SHERPA Ray

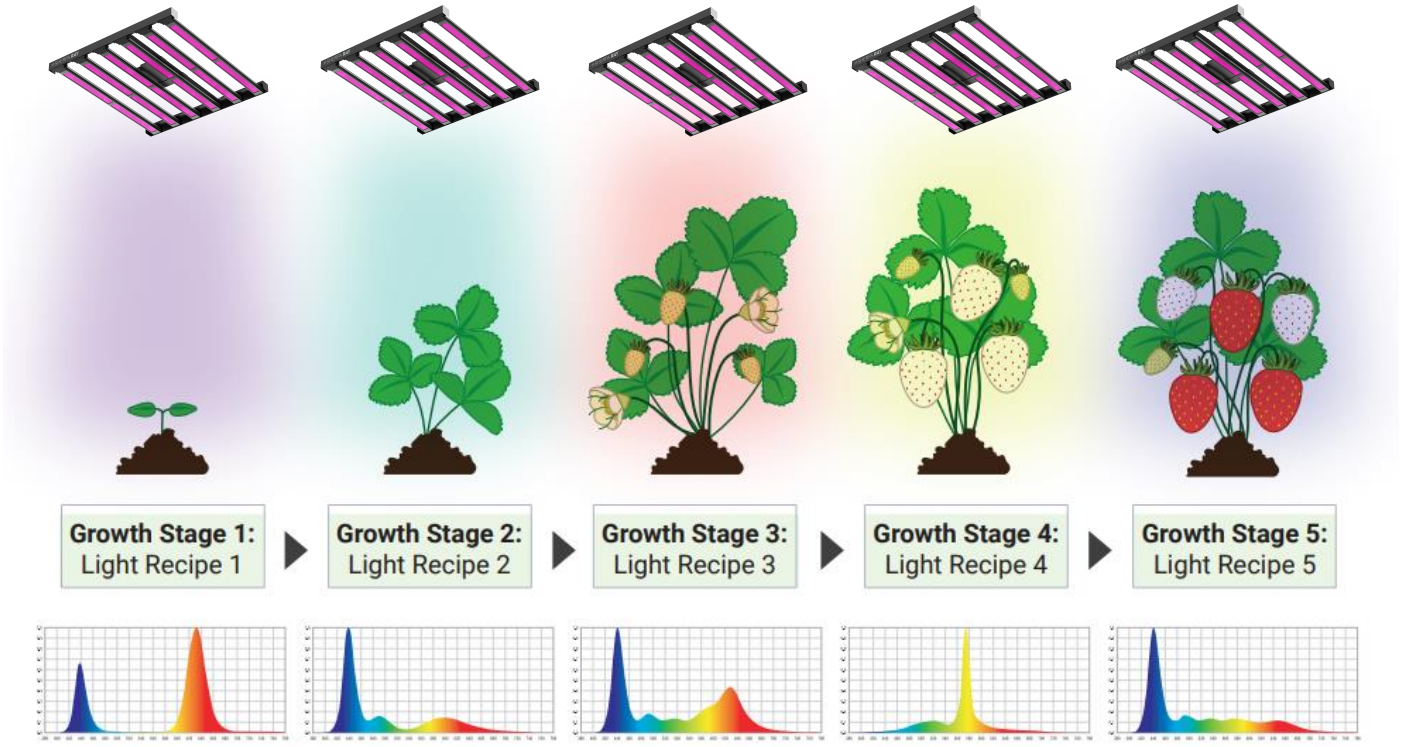
Tunable, Full-Spectrum Lighting

Sherpa Space

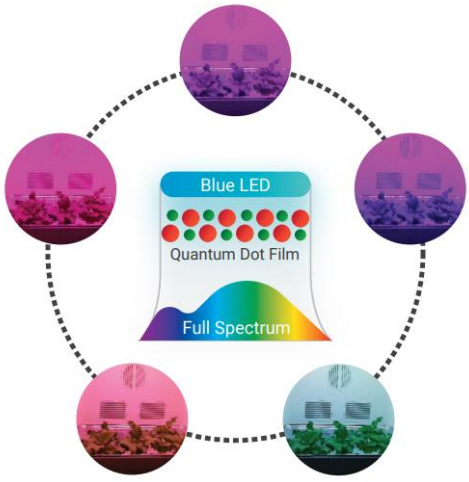
Sherpa Ray is a full spectrum tunable lighting product that can provide the required wavelength based on type of plant, species, growth stage to optimize harvesting quality and productivity

Sherpa Ray Necessity

Just as humans need various nutrients as they grow, various wavelengths are needed for optimal growth of plants. Lightening needs varies by plant species, and the wavelengths required when plants are young, growing, and bearing fruit.



