

# TELOS

**DYNAMIC SERIES**  
USER GUIDE

# TELOS DYNAMIC RANGE

## KEY TECHNOLOGIES

85,000 hours lifespan

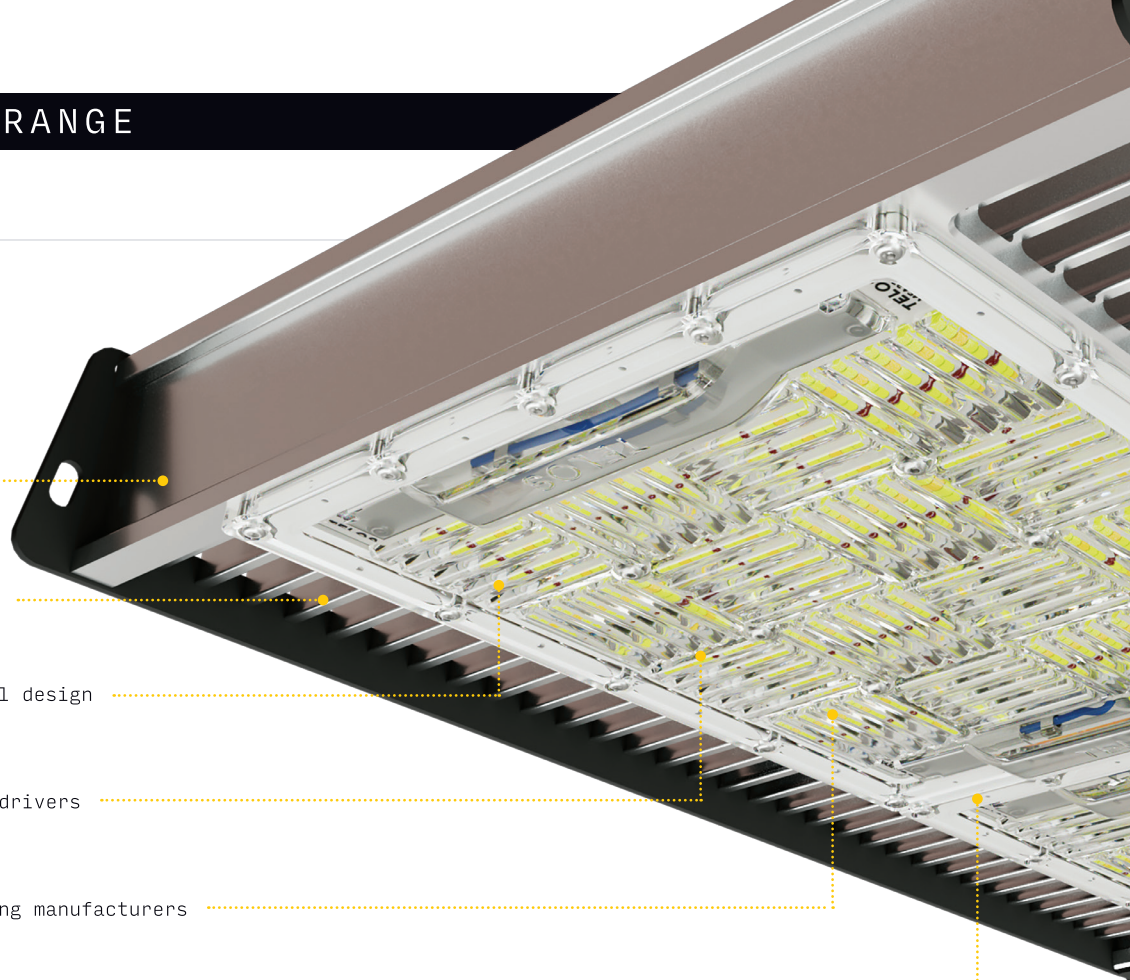
Advanced heat sink design keeps the LEDs at optimal temperatures

Patent pending refractive optical design

Upto 97% efficient next gen LED drivers

High performance LEDs from leading manufacturers

IP66 water proof





## CONTENTS

Overview	4
Spectrum	5
Light Distribution	5
Dynamic 930 / 330W	6-7
Dynamic 1200 / 400W	8-9
Dynamic 1960 / 650W	10-11
Dynamic 2400 / 800W	12-13
Hanging Installation	14-15
Connecting Power	16
Power Link	17
Growcast	18
Dimming Link	19
Safety	20-21
Warranty	22-23

## OVERVIEW

---

Telos is a market-leading manufacturer of high-end LED fixtures and light controllers for the horticultural industry. Operating from our production facility near Durham, UK, we specialise in developing innovative growing technologies.

