LED Grow Lights

Product Brochure

VALOYA
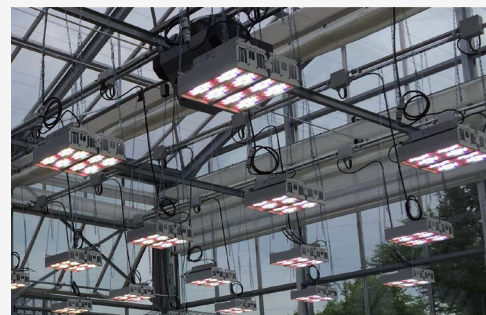RESEARCH DRIVEN

10 Years
of Excellence

Since 2009 we have been committed to creating the best LED grow lights on the market so as to enable growers to increase yields, quality and energy savings.

With one of the largest patent portfolios of the horticulture lighting industry, we are the pioneers of the high quality LED grow light solutions.

514

Plant trials conducted

60+

Spectra tested

50+

Countries sold to so far

100

Patents granted

Hundreds of clients around the world rely on Valoya technology including 8 out of 10 world's largest agricultural companies.

As our customers, you will receive the support and care of our photobiologists, seed to sale.

- The Valoya Team

Choose a Spectrum for Your Needs

Solray™

Optimized sunlight for commercial horticulture and research applications.

All growth stages.

A balanced range of wavelengths from UV to FR suitable for all growth stages. It has been tested on and is suitable for most plant species cultivated worldwide. Solray works as both sole source or supplemental light.

UV	B	G	R	FR
1 %	24 %	34 %	38 %	3 %

PAR	CCT	CRI	B:G	R:FR
96 %	4600	95	0,8	14,0

NS1 NS12

Sun-like, wide spectrum for research and biotech.

All growth stages.

The spectrum that illuminates the chambers and greenhouses of some of the world's largest universities, research institutes and agricultural companies.

Table below expresses data for NS1 (upper row) / NS12 (lower row).

UV	B	G	R	FR
1%	20%	39%	35%	5%
0,5%	21%	38%	35%	6%

PAR	CCT	CRI	B:G	R:FR
94%	4800	90	0,7	10,4
94%	5000	91	0,6	4,6

AP67

Spectrum for vegetative and strong generative growth.

Vegetative growth, flowering, tissue culture, propagation.

Designed and proven to quickly boost plant biomass and induce flowering.

UV	B	G	R	FR
0 %	14 %	16 %	53 %	17 %

PAR	CCT	CRI	B:G	R:FR
83 %	2500	70	1,2	3,3

AP673L

Spectrum for strong vegetative growth.

Vegetative growth.

Designed and proven to quickly boost plant biomass and produce plants saturated with flavor and nutrients. Ideal for the cultivation of leafy greens.

UV	B	G	R	FR
0 %	12 %	19 %	61 %	8 %

PAR	CCT	CRI	B:G	R:FR
92 %	2000	60	1,8	5,5

G2

Spectrum for enhancing vernalization process, flowering and stem elongation.

Vernalization, flowering, rooting.

Designed to shorten the vernalization period of species which require a cold period in order to flower. The spectrum is also ideal for long day plants as a night interruption.

UV	B	G	R	FR
0 %	8 %	2 %	65 %	25 %

PAR	CCT	CRI	B:G	R:FR
75 %	NA	NA	25,9	3,1

Typical values presented in the tables. There may be some variations between the spectra in different fixture models due to a disparity in the LED layout.

Choose a Form Factor for Your Needs

Valoya LED luminaires.

To see which spectrum is available in which product series, please see detailed tech sheets, pages 6-11 of this brochure.

L-Series	C-Series

Rooms and chambers, tissue culture and vertical farming.

- Non-dimmable
- Slim, retro-fit
- IP64

Rooms and chambers, tissue culture and vertical farming.
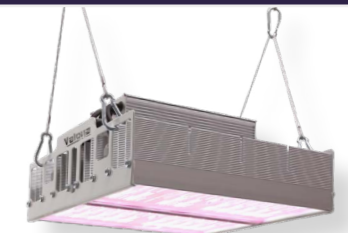
- Dimmable
- IP66

BX-Series	BL-Series	RX-Series

Rooms and chambers, vertical farming, greenhouses, and HPS hybrid.