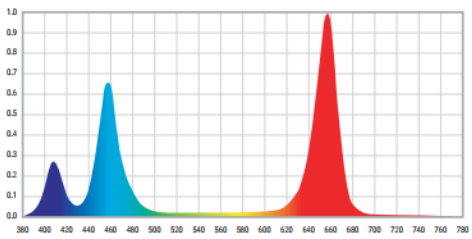
Sherpa Ray Skill



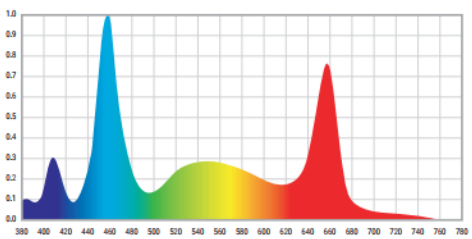
Without the Sherpa Space lighting product, many varieties of LEDs would be required to provide all the wavelengths to optimize plant growth, but Sherpa Space has developed a variable light source device that efficiently implements various wavelengths using only a single LED light product utilizing a patented quantum dot film technique whereby various spectrums of wavelength can be provided to the crop automatically at various growth stage without affecting intensity or requiring to change the light.

Sherpa Ray Innovation

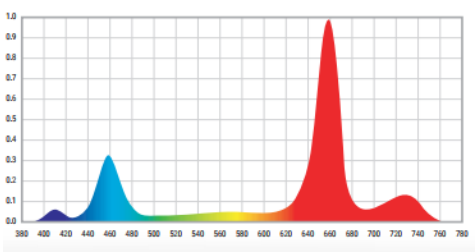
Dynamically adjustable full spectrum light provides the light that plants really need at every moment.