Our mission is to revolutionise practices across the global horticultural industry, increasing the return on investment for growers. This transformation begins with our new Dynamic generation of lights and will continue with future innovations.

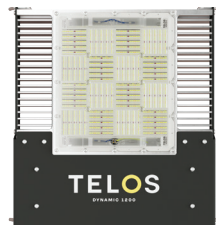
The Dynamic range offers growers consistent reliability, exceptional light coverage, and market-leading electrical efficiency. At the heart of this range is the new PWS1 spectrum, enabling growers to leverage higher PPFD levels without compromising plant health, resulting in better-quality, bigger yields.

## THE DYNAMIC RANGE

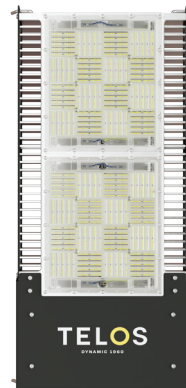
---



DYNAMIC 930



DYNAMIC 1200



DYNAMIC 1960

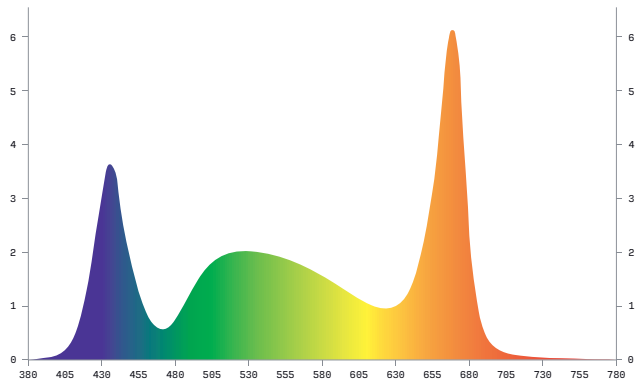


DYNAMIC 2400

PWS1 POLAR WHITE SPECTRUM

The new PWS1 spectrum has been carefully developed to follow the latest scientific research with a higher blue & higher green concentration than the typical full spectrum offerings. It also uses the latest 430nm violet pump white LEDs which have been proven to increase yield and flavonoids, whilst sterilising the growing environment to protect against bacteria and mould.

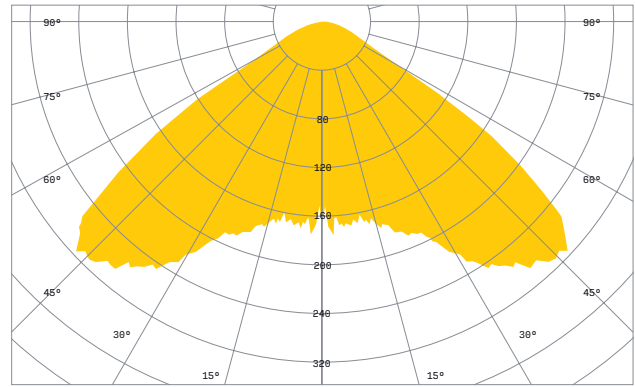
	Blue	Green	Red	Far Red
300-399nm	400-499nm	500-599nm	600-699nm	700-800nm
<1%	21%	35%	43%	<1%



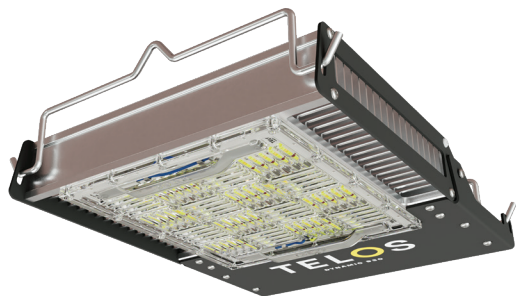
TELOS BAT WING DISTRIBUTION

The LED module in the Dynamic series is precisely engineered to produce a Batwing light distribution. This is achieved through the use of a refractive optical lens, which directs the light at specific angles to ensure optimal coverage.

This innovative optical design delivers unprecedented PPFD uniformity values, significantly reducing the traditional “hot spot” distribution common with many light fixtures. Telos’ specialised Batwing distribution ensures best-in-class spectral mixing, maintaining consistent quality and quantity of light across the entire canopy.



