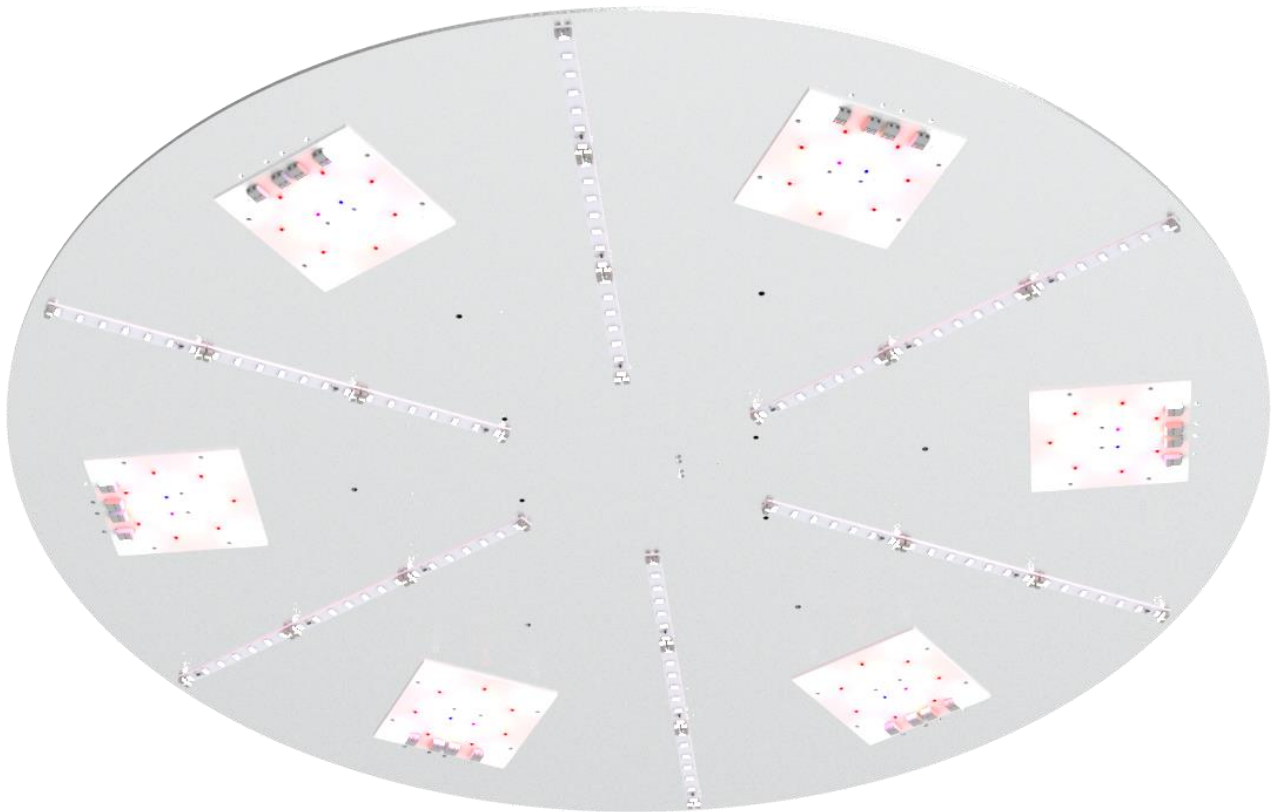


CEZOS

OliveTree dia 800 mm



INTRODUCTION

OliveTree is an advanced light source designed for the best energy efficient and eco-friendly indoor lighting. It is based on medium or high power LEDs produced by the leader of the LED technology. Using the newest technology we provide the best solution for lighting. With a very high value of CRI and simple installation.

LED Type	OSRAM - GH CSSRM3.24 OSRAM - GF CSSPM1.24 OSRAM - GD CSSPM2.14 OSRAM - GW CSSRM2.CM OSRAM - LUW CQAR LHUV-0395-0400 OSRAM E5 - GW JDSTS2.EM
LED Quantity	HYPER RED - 42 pcs FAR RED - 6 pcs BLUE - 6 pcs WARM WHITE - 24 pcs COLD WHITE - 24 pcs UV - 6 pcs COLD WHITE - 126 pcs
Dimension	dia 800 mm
Power Supply Type	~230 V AC
Current on LED module	350 mA / channel
Max Ambient Temperature	45°C