- Dimmable
- IP67

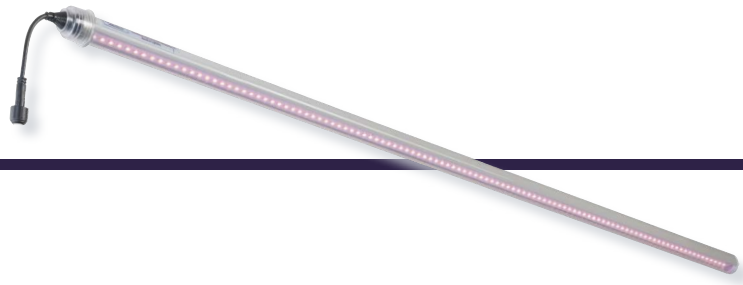**Greenhouses, rooms and chambers and HPS hybrid.**

- Non-dimmable
- Chainable
- IP66

Greenhouses and HPS hybrid.

- Dimmable
- High power
- IP55

L-Series

The T8 form factor allows the L-series products to be installed in fluorescent tube fixtures without modification (fixtures with magnetic ballast). Other installation options are cost effective, easy to install end-caps with IP64.

- **Typical applications**
  Vertical farming, tissue culture, growth chamber

- **Light intensity in typical applications**
  20 ~ 250 µmol/m^2/s

- **Accessories**
  Optional Valoya end-cap set with ingress protection available to order.

Optional (IP64)
single

Optional (IP64)
chain
*up to 60 luminaires
with 1 mains cable*

	L10	L14	L18	L28	L35
Spectra available	NS12	NS12	AP67	AP67, AP673L, G2, NS12	
Power consumption	10W	14W	18W	28W	35W
Power input (50/60Hz)	110-240, 277 VAC				
Weight	0,22 kg (0.49 lb)	0,29 kg (0.64 lb)	0,36 kg (0.79 lb)	0,36 kg (0.79 lb)	0,44 kg (0.97 lb)
Dimensions (Length / Diameter)	595 mm / Ø 26	895 mm / Ø 26	1198 mm / Ø 26	1198 mm / Ø 26	1498 mm / Ø 26
	23.4" / Ø 1.02	35.2" / Ø 1.02	47.2" / Ø 1.02	47.2" / Ø 1.02	59.0" / Ø 1.02
Single end-cap cable length	3 m (118")				
Certifications / Approvals	CE marked, RoHS compliance				
	Tested and certified to UL/CSA standards	-	-	Tested and certified to UL/CSA standards	
Distance from the plants (rec.)	< 0,5 m (20")				
Light intensity decay	Max 10% at 36 000 h. Typical usage 50 000 h.				
Light efficacy (380 - 820 nm)	Up to 2,1 µmol/W (spectrum dependent)				
Ambient operating temperature	-10 ˚C – +40 ˚C (14 ˚F – 104 ˚F)				
Water & impact protection	Non-protected without end-cap IP64 with end-cap: Dust-tight & protected against splashing water from any direction				
Warranty	Up to 5 years limited warranty. More details at www.valoya.com/warranty.				
Minimum order quantity	108 pcs	12 pcs	12 pcs	12 pcs	12 pcs

Typical values presented. Tolerances apply. For more detailed technical specifications please download the 'Installation Guide' from valoya.com/brochures

C-Series

The C-series is ideal for growth rooms and other demanding applications where high intensity lighting is needed. These luminaires are ultra slim and lightweight which makes them easy to install even in places with very limited space. The bar shaped form factor minimizes shadow effect and makes it suitable for various vertical farming solutions.

- **Typical applications**
  Growth rooms, vertical farms

- **Light intensity in typical applications**
  50 ~ 400 µmol/m^2/s

- **Accessories**
  Standard hooks and LED driver included.
  Optional hooks available to order.

