A New Lighting Experience

- **long service lifetime due to optimal thermal management**
- **very high lumen output**
- **highly efficient (up to 90 lm/W)**
- **available in different CCT's**
- **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-XR-E

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 XR-E

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 °C

Type	**Ref. No.**	Colour	Number of LEDs	Max. current per module mA	Max. voltage DC V	Max. power consumption W
WU-M-329-XRE-WWW	**All types**	White	12	1050	16	16.8
WU-M-329-XRE-warmwhite	**All types**	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
	°C min.	°C max.	°C min.	°C max.	V
All types	–20	+85	–40	+85	5

Optical Characteristics

at ambient temperature t_a = 25 °C

Type	**Ref. No.**	Colour	Correlated colour temperature K	Brightness bin**	Luminous flux (lm) at 1050 mA	Radiation angle °	Max. Power W
WU-M-329-XRE-WWW	**534426**	White	5650...6950	N4	774.0.....806.4	90	16.8
WU-M-329-XRE-WWW	**535080**	White	5650...6950	P2	806.4.....886.8	90	16.8
WU-M-329-XRE-WWW	**535081**	White	5650...6950	P3	886.8.....967.2	90	16.8
WU-M-329-XRE-WWW	**535082**	White	5650...6950	P4	967.2...1048.8	90	16.8
WU-M-329-XRE-WWW	**535186**	White	5650...6950	Q2	1048.8...1126.8	90	16.8
WU-M-329-XRE-WWW	**535187**	White	5650...6950	Q3	1126.8...1200.0	90	16.8
WU-M-329-XRE-WWW	**535274**	White	5650...6950	Q4	1200.0...1284.0	90	16.8
WU-M-329-XRE-WWW	**537921**	White	5650...6950	Q5	1284.0...1368.0	90	16.8
WU-M-329-XRE-warmwhite	**535083**	Warm white	2720...3040	N3	681.6.....744.0	90	16.8
WU-M-329-XRE-warmwhite	**535084**	Warm white	2720...3040	N4	744.0.....806.4	90	16.8
WU-M-329-XRE-warmwhite	**535736**	Warm white	2720...3040	P2	806.4.....886.8	90	16.8
WU-M-329-XRE-warmwhite	**535737**	Warm white	2720...3040	P3	886.8.....967.2	90	16.8
WU-M-329-XRE-warmwhite	**537927**	Warm white	2720...3040	P4	967.2...1048.0	90	16.8

* 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.

** The reference numbers represent a single brightness group. In order to ensure availability please contact your sales prior to order.

Operating Life

50,000 hrs. (lumen maintenance at 70 %,
t_c = 80 °C, I_F = 1050 mA)
This value does not refer to the
colour temperature.

Thermal Characteristics

Type	Thermal resistance, p-n-junction to bottom of PCB K/W
All types	15

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

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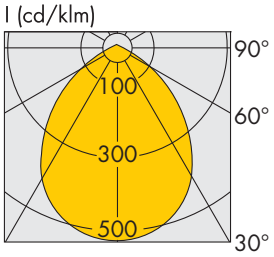
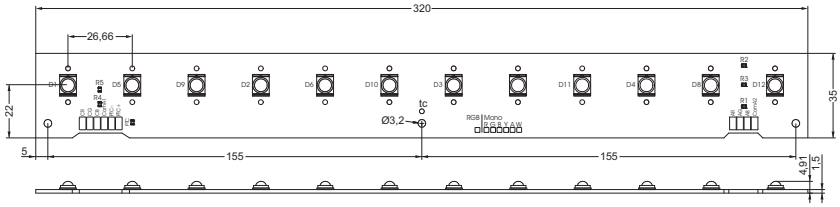
LEDLine High Power XR-E

Light Distribution Curves



without lens

Mechanical Dimensions

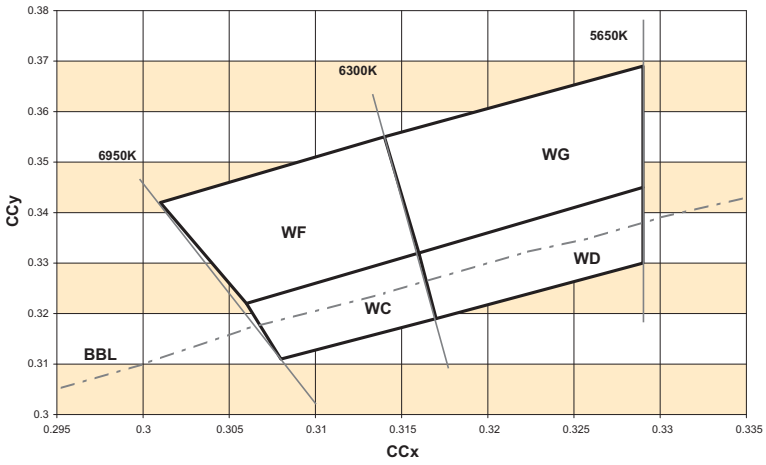


The PCB is pre-assembled with leads of 200 mm in length.

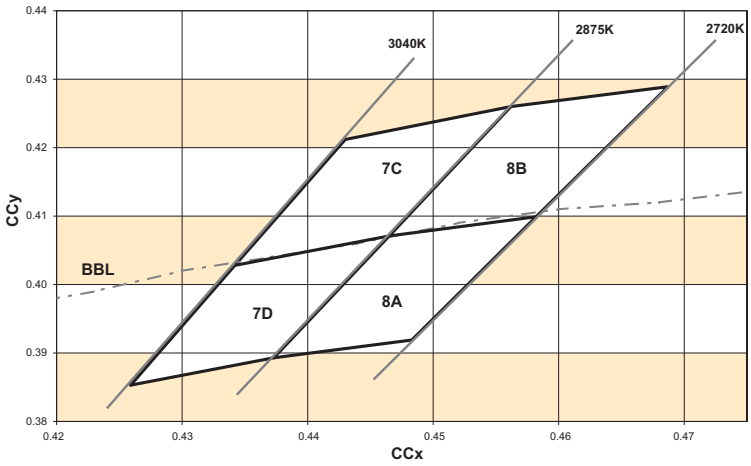
Bins

The standard shipping format regarding the reference numbers on page 2 includes all chromaticity coordinate groups.
The concrete delivered group is marked on each product packing. Reduction of orderable groups is possible only project-based.

White



Warm white



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LEDLine High Power XR-E

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 XR-E is pre-assembled with leads with a length of 200 mm.
- Safe operation is dependent on ensuring that 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.

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