about
available LED and other options.

Standard LED and board features and configuration	
LED number	650-670nm DEEP RED - 54 450-460nm BLUE - 20 4000K CRI 80 - 16
Total LED option	90 x 2835 + 4 x 3535 Power
Circuit	650-670nm DEEP RED - S9P6 450-460nm BLUE - S5P4 4000K CRI 80 - S8P2
Material	MCPCB
Solder	WHITE
Connections	
Cable	Solid 0,2-0,8mm ² Strand 0,45-0,7mm ²
Connector	3x S-Poke 4mm 2 pole + 2 for 4x3535 LED POWER CH
Power	
Abs. Max Input current CC	650-670nm DEEP RED - 900mA 450-460nm BLUE - 600mA 4000K CRI 80 - 300mA
Mechanical Data	
H x L	232x110mm
Thickness	5,8mm
Conditions	
Max. temp. (Tp)	75°C
Max. temp. (Tc)	85°C
Operating temp. Range	-25°C +50°C

SpecialRED

R5276

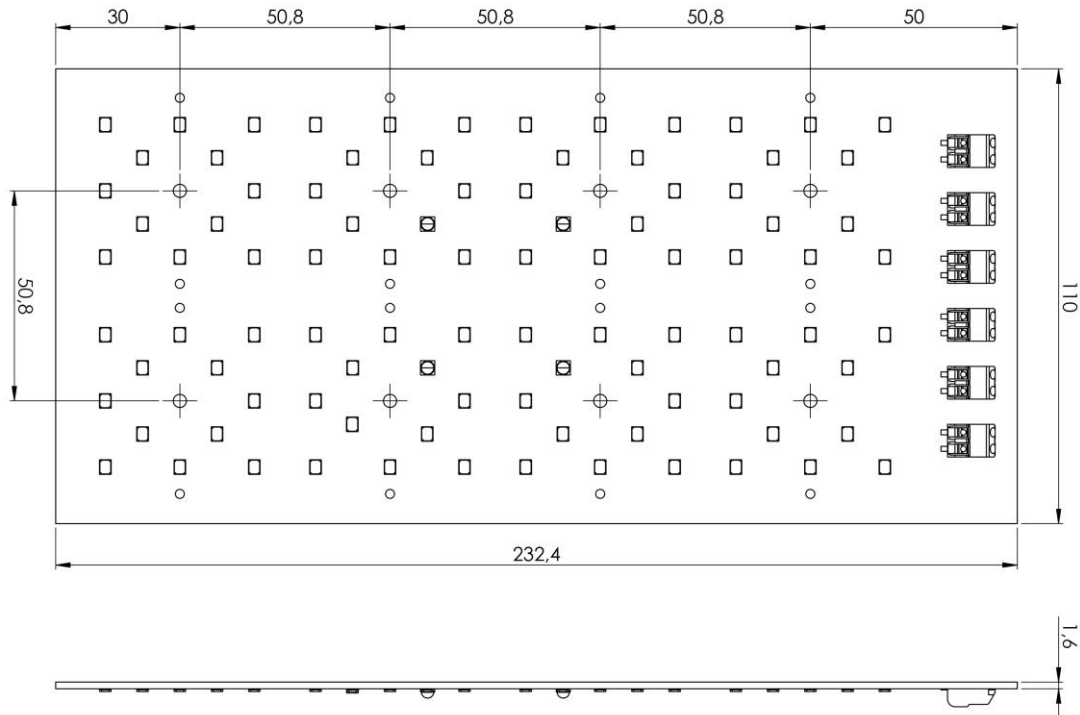
LED module for horticulture lighting



5 YEARS WARRANTY

CC CONSTANT CURRENT

MECHANICAL DRAWING



ELECTRICAL CIRCUIT (colors are only approximate)



SpecialRED

R5276

Accessories: LedLink Optics lens



5 YEARS WARRANTY

CC CONSTANT CURRENT



Specifications: CRC series	
View Angle (Fwhm)	10°/25°/55°/90°/150°/40°x135°/45°x145°/45°x155°/60°x145°/60°x155°/75°x140°
Material	PC 125OZ
Type	Industrial, Multi Lens
Efficiency	400nm~900nm > 90%
Operating Temperature	-40°C~+110°C
Certification	RoHS & REACH

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. disconnection 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 galvanic 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 (I_{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 modules is equipped with push-in terminals (WAGO 2060).
- o Safety regulations acc. to EN 60598 (or further standards) has to be observed if the maximum output voltage exceed 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 tp 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 exceed 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: _ risk 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 62471 for the assessment of blue light hazard to light sources and luminaires