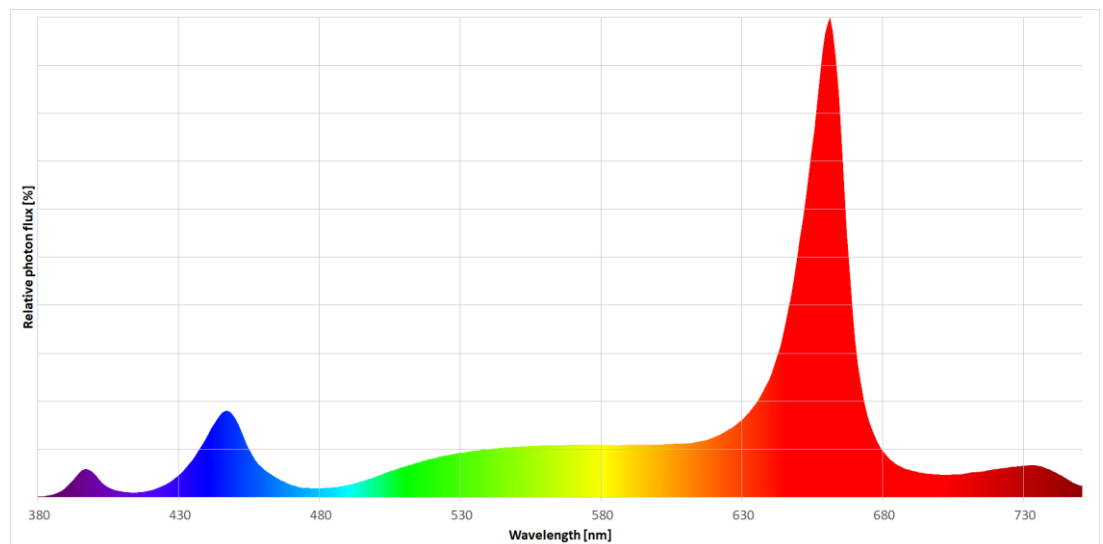
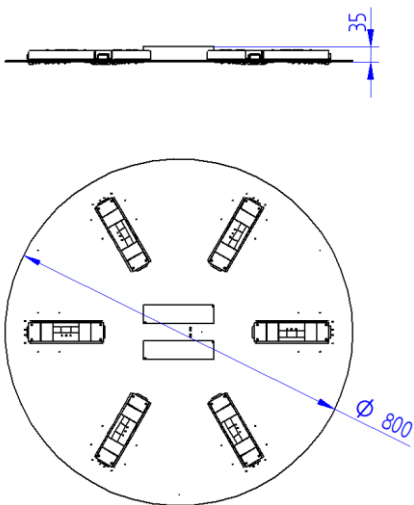
FEATURES

LEDs have significant advantages compared to other types of lighting and are easy to use. LEDs are versatile and virtually maintenance free.

- Rigid board LED module
- Small colour tolerance
- Small luminous flux tolerances
- Simple installation
- Long lifetime

APPLICATIONS

- Horticulture



CALCULATED PARAMETERS AT T_J = 25°C AND T_J = 85°C

Power [W]	Colour	λ [nm] / CCT [K]	PPF [μmol/s]	PPF/W [μmol/J]
161,9	HYPER RED	657	309,37	1,91
	FAR RED	727		
	DEEP BLUE	455		
	UV	400		
	WHITE	2700		
	WHITE	EQW		
	WHITE	5000		

Parameters were calculated for temperatures T_J= 25°C and luminous flux only for white LEDs.

Value of these parameters were calculated for default bin and with tolerances of 15%.

Parameters shown in table are default and for temperatures T_J=25°C. Some of this parameters are dependent on temperature and can be different during long time of operation. So it is impossible to order modules with same parameters after some time. LED technology is developed fast and producers are creating new LEDs with better features very quick. If you need LED modules with different value of some parameters, we provide other LEDs with different colour temperature and features. Parameters in table doesn't take into account the differences which can be done by additional optics. If parameters does not meet your needs, it is possible to make modification of LED modules or create a new one. In such a case and for more information, please contact us before ordering. Please have all of this in mind when ordering LED modules.

CONNECTIONS

OliveTree is a set, that contain LED modules, power supply, housing and optic. Remember to check all connection of set before connection power supply to mains. It is possibility to use different power supply and optic, but please contact us for information about compatibility. We are not responsible for any loss, or damage resulting from improper use of all parts! Guarantee become void in such cases.

