A New Lighting Experience

- very high luminous flux
- simple plug and play connection technology
- long service lifetime due to optimal thermal management
- various light distribution options using optic modules

High Power RGB 24V CA System Triple / Line / Flood

WU-M-340-RGB
WU-M-341-RGB
WU-M-342-RGB

Typical Applications

Assembly Modules for
- Architectural illumination
- Decorative lighting
- Entertainment, shop design
- Light advertising

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Triple / Line / Flood

Technical Notes

- Voltage supply: 24V DC
- Aluminum-PCB for optimum thermal management
- Increased ESD-protection

Electrical Characteristics

at ambient temperature t_a = 25 °C

Type	Ref. No.	Colour	Number of LEDs	Operation Voltage V	Inrush Current A	Nominal Current A	Nominal Power consumption (W) typ.	max.
Triple Module								
WU-M-340-RGB	**534610**	RGB	3	24	0.54	0.22	4,5	5
Line Module								
WU-M-341-RGB	**534611**	RGB	6	24	1.10	0.65	14	15
Flood Module								
WU-M-342-RGB	**534612**	RGB	10	24	1.40	1.10	21	25

Limits

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

Type	Voltage DC V min.	V max.	Operation temperature range at t_c point °C min.	°C max.	Storage temperature range °C min.	°C max.
All types	23	25	–30	+85	–40	+85

Optical Characteristics

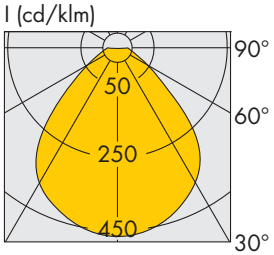
at junction temperature t_j = 25 °C

Type	Ref. No.	Colour	Dom. wavelength Red nm	Green nm	Blue nm	Luminous flux* Red lm	Green lm	Blue lm	Radiation angle* °
Triple Module									
WU-M-340-RGB	**534610**	RGB	620–630	520–535	465–485	56	112	46	100
Line Module									
WU-M-341-RGB	**534611**	RGB	620–630	520–535	465–485	112	224	92	100
Flood Module									
WU-M-342-RGB	**534612**	RGB	620–630	520–535	465–485	168	448	138	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.

Light Distribution Curve

I (cd/klm)



WU-M-340/-341/-342

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.

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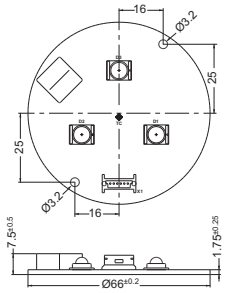
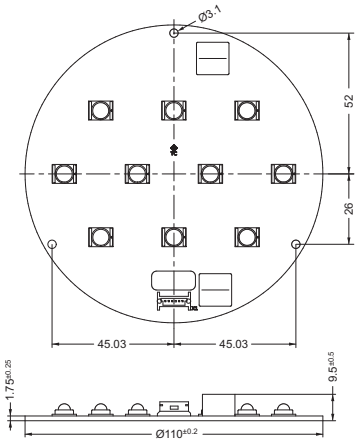
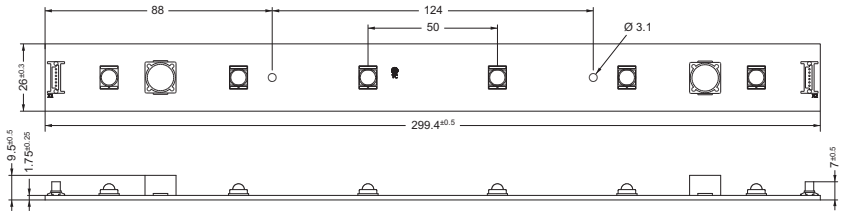
Mechanical Dimensions



Triple Module



Flood Module



Line Module

Maximum quantity of 24V HighPower modules on VS converter 24V

LED modules Type	**Ref. No.**	Max. quantity of 24V HighPower modules on VS converter 24V EDXe110 10W/24V	 EDXe120 20W/24V	 EDXe130 30W/24V	 EDXe170 70W/24V	 EDXe1130 130W/24V
WU-M-340-RGB	**all types**	1	2	5	7	13
WU-M-341-RGB	**all types**	–	1	2	3	6
WU-M-342-RGB	**all types**	–	1	1	2	5

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Assembly and Safety Information

Installation must be carried out under observation of the relevant regulations and standards. The LED modules of the 24V CA System 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.

- ESD (electrostatic discharge) protection measures must be observed when handling and installing the LED modules. See VS's application notes on ESD protection.
- 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 vibrations of more than 2 kHz, 40 G
- LED assembly modules are designed for attachment using a thermally conductive adhesive, an adhesive foil or M3 screws.
- When using adhesive to attach LED assembly modules, care must be taken to ensure a clean, smooth and even surface that is free of grease, oil, silicone and dirt particles. Moreover, adequate connection to the substrate must be ensured to permit thermal dissipation. Due to the diversity of possible applications, surfaces and environmental conditions, VS cannot accept any liability for modules attached using adhesives.
  If opting for screw attachment, plastic screws or suitably insulated, non-loosening metal screws must be used.
- LED assembly modules are designed for connection to PCB distributors or slave boards and for direct connection to DigiLED CA (colour control) modules.
  A reverse-polarity protected flatband cable system (in two lengths: 20 mm, Ref. No. 539476 and 100 mm, Ref. No. 539475) with pre-assembled connectors is available for connecting the PCB distributor.
  The LED assembly modules can be connected to a slave board or directly to a DigiLED CA colour control unit by alternatively using a 500 mm feed-in cable (Ref. No. 535900). The feed in cable is fitted with a pre-assembled connector that ensures reverse-polarity protected connection to the LED assembly modules; the other end of the cable is connected to the slave board or DigiLED CA colour control unit under observation of correct polarity (see respective colour coding of cables and terminals). Further details on the DigiLED CA series can be found in the data sheets at www.vs-optoelectronic.com.
- The WU-M-341-RGB (Line) LED assembly module can be connected to a further LED assembly module using a flatband cable. A maximum of three (3) LED assembly modules can be connected in series.
  Please see the "Connection Technology" data sheet for details on connection options.
- 24V DC converters that comply with EN 61347-2-13 must be used for power supply purposes. Vossloh-Schwabe recommends operating VS LED assembly modules with matching (SELV or SELV-equivalent, short-circuit-, overload- and temperature-protected) VS converters that are listed in the general system description.
- 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.
- To ensure problem-free operation, the specified maximum temperature at the t_C point 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.
- 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 recognised as a defect or manufacturing fault.

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Assembly and Safety Information

- 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.
- Provided that LED assembly modules are correctly installed and used, no additional eye protection is necessary. However, looking directly into the light source should still be avoided. When confronted with any source of bright light, e.g. LED light, the eyes protects themselves from harm by the lids' natural reflex to blink. If LED assembly modules are used in conjunction with other optical systems (e.g. lenses), the system must be checked in accordance with IEC 62471: 2006.
- 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.

Applied Standards

EN 62031
LED modules for general lighting – Safety specifications
(IEC 34A/1144/CD:2005)

EN 61347–1
Lamp controlgear – Part 1: General and safety requirements

EN 61347–2–11
Lamp controlgear – Part 2–11:
Particular requirements for
miscellaneous electronic circuits used with luminaires
(IEC 61347–2–11:2001)

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