Stage1 : Adaptation



Stage2 : Vegetative



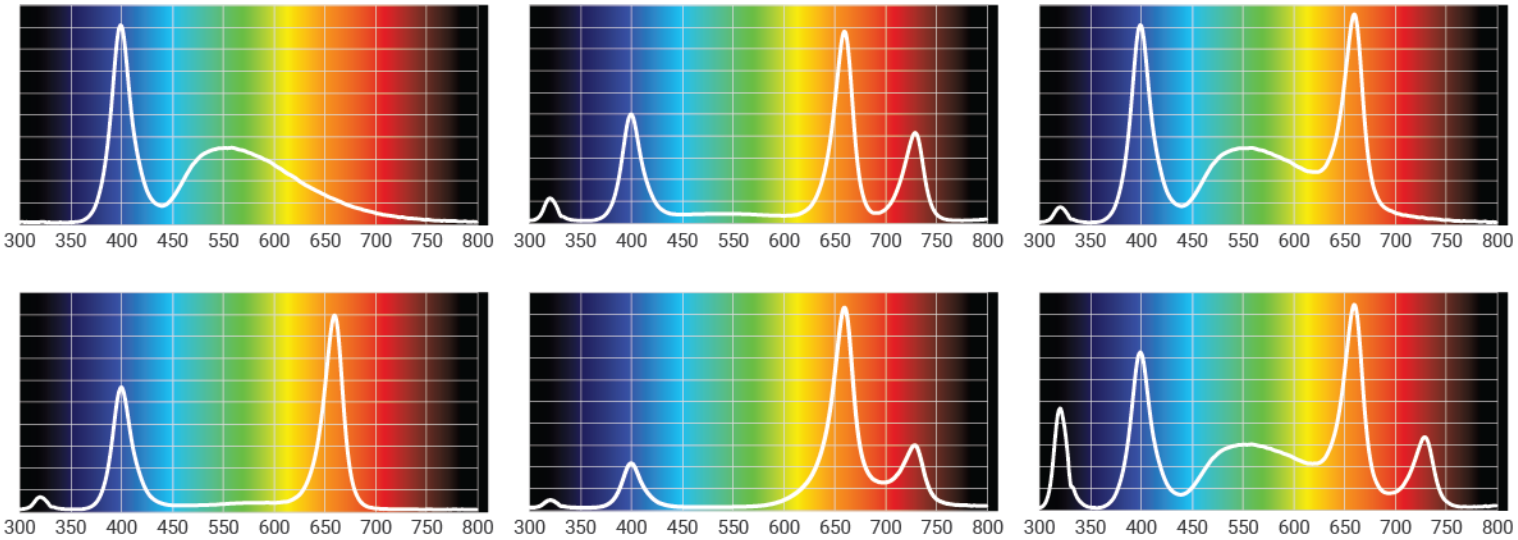
Stage1 : Flowering

Tunable, Full-Spectrum Lighting for Optimal Plant Growth

The Sherpa Ray is a full spectrum, tunable grow light used in indoor farming or greenhouses as a supplemental light. The Sherpa Ray's spectrum and intensity can be customized for individual strains of cannabis at each stage of growth allowing for growers to tune the light to their exact specifications to meet their unique lighting needs.

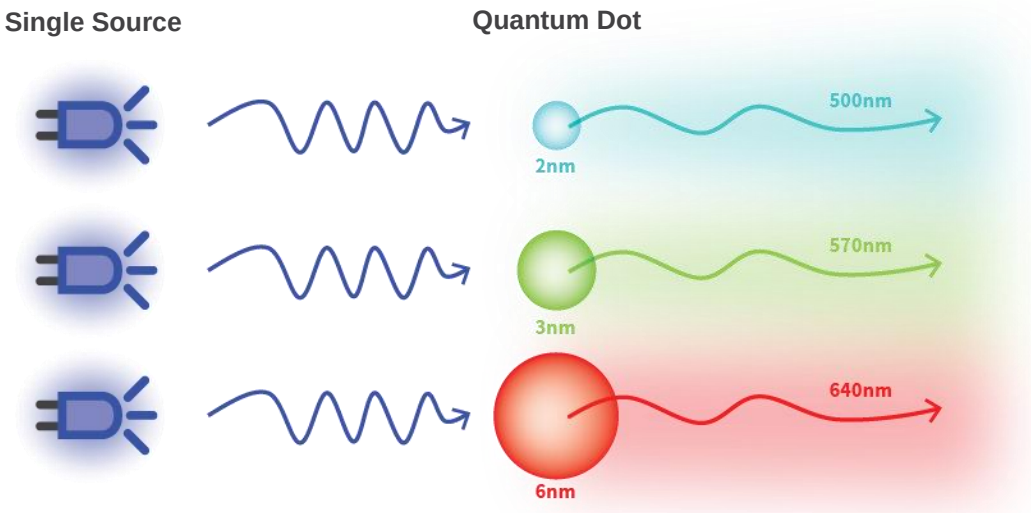
Sample Spectrums*

*Customization available



Sherpa Light Technology

The Sherpa Ray produces customizable spectrums of light by using LEDs combined with Quantum Dot (QD) film. This allows it to transform single wavelengths of light into a diverse variety of wavelengths for true tunability.

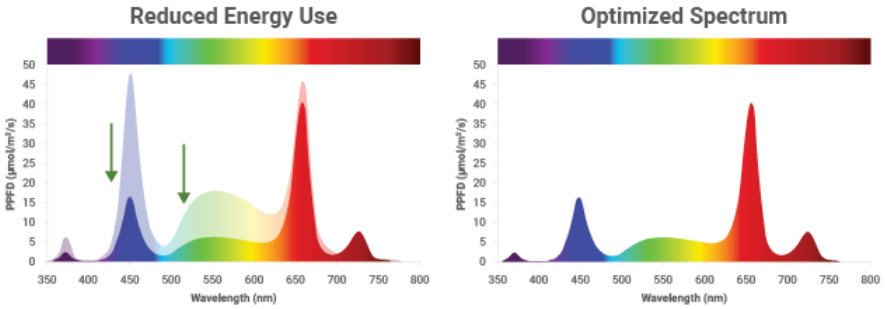


Energy Saving and Growth Maximization using Sherpa Ray

SUNLIGHT + QUANTUM DOT VARIABLE FILM + LED
= IMPLEMENTATION OF CROP LIGHT RECIPE

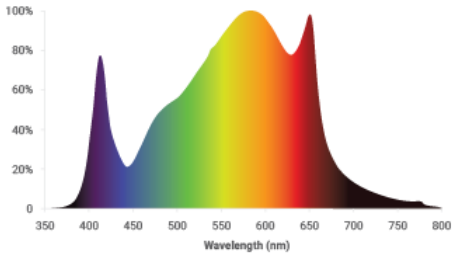
The Sherpa Ray produces customizable spectrums, 360–750nm including UVA and Far Red, of light by using LEDs combined with Quantum Dot (QD) film. The Sherpa Ray only supplements the light from the environment to optimize plant growth. Thus, it helps reduce energy use.

