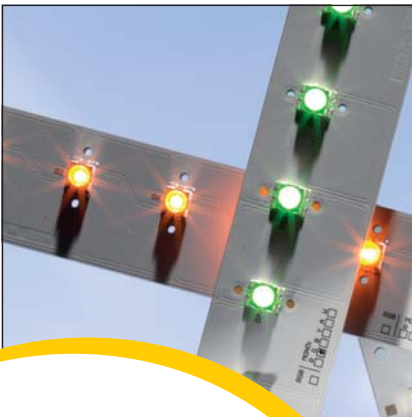




A New Lighting Experience



- 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
- attachment for lenses with different radiation angles
- lead-free soldered
- resistant against shock and vibrations

LEDLine High Power

WU-M-329

Typical Applications

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

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LEDLine High Power

Technical Notes

- PCB: 320x35 mm
- 12 LEDs per PCB
(PCB with 4 LEDs on request)
- Pre-assembled with leads
- Aluminum PCB for optimum thermal management
- ESD protection class 2

Electrical Characteristics

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

Type	Ref. No.	Colour	Number of LEDs	Max. current per module mA	Max. voltage DC V	Max. power consumption W
WU-M-329-SOSOSO	534193	Red	12	1050	12	12.6
WU-M-329-SGSGSG	534192	Green	12	1050	16	16.8
WU-M-329-SBSBSB	534191	Blue	12	1050	16	16.8
WU-M-329-WWWW	534194	White	12	1050	16	16.8
WU-M-329-warmwhite	534200	Warm white	12	1050	16	16.8

Use of external LED constant current driver with max. 1050 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
	°C min.	°C max.	°C min.	°C max.	
All types	-20	+85	-40	+85	5

Optical Characteristics

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

Type	Ref. No.	Colour	Dom. wavelength nm	Correlated colour temperature K	Luminous flux (lm)		Radiation angle °
					min.	typ.	
WU-M-329-SOSOSO	534193	Red	620–635		267	480	100
WU-M-329-SGSGSG	534192	Green	520–535		367	624	100
WU-M-329-SBSBSB	534191	Blue	465–475		120	228	100
WU-M-329-WWWW	534194	White		5700...6700	468	624	100
WU-M-329-warmwhite	534200	Warm white		2600...3500	360	540	100

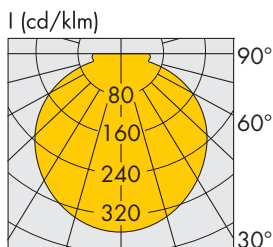
* On account of the complex manufacturing process of the modules the above values only represent statistical variables. The values do not necessarily correspond exactly to the actual parameters of every single product which can vary from the typical specification.

Thermal Characteristics

Type	Thermal resistance, p-n-junction to bottom of PCB (K/W)
All types	1.5 (per LED)

For improved thermal management VS recommends an additional cooling element, which is suitable for the application.

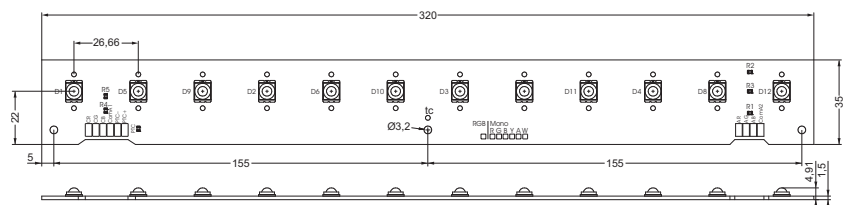
Typical Light Distribution Curve



WU-M-329-WWW

Attachment optics with various radiation characteristics are available at VS Optoelectronic. Please find further information at www.vs-optoelectronic.com.

Mechanical Dimensions



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

LEDLine High Power

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. 1050 mA).
- Operation is dependent on constant current drivers that should provide the following protective measures:
 - short-circuit protection
 - overload protection
 - SELV equiv. (Safety Extra Low Voltage)
- LEDLine High Power is pre-assembled with leads with a length of 200 mm.
- Safe operation is dependent on ensuring that the p-n junction temperature of 125 °C or the t_c temperature of 85°C are not exceeded. Depending on the ambient temperature and type of application, additional cooling surfaces and heat-conductive paste or tape 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.
- In measurement technique applications a 100% homogeneity of illumination will not be warranted.
- 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.

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.