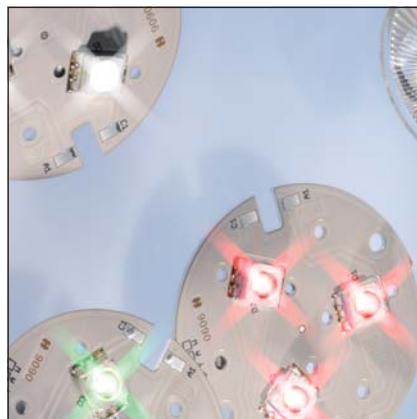




A New Lighting Experience



- long service lifetime due to optimal thermal management
- very high lumen output
- highly efficient (up to 52 lm/W)
- available in different colours
- easy connections due to pre-assembled leads
- lead-free soldered
- resistant against shock and vibrations
- optional with attached lenses

TriplePowerEmitter 3x3 Watt

WU-M-325-XR

WU-M-325-XR with optics

Typical Applications

- Integration in luminaires
- Architectural illumination
- Marking of paths, stairs, etc.
- Furniture lighting
- Light advertising
- Entertainment, shop design

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TriplePowerEmitter 3x3 Watt

Technical Notes

- PCB diameter: 50 mm
- Pre-assembled with 2 leads
- Aluminum PCB for optimum thermal management
- ESD protection class 2
- Optional with attached lenses

Electrical Characteristics

at ambient temperature $t_a = 25\text{ }^\circ\text{C}$

Type	Ref. No.	Colour	Max. current mA	Max. voltage DC V	Max. power consumption W
Without lens					
WU-M-325-XR-SO	533337	Red	700	9	6.3
WU-M-325-XR-SG	533338	Green	700	12.9	9
WU-M-325-XR-SB	533339	Blue	700	12.9	9
WU-M-325-XR-W	533340	White	700	12.9	9
With attached lens					
WU-M-325-XR-SO-10°	533342	Red	700	9	6.3
WU-M-325-XR-SG-10°	533343	Green	700	12.9	9
WU-M-325-XR-SB-10°	533344	Blue	700	12.9	9
WU-M-325-XR-W-20°	533345	White	700	12.9	9

Use of external LED constant current driver with max. 700 mA required.

Maximum Ratings

Exceeding the maximum ratings can lead to reduction of lifetime or destruction of the module.

Type	Operation temperature range at t_c -point		Storage temperature range		Reverse voltage/LED V
	$^\circ\text{C}$ min.	$^\circ\text{C}$ max.	$^\circ\text{C}$ min.	$^\circ\text{C}$ max.	
All types	-20	+100	-40	+85	5

Optical Characteristics

at junction temperature $t_j = 25\text{ }^\circ\text{C}$

Type	Ref. No.	Colour	Dom. wavelength nm	Correlated colour temperature (K)	Luminous flux at 350mA		Radiation angle* $^\circ$
					min. (lm)	typ. (lm)	
Without lens							
WU-M-325-XR-SO	533337	Red	620–635		69	120	100
WU-M-325-XR-SG	533338	Green	520–535		117	156	100
WU-M-325-XR-SB	533339	Blue	465–475		30	57	100
WU-M-325-XR-W	533340	White		5700...7000	117	156	100
With attached lens							
WU-M-325-XR-SO-10°	533342	Red	620–635		62	108	10
WU-M-325-XR-SG-10°	533343	Green	520–535		105	140	10
WU-M-325-XR-SB-10°	533344	Blue	465–475		27	51	10
WU-M-325-XR-W-20°	533345	White		5700...7000	105	140	20

¹ Luminous flux at 700 mA: White, Blue and Green: +70%; Red: +50%

* On account of the complex manufacturing process of the modules the above values only represent statistical variables.

The values do not necessarily correspond exactly to the actual parameters of every single product which can vary from the typical specification.

Thermal Characteristics

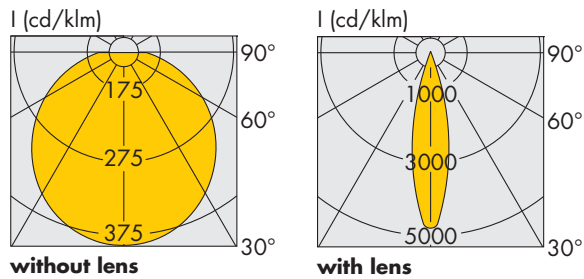
Type	Thermal resistance, p-n junction to t_c point K/W	Thermal resistance, p-n-junction to bottom of PCB K/W
White, Blue, Green	2.6	2.7
Red	3.3	3.4

VS recommends an additional cooling element for improved thermal management.