SHERPA TUNABLE SPECTRUM LIGHT



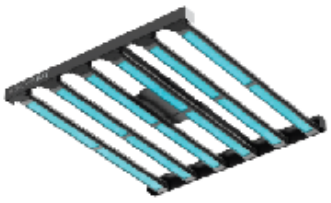
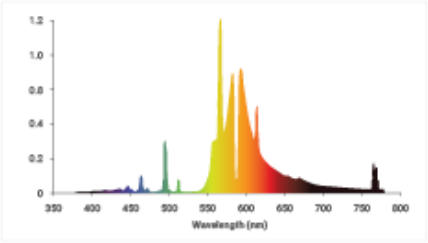
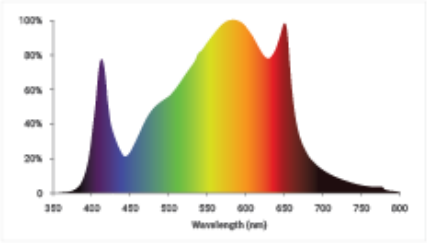
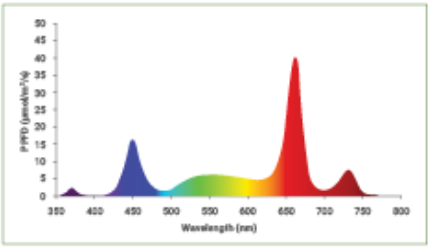
- Tunable Full Spectrum LED
- Possible to change spectrum
- Possible to get specific ratios of wavelengths by spectrum shift using Films
- Full range including UVA and Far Red (360-780 nm)

COMPETITOR'S BROAD SPECTRUM LIGHT



- Fixed Broad-Spectrum LED
- Not possible to change the spectrum
- Not possible to alter respective wavelength ratios
- No UV-A and Far-Red Spectrum

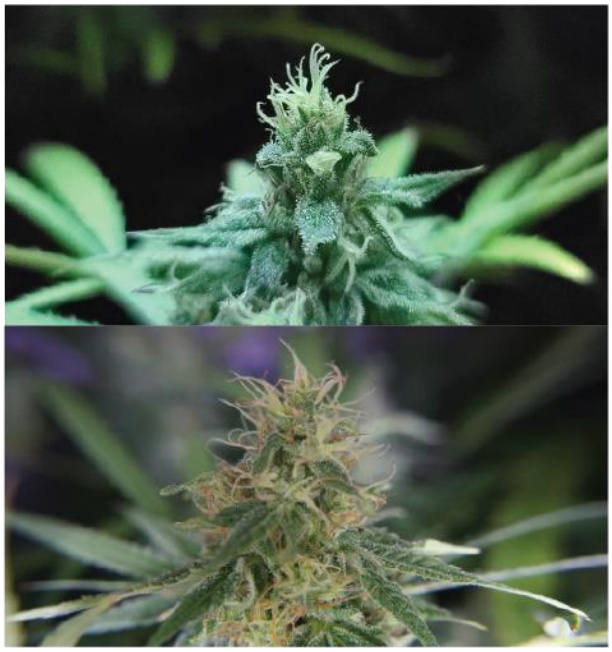
Up to 55% energy savings compared to conventional technology when Sherpa Light's Dynamic Spectrum is applied.

HPS LAMP	GENERAL LED	SHERPA RAY
		
		
Spectrum can't be changed	Spectrum can't be changed	Full-spectrum and tunable
Power Consumption 1000W	Power Consumption 645W	Power Consumption 450W