Standard   **Optional**

	C65	C75	C90
Spectra available	AP67, AP673L, NS12	AP67, AP673L, NS12	AP67, AP673L, NS12
Power consumption (incl. LED driver)	65W	80W	90W
Power input	100-240, 277 VAC	100-240, 277 VAC	100-240, 277 VAC
Weight (incl. LED driver)	2,8 kg (6.2 lb)	3,3 kg (7.2 lb)	3,8 kg (8.4 lb)
Dimensions (L x W x H)	1175 x 45 x 33 mm	1475 x 45 x 33 mm	1750 x 45 x 33 mm
	46.3" x 1.8" x 1.3"	58" x 1.8" x 1.3"	68.9" x 1.8" x 1.3"
Cables	0,5 m (20") mains input to PSU, 3 m (118") PSU to luminaire, 0,3 m (11.8") dimming		
Certifications / Approvals	CE marked, RoHS compliance Tested and certified to UL/CSA standards		
Dimming	0 - 10 V, PWM, light output: off, 6 - 100%		
Distance from the plants (rec.)	0,1 - 1,5 m (4 - 59")		
Light intensity decay	Max 10% at 36 000 h. Typical usage 50 000 h.		
Light efficacy (380 - 820 nm)	Up to 1,8 µmol/W (spectrum dependent)		
Ambient operating temperature	0 ˚C – 30 ˚C (32 ˚F – 86 ˚F)		
Water & impact protection	IP66: Dust-tight & protected against powerful water jets		
Warranty	Up to 5 years limited warranty. More details at www.valoya.com/warranty.		

Typical values presented. Tolerances apply. For more detailed technical specifications please download the 'Installation Guide' from valoya.com/brochures

BX-Series

BX-Series is the new generation of Valoya's bestseller, the B-Series. Light intensity of up to 2,4 μmol/W comes in slim, light, humidity and impact resistant bar shaped luminaires. Applications demanding high light intensity with absolute light uniformity are what BX-Series was designed for.

- **Typical applications**
  High intensity lighting, growth rooms, multilayer

- **Light intensity in typical applications**
  200 ~ 1000 μmol/m^2/s

- **Accessories**
  Standard hooks and LED driver with mating part to the cable connector included. Optional hooks available to order.

Standard   **Optional**

	BX90	BX120	BX180
Spectra available	AP67, AP673L, G2, NS1	AP67, AP673L, G2, NS1, Solray™	AP67, AP673L, NS1
Power consumption (incl. LED driver)	88W	132W	199W
Power input	100-240, 277 VAC	100-240, 277 VAC (all spectra) 200 - 277 VAC / 200 - 480 VAC (Solray™ spectrum only)	100-240, 277 VAC
Weight (incl. LED driver)	3,5 kg (7.7 lb)	4,1 kg (9.0 lb)	5,4 kg (11.9 lb)
Dimensions (L x W x H)	903 x 73,5 x 58 mm	1176 x 73,5 x 58 mm	1722 x 73,5 x 58 mm
	35.5" x 2.9" x 2.3"	46.3" x 2.9" x 2.3"	68" x 2.9" x 2.3"
Cables	0,3 m (11.8") mains to LED driver, 3 m (118") luminaire to LED driver, 0,3 m (11.8") dimming cable		
Certifications / Approvals	CE marked, RoHS compliance Tested and certified to UL/CSA standards		
Dimming	0 - 10 V, PWM, light output: off, 6 - 100%	1 - 10 V, PWM, light output: off, 10 - 100%	
Distance from the plants (rec.)	0,1 - 4,0 m (4 - 13.1")		
Light intensity decay	Max 10% at 36 000 h. Typical usage 50 000 h		
Light efficacy (380 - 820 nm)	Up to 2,4 μmol/W (spectrum dependent)		
Ambient operating temperature	0 ˚C – 40 ˚C (32 ˚F – 104 ˚F)		
Water & impact protection	IP67: Dust-tight & protected against the effects of immersion		
Warranty	Up to 5 years limited warranty. More details at www.valoya.com/warranty		

Typical values presented. Tolerances apply. For more detailed technical specifications please download the 'Installation Guide' from valoya.com/brochures

BL-Series

BL-Series combines the high intensity and durability of the BX-Series with the chainability feature allowing up to 16 luminaires to be connected to a single mains input. The LED driver is internal meaning less cables and a simple installation. The BL-Series is ideal for high light intensity applications.

