

Planta Seed Flex Basic and IP66 Family

Product Specification

Planta Seed Flex IP66



Planta Seed Basic



Product Description

Flex LED Modules for Horticulture Applications in Indoor and Container Farming. The LED Modules can be used in multiple combinations to maximize luminaire design freedom.



Benefits

- LED modules for Indoor-Horticulture applications
- Two Light spectra for supplemental lighting and sole source lighting
- Basic Version with IP00 and Protected Version with IP66
- Flexible LED Module solution for Constant Voltage 24V applications
- Great design freedom thanks to flexibility and cuttability of the LED stripe

Features

- PPF and PPFE acc. To the table at rated conditions
- CE marked
- Type of protection IP00 or IP66
- Rated beam angle 120°
- Average Lifetime (L80B50) > 60000 hours (up to temperature at $T_p = 60\text{ °C}$)
- Dimmable by PWM technology and DALI
- Pre-soldered wires with optional Connection System
- Easy mounting on many smooth surfaces thanks to self-adhesive tape at the back
- Starting time < 0.5s
- Warm-up Time < 1.00s
- Number of switching cycles 100.000

Table 1. Product Performance, $T_p = 50\text{ }^\circ\text{C}$

Product name	Uf (V)	P _{electr.} (W/m)	PF (360-800nm) ($\mu\text{mol/s/m}$)	PF Eff. (360-800nm) ($\mu\text{mol/J/m}$)	PF (400-700nm) ($\mu\text{mol/s/m}$)	PF Eff. (400-700nm) ($\mu\text{mol/J/m}$)
Planta Seed R85B15 BA	24.0	24.8	46.0	1.80	44.0	1.7
Planta Seed R50W35 BA	24.0	25.0	50.0	1.95	48.0	1.9
Planta Seed R85B15 IP66	24.0	24.8	46.0	1.80	44.0	1.7
Planta Seed R50W35 IP66	24.0	25.0	50.0	1.95	48.0	1.9

1. Nominal performance is measured at $T_p = 55\text{ }^\circ\text{C}$ and related to 1m lengths
2. Tolerance for the optical and electrical data are $\pm 10\%$, values are simulated.
3. Maximal power is defined at Max rating current (Table. 3) and the T_c should be maintained under the Max $T_c 60\text{ }^\circ\text{C}$
4. Always ensure that T_c will not exceed the maximum allowed value with a properly design heat dissipation profile.

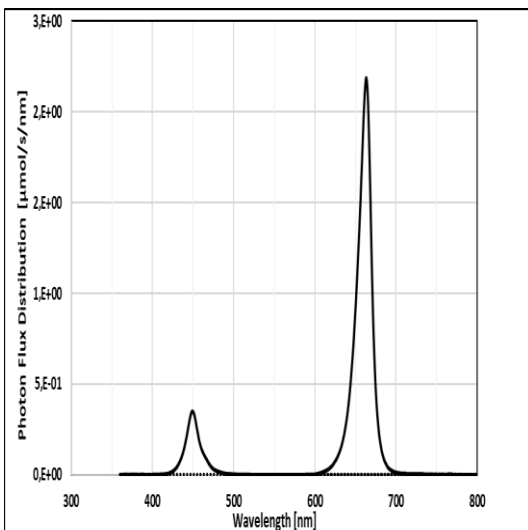
Table 2. Spectrum Characteristics, $T_p = 55\text{ }^\circ\text{C}$

Product name	% Blue (400 to 499nm)	% Green (500 to 599nm)	% Red (600 to 699nm)	% FarRed (700 to 799nm)
Planta Seed R85B15 BA	15.0	0.2	83.0	0.5
Planta Seed R50W35 BA	12.0	33.0	52.0	2.0
Planta Seed R85B15 IP66	15.0	0.2	83.0	0.5
Planta Seed R50W35 IP66	12.0	33.0	52.0	2.0