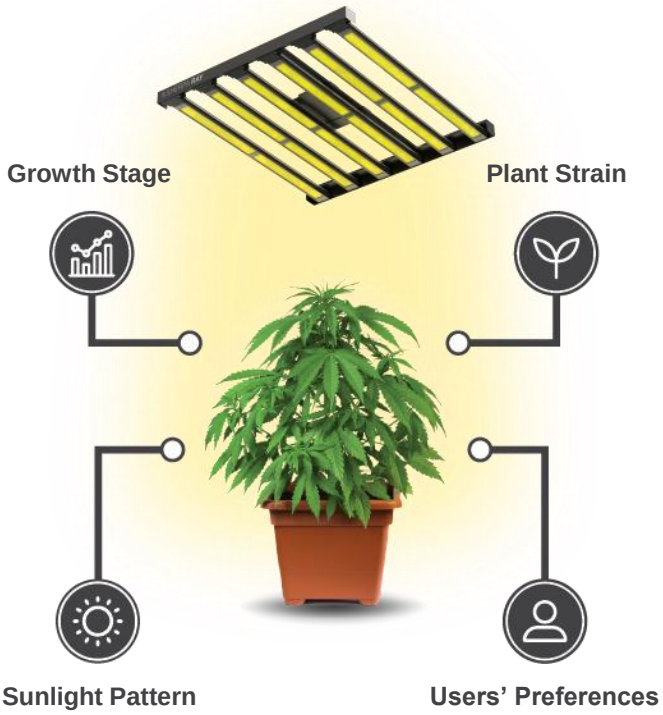
55% 30%

Light Recipes

At the Sherpa Space Light Recipe Studio we are continuously researching optimal lighting conditions for the plant strain and growth stage to create new Light Recipes. These unique combinations of wavelength and intensity values helps plants reach their full potential.