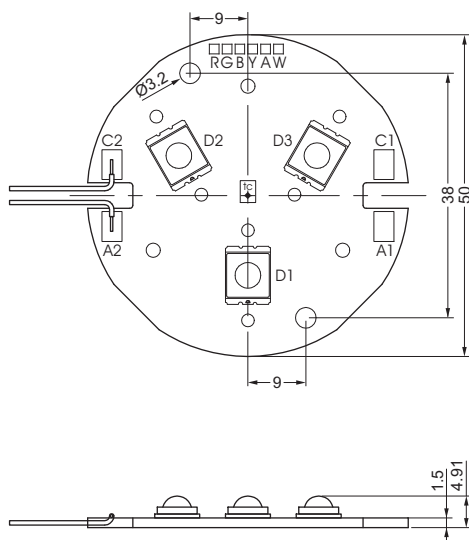
The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification. Please find further detailed information at www.vs-optoelectronic.com.

TriplePowerEmitter 3x3 Watt

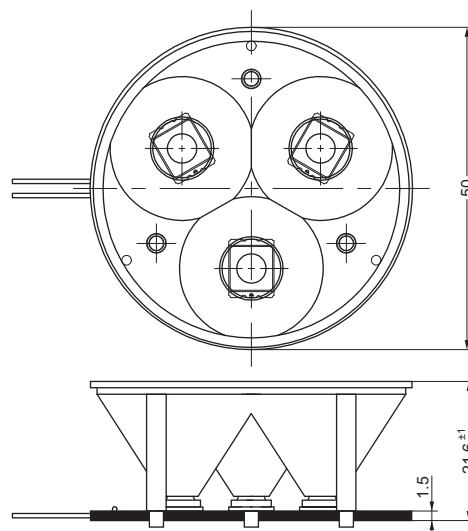
Light Distribution Curve



Mechanical Dimensions



Module without lens



Module with lens

The PCB is pre-assembled with 2 leads of 200 mm in length:

red: anode (+); AWG-22/0.34 mm²

black: cathode (-); AWG-22/0.34 mm²

TriplePowerEmitter 3x3 Watt

Assembly and Safety Information

- LED modules and all PCB components must not be subjected to undue mechanical stress:
 - LED modules must not be handled as bulk cargo
 - Shear and pressure stress must be avoided on LEDs during assembly and handling
- The circuit path must not be damaged or interrupted.
- Fixing holes are integrated in the PCB for easy assembly. Please use only plastic bolts for assembly to avoid short circuits or damage.
- Safe operation is only possible with an external constant current source (max. 700 mA).
- Operation is dependent on constant current drivers that should provide the following protective measures:
 - short-circuit protection
 - overload protection
 - overheating protection
 - SELV equiv. (Safety Extra Low Voltage)
- TriplePowerEmitters 3x3 Watt are pre-assembled with two leads (AWG-22) with a length of 200 mm.
- Safe operation is dependent on ensuring that the p-n junction temperature of 145 °C is not exceeded. Depending on the ambient temperature and type of application, additional cooling surfaces and heat-conductive paste or tape (Ref. No. 529157) must be used to avoid heat accumulation in the module.
- Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- The maximum output of the power supply must be observed.
- Please ensure standard ESD (electrostatic discharge) protection measures are employed when handling and installing LED modules. Electrostatic discharge can damage LEDs.
- The modules are not protected against dust or moisture. When LED modules are operated in unduly moist or dusty environments, care must be taken to ensure each module is built into a protective casing in compliance with the correct IP classification or provided with corrosion protection. Damage caused by moisture and/or corrosion will not be recognised as a material or manufacturing defect.
- For optimal load of used constant current driver the TriplePowerEmitter 3x3 Watt 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. A parallel connection of the modules is not allowed.
- Tests have shown the following chemicals to be harmful to LEDs used on the modules. It is recommended not to use the under-mentioned chemicals anywhere in an LED system. The fumes from even small amounts of these chemicals may damage the LEDs.
 - Chemicals that might outgas aromatic hydrocarbons (e.g., toluene, benzene, xylene)
 - Methyl acetate or ethyl acetate (i.e., nail polish remover)
 - Cyanoacrylates (i.e., "Superglue")
 - Glycol ethers (including Radio Shack®, Precision Electronics Cleaner – dipropylene glycol monomethyl ether)
 - Formaldehyde or butadiene (including Ashland PLIOBOND® adhesive)
 - Dymax 984-LVUF conformal coating
 - Loctite Sumo glue
 - Gorilla glue
 - Clorox bleach
 - Clorox Clean-Up cleaner spray
 - Loctite 384 adhesive
 - Loctite 7387 activator
 - Loctite 242 threadlocker

Detailed information of handling of Cree LEDs can be found on www.cree.com.