1. Nominal spectrum is measured at $T_p = 55\text{ }^\circ\text{C}$
2. Tolerance for the optical data are $\pm 10\%$, values are simulated

Typical Spectral Distribution

Planta Seed R85B15 xx



Planta Seed R50W35 xx

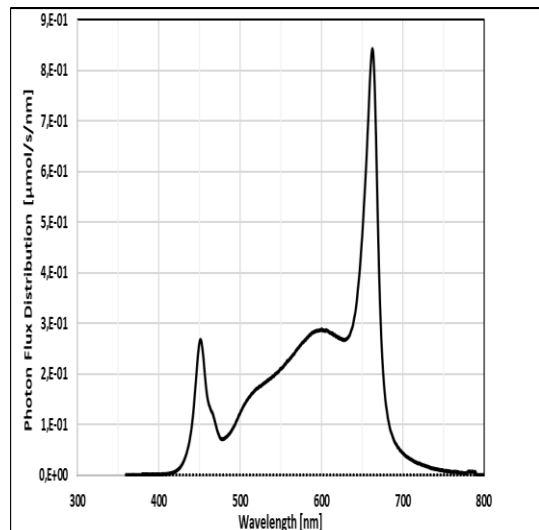


Table 3. General Data

Description	Value
Nominal Voltage	24.0V
Reverse Voltage protection up to	25.0V
Dimmable	Yes
Adhesive tape on backside	Yes
Minimum bending radius	5cm
Protection Type	IP00 & IP66
Length	5m
SEU	100mm

Table 4. Temperature Data

Product name	Case Temperature (T _{cmax})	Operating Temperature (T _a)	ESD Classification	Storage Temperature
Planta Seed Flex Modules	60 °C	-30 to 50 °C	2 kV	-30 to 85 °C

Lifetime Data

Planta Seed R85B15 xx

X	LxBy					
	70		80		90	
Y	10	50	10	50	10	50
tp [°C] = 50	100.000	100.000	78.000	87.000	38.000	42.000
tp [°C] = 55	100.000	100.000	75.000	84.000	36.000	40.000
tp [°C] = 60	100.000	100.000	68.000	75.000	32.000	36.000

Planta Seed R50W35 xx

X	LxBy					
	70		80		90	
Y	10	50	10	50	10	50
tp [°C] = 50	100.000	100.000	68.000	77.000	33.000	37.000
tp [°C] = 55	100.000	100.000	66.000	74.000	32.000	36.000
tp [°C] = 60	100.000	100.000	63.000	71.000	31.000	34.000

Ordering Guide

Short test	EAN10	EAN40
Planta Seed R85B15 BA	4062172357616	4062172357623
Planta Seed R50W35 BA	4062172357678	4062172357685
Planta Seed R85B15 IP66	4062172357692	4062172357708
Planta Seed R50W35 IP66	4062172357753	4062172357760

Safety Information:

- The LED module itself and all its components must not be mechanically stressed.

The modules are intended for operation with matching Inventronics Drivers.

To also ease the luminaire/installation approval, electronic control gear for LED or LED modules should carry the CE mark.

In Europe the declarations of conformity must include the following standards:

CE: EN 61347-2-13, EN 55015, EN 61547 and EN 61000-3-2 and EN 62384.

Also check for the mark of an independent authorized certification institute.

Please see the relevant brochure for more detailed information (see "Related and Further Information")

- Installation of LED modules (with power supplies) needs to be made with regard to all applicable electrical and safety standards. Only qualified personnel should be allowed to perform installations.
- Pay attention to standard ESD precautions when installing the module.
- Photobiological safety according to IEC/TR 62471, risk group RG3
- Max. Voltage U-OUT = 24.5V for operation on Constant Voltage Driver with Power supply 24V

Sales and technical support:

Inventronics GmbH

Berliner Alle 65
86153 Augsburg
Germany
www.inventronicsglobal.com

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On our worldwide homepage all Inventronics subsidiaries are listed with complete address and phone numbers.