- **Typical applications**
  High intensity lighting, greenhouses, growth room

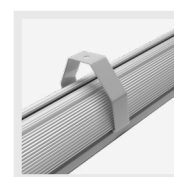- **Light intensity in typical applications**
  100 ~ 1000 µmol/m^2/s

- **Accessories**
  Standard hooks included. Optional hooks, mains input Wieland connector and blank cap available to order.

Standard

Optional

Optional

Optional

BL120

Spectra available	AP67, AP673L, NS1
Power consumption (incl. LED driver)	125W
Power input	220 -240 VAC
Weight (incl. LED driver)	3,2 kg (7.1 lb)
Dimensions (L x W x H)	1175 x 45 x 33 mm
	46.3" x 2.9" x 2.3"
Cables	0,3 m (11.8") from each end of the luminaire
Certifications / Approvals	CE marked, RoHS compliance
Dimming	NA
Distance from the plants (rec.)	0,1 - 4,0 m (4" - 13.1')
Light intensity decay	Max 10% at 36 000 h. Typical usage 50 000 h
Light efficacy (380 - 820 nm)	Up to 2,1 µmol/W (spectrum dependent)
Ambient operating temperature	0 ˚C – 35 ˚C (32 ˚F – 95 ˚F)
Maximum no. of interconnected luminaires	16
Water & impact protection	IP66: Dust-tight & protected against powerful water jets
Warranty	Up to 5 years limited warranty. More details at www.valoya.com/warranty

Typical values presented. Tolerances apply. For more detailed technical specifications please download the 'Installation Guide' from valoya.com/brochures

RX-Series

The RX-series form factor resembles traditional HID lighting and offers an easy to install option for one-to-one replacement of HID lights. RX-series lights are thus ideal for a step by step investment in LEDs by replacing part of HID lights with more energy efficient Valoya wide spectrum LED lights. A highly durable fixture due to all aluminium build, high IP and passive cooling.

- **Typical applications**
  High intensity lighting, HID replacement

- **Light intensity in typical applications**
  100 ~ 1000 µmol/m^2/s

- **Accessories**
  Standard hooks and mating part to the cable connector included. Optional hooks available to order.

Standard   **Optional**

RX400

Spectra available	AP67, AP673L, NS1, Solray™
Power consumption	395W
Power input	100-240, 277 VAC (all spectra) 200 - 480 VAC (Solray™ spectrum only)
Weight	11 kg (24.3 lb)
Dimensions (L x W x H)	347 x 382 x 166 mm 13.7" x 15" x 6.5"
Cable	0,3 m (11.8") mains input, 0,3 m (11.8") dimming cable
Certifications / Approvals	CE marked, RoHS compliance Tested and certified to UL/CSA standards
Dimming	0-10V, PWM, light output: off, 6-100%
Distance from the plants (rec.)	0,5 - 4,0 m (20" - 13.1')
Light intensity decay	Max 10% at 36 000 h. Typical usage 50 000 h.
Light efficacy (380 - 820 nm)	Up to 2,4 µmol/W (spectrum dependent)
Ambient operating temperature	-10 ˚C – +35 ˚C (14 ˚F – 95 ˚F)
Water & impact protection	IP55: Dust-protected & protected against water jets
Warranty	Up to 5 years limited warranty. More details at www.valoya.com/warranty

Typical values presented. Tolerances apply. For more detailed technical specifications please download the 'Installation Guide' from valoya.com/brochures

Light**DNA**

LightDNA is a high-end product line of Valoya's professional LED grow lights. The purpose of the LightDNA products and solutions, is the delivery of accurate natural outdoor light conditions to indoor growing environments. Outdoor light is by default changing all the time with regards to light spectrum, intensity and photoperiod. LightDNA captures these dynamic features with precision.

▪ **Accessories**
  Standard hooks included. Other required accessories are defined based on the project specification. Please consult our sales representative prior to purchase.