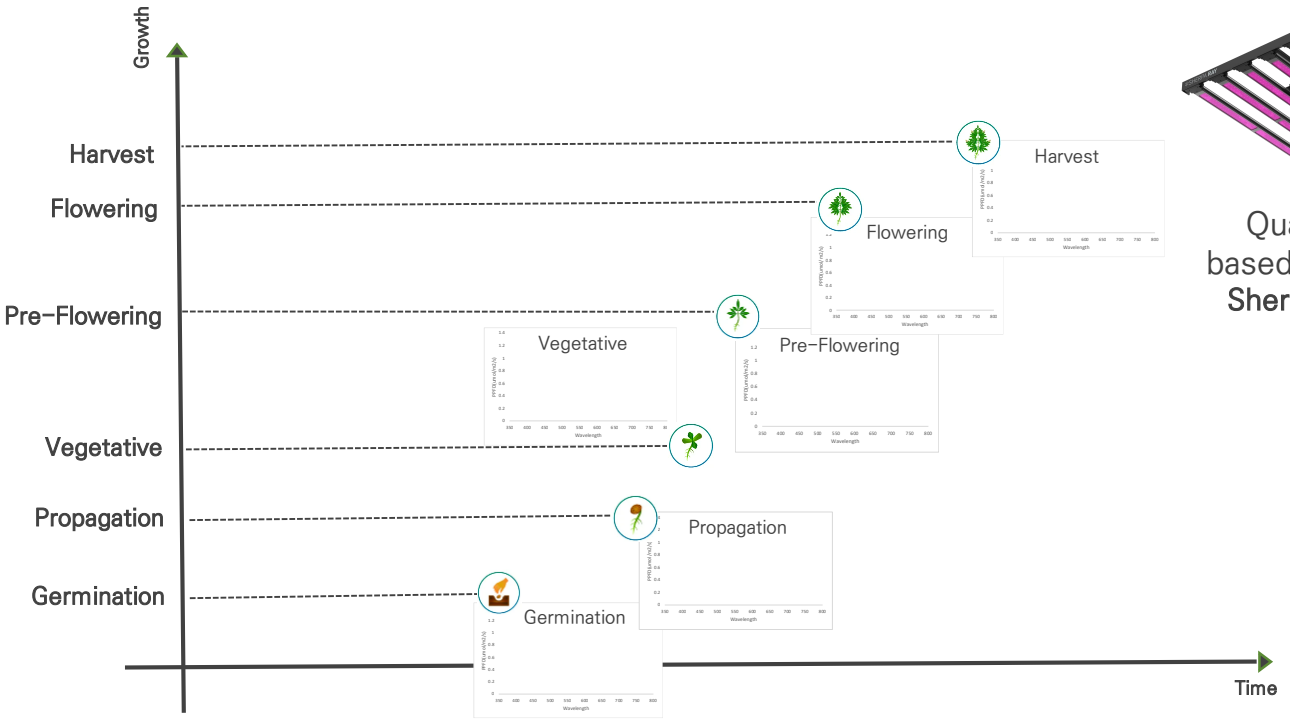


Specimens from the Sherpa Space Light Recipe Studio



Light Recipe Customization

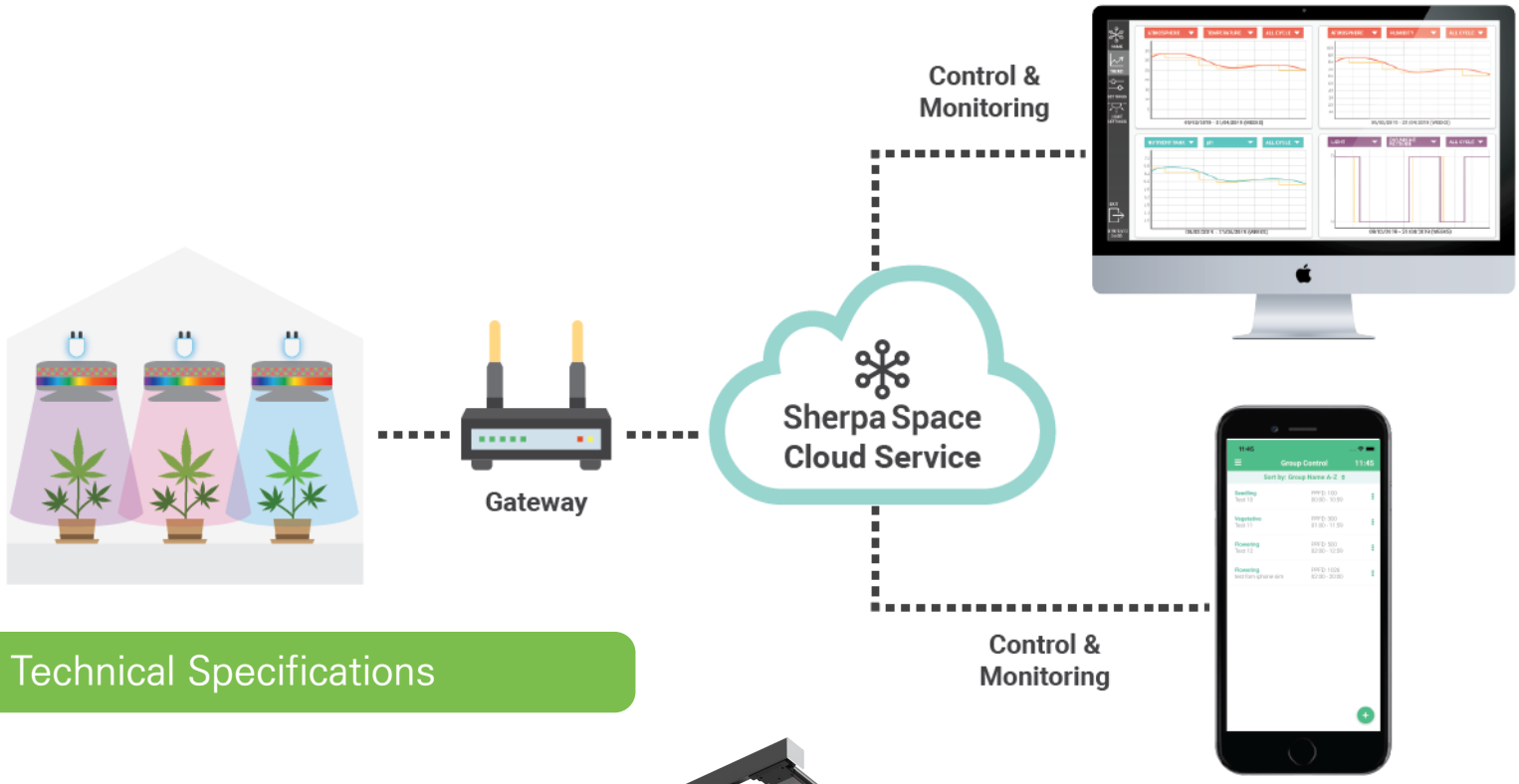
With Sherpa Ray's Dynamic Spectrum technology, energy is minimized and productivity/quality is maximized.



Quantum dot based variable film
Sherpa Top Light

Sherpa Light Software

With the Sherpa Light software and phone app users can easily program and control the Sherpa Ray system. Users can create their own custom light recipes or download existing light recipes from the Sherpa Space Data Base.



Technical Specifications

1	**Model Name**	Sherpa Ray (SR-600)
2	**Product Specification**	A customized light source device based on optical editing technology using wavelength conversion materials (360-750nm)
3	**Length**	1198mm
4	**Width**	1096mm
5	**Height**	98mm
6	**Weight**	20kg
7	**PFD**	1440~1740 μmol/s
8	**Quality of the material**	ABS/PC, Glass, Aluminum
9	**Electricity**	600W
10	**Input voltage**	100~277VAC
11	**Communication**	WiFi, Zigbee

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