SAFETY

Most of LEDs generate high intensity light even when they are dimmed. If LED generate high intensity light, it is classified as laser and these LEDs must have appropriate marking. Combination of many mid power LEDs or even low power LEDs with optics can be very dangerous, because optics can focus beam. Looking into LEDs beam is unhealthy and may cause irreversible effects to eye's retina. Never look into the beam without protection glasses with appropriate filter. Additionally LEDs light change intensity almost immediately. If people are photosensitive, LED light may be a trigger to epileptic seizures and alter the perception.

Power supply is connected directly to high voltage. It is very dangerous, so installation, modification, repair, maintenance and disassembly of OliveTree must be made by qualified person with appropriate certificates that allow to do such things. All connection and wiring must fulfill all current and valid national standards and requirements. Do not touch modules connectors and wires when power supply is turned on and before you make sure that there is no high voltage. If LED modules, wires and connectors are damaged, turn off power supply immediately. Wrong installation and damages may cause overheat, short circuit, electrical shock etc. In worst cases it can cause fire or generation of fumes. OliveTree isn't designed to be used in high humidity environment like bathrooms, baths, pools, outdoors etc. Please read instructions of each elements of OliveTree before use. We are not responsible for any losses, or damage caused by improper use of all parts! Guarantee becomes void in such cases.

PROTECTION MEASURES AGAINST DAMAGE

LED modules are delicate, even small mechanical stress may damage modules. Especially sensitive are LEDs. Such stresses should be avoided. If it is impossible, it should be kept to minimum. Mechanical stresses such as pressure, bending, breaking, drilling, etc. may cause irreversible damage. Damaged LED modules aren't suitable for use.

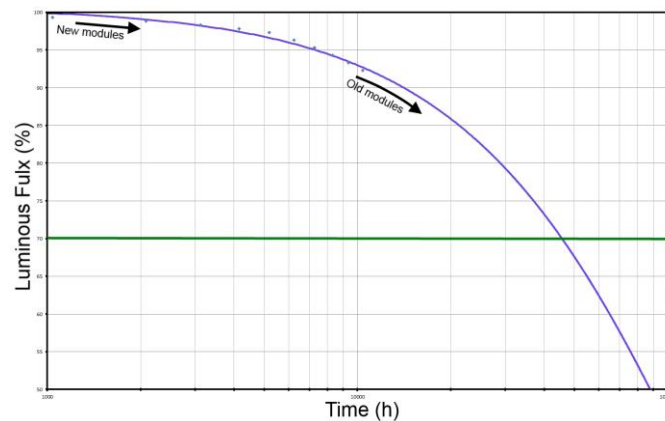
Serious threat to LEDs is electrostatic voltage discharge. People generate very high electrostatic voltage. Such voltage decrease lifetime of LEDs and in worst case may destroy electronic components. Best way to avoid damage is use of electrostatic protection. Do not touch electronic components.

Additionally LED modules can be damaged by some chemical substances. Depends of elements the damage may be different. It is important not to use chemical substances like acids, organic acids, sulphur, alkalis, organic solvents, mineral oils, vegetable oils and synthetic oils, etc. We are not responsible for any loss, or damage resulting from improper use of modules! Guarantee become void in such cases.

Do not operate LED modules or power supply, when they aren't working properly. If they are working incorrectly, turn off power supply. Damaged LED modules or power supply may cause electric shock or short circuit.

COOLING

The lifetime of the module depends to operating temperature and used LEDs. If temperature at T_c will be lower than 65°C , the value of luminous flux shouldn't be less than 80% of its nominal value after 50.000h. If temperature is too high then lifetime can be significantly decreased or damage LEDs. Another disadvantage of high temperature is reduction of relative luminous intensity. LED modules produce heat. They must be provided with good air ventilation. Modules without air ventilation can overheat. Overheat can damage or destroy some elements or entire LED modules. Never use overheated module again as it may be damaged and can cause losses or even fire. We are not responsible for any loss, or damage resulting from improper use of modules! Guarantee becomes void in such cases.



Most common problem using new modules in old installation is differences in brightness of modules. This is a result of luminous flux degradation over time of use. Degradation is a normal effect and applies to all LEDs. This effect is different for each LED and can be only predicted by testing and estimation. It is a complicated issue that mostly depends on temperature and current. A good solution to this problem is to reduce the current in new modules, but degradation will be different for each module. The above characteristic is an example for LEDs in a temperature above 100°C and different from the actual.

CONTACT

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Subject to technical changes and errors.