Standard   **Standard**

	Dynamic 2-Channel Light						Dynamic 8-Channel Light
	BX120			**BX180**			**LightDNA 8-channel**
Luminaire(s) per complete system	2	3	4	2	3	4	1
LED Driver (NS1/ FR) quantity	2 / 1	3 / 1	4 / 1	2 / 1	3 / 1	4 / 1	-
Junction box quantity	2	3	4	2	3	4	-
Power consumption (fixture)	156 W			210 W			300 W total (30 - 70 W channel dependent)
Power consumption (complete system)	314 W	471 W	625 W	422 W	633 W	844 W	-
Power input (complete system)	180-240, 277 VAC	100-240, 277 VAC					100-240, 277 VAC
Dimension (fixture), L x W x H	1176 x 74 x 58 mm 46.3" x 2.9" x 2.3"			1722 x 74 x 58 mm 68" x 2.9" x 2.3"			340 x 180 x 175 mm 13.4" x 7.0" x 6.9"
Total weight (complete system)	9,7 kg (21.4 lb)	14 kg (30.9 lb)	18,3 kg (40.3 lb)	12,6 kg (27.8 lb)	18,5 kg (40.8 lb)	24 kg (52.9 lb)	7,7 kg (16.9 lb)
Certifications	CE marked, RoHS compliance Tested and certified to UL/CSA standards						CE marked, RoHS compliance
Dimming	1 - 10 V, PWM. Light output: 10 - 100%						8 channel dimmable, controlled with microPC
Micro PC	-						BeagleBone Industrial
Light intensity decay	Max 10 % of original output at 36 000 hours. Typical usage 50 000 h.						
Light efficacy (380-820nm)	1,8 µmol/W						1,3 µmol/W, varies among spectra
Ambient operating temperature	0 - 40 ˚C (32 - 104 ˚F)						0 - 30 ˚C (32 - 86 ˚F)
Water & impact protection	IP67: Dust-tight & protected against the effects of immersion						IP20: Not protected from water
Warranty	Up to 5 years limited warranty. More details at www.valoya.com/warranty.						

Typical values presented. Tolerances apply. For more detailed technical specifications please download the 'Installation Guide' from valoya.com/brochures

STANDARDS

EUROPE

EN60598-1: Luminaires. General requirements and tests.
EN60598-2-1: Luminaires. Part 2: Particular requirements. Section one – Fixed general purpose luminaires.
EN62031: LED modules for general lighting. Safety specifications.
EN 62493: Assessment of lighting equipment related to human exposure to electromagnetic fields.
EN55015: Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment.
EN61547: Equipment for general lighting purposes. EMC immunity requirements.
EN61000-3-2: Electromagnetic compatibility - Limits - Limits for harmonic current emissions.
EN61000-3-3: Electromagnetic compatibility – Limits - Limits for Voltage Fluctuations and Flicker.
IEC EN 61000-4-2: Electromagnetic compatibility (EMC)- Part 4-2: Testing and measurement techniques - electrostatic discharge immunity test.
IEC EN 61000-4-3: Electromagnetic compatibility (EMC)- Part 4-3: Testing and measurement techniques - radiated, radio-frequency, electromagnetic field immunity test.
IEC EN 61000-4-4: Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test.
IEC EN 61000-4-5: Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test.
IEC EN 61000-4-6: Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields.
IEC EN 61000-4-8: Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test.
IEC EN 61000-4-11: Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests.
IEC 61347-2-13: Lamp controlgear. Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules.
IEC 61347-1: Lamp controlgear - Part 1: General and safety requirements.
IEC 62384: DC or AC supplied electronic control gear for LED modules. Performance requirements.
EN62471: Photobiological safety of lamps and lamp systems.
EN62560: Self-ballasted LED-lamps for general lighting services by voltage >50V - Safety specifications.
EN62776: Double-capped LED lamps designed to retrofit linear fluorescent lamps - Safety specifications.

NORTH AMERICA

UL1598: Luminare safety.
UL8750: Light Emitting Diode (LED) equipment for use In lighting products.
UL2108: Standard for Low Voltage Lighting Systems.
CSA C22.2: #9.0: General Requirements for Luminaires.
CSA C22.2: #250.0.8: Safety for Light emitting diode (LED) equipment for lighting applications.
CSA C22.2 No. 250.13-14: Light Emitting Diode (LED) equipment for use in lighting products.

Get in touch with Valoya

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Distributors

You can get Valoya products through one of 30 global distributors. The complete distributor list is available at:
www.valoya.com/contact