## TELOS DYNAMIC 930 / 320W

PPF 3  $\mu\text{mol/J}$  / PWS1 Polar white spectrum

## ELECTRICAL

Input Voltage	90~305Vac
Power consumption	320W
Frequency range	47~63Hz
Input Current	1.5A /230VAC
Dimming range	10-100%
Dimming to off	Yes
Method of dimming	Integrated Growcast controller

## MECHANICAL

System Weight	4.43KG
Waterproof Rating	IP66
Cooling	Natural Convection / Passive
Ambient operating temperature	0-40°C
Chassis Materials	Anodised Aluminium / Stainless steel
Length Width Height mm	336 x 268 x 63

## PHOTOMETRIC PARAMETER

PPF Output (@Full Power)	930 $\mu\text{mol/s}$
PPF Efficiency (@Full Power)	2.9 $\mu\text{mol/J}$
Beam Angle FWHM	105° Telos Bat Wing Distribution

## PHOTO BIOLOGICAL SAFETY COMPLIANCE

Electrical Safety Class	Class 3
Photo biological Safety class	Class 1
Approvals	CE, UKCA

TELOS DYNAMIC 930 PPFD MAP

1187	1197	1187	1168	1161	1170	1153	1172	1182	1192
1169	1187	1206	1205	1187	1181	1208	1211	1195	1182
1170	1223	1252	1249	1242	1243	1257	1255	1220	1187
1159	1230	1258	1243	1242	1249	1256	1258	1217	1181
1170	1216	1249	1242	1235	1242	1257	1252	1207	1153
1172	1211	1247	1244	1243	1244	1249	1249	1209	1170
1175	1214	1256	1256	1242	1240	1249	1250	1209	1172
1186	1219	1253	1253	1238	1242	1249	1248	1214	1185
1185	1196	1209	1201	1179	1190	1199	1205	1191	1186
1192	1173	1175	1167	1159	1162	1164	1179	1183	1188

This Is the light map for the Telos Dynamic 930 light fixture. It shows the even distribution of light across the room.

The optimum hanging height is 50cm from the canopy. You can use this map to see how many fixtures you need for the area of your grow room. This grow room is 0.64m², you can see for this area to get 1000  $\mu\text{mol}/\text{m}^2/\text{s}$  you would need one fixture running at 73%.

Fixture	Dynamic 930
Tent size	0.8m x 0.8m
Optimal Hanging Height	50cm
Uniformity (Min:Avg)	>90%
Uniformity (Min:Max)	>85%
Average PPFD	1211 $\mu\text{mol}/\text{m}^2/\text{s}$
Minimum PPFD	1153 $\mu\text{mol}/\text{m}^2/\text{s}$
Maximum PPFD	1258 $\mu\text{mol}/\text{m}^2/\text{s}$

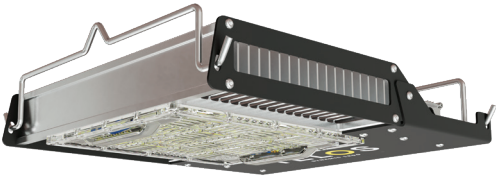
Homebox Ambient, 83.3% efficiency

GROW SETTINGS

	0-10V Percentage	Power Consumption (W)	Efficiency ( $\mu\text{mol}/\text{J}$ )
Propagation (200 $\mu\text{mol}/\text{m}^2/\text{s}$ )	14%	48.6	3.2
Vegetative (450 $\mu\text{mol}/\text{m}^2/\text{s}$ )	32%	109.3	3.2
Flower (1000 $\mu\text{mol}/\text{m}^2/\text{s}$ )	73%	253.3	3.0

TELOS DYNAMIC 1200 / 400W

PPF 3  $\mu\text{mol/J}$  / PWS1 Polar white spectrum



ELECTRICAL

Input Voltage	120~305Vac
Power Consumption	400W
Frequency range	47~63Hz
Input Current	1.82A /220VAC
Dimming range	10-100%
Dimming to off	Yes
Method of dimming	Growcast or 0-10V

MECHANICAL

System Weight	4.79KG
Waterproof Rating	IP66
Cooling	Natural Convection / Passive
Ambient operating temperature	0-40°C
Chassis Materials	Anodised Aluminium / Stainless steel
Length Width Height mm	342 x 308 x 63

PHOTOMETRIC PARAMETER

PPF Output (@Full Power)	1200 $\mu\text{mol/s}$
PPF Efficiency (@Full Power)	3.0 $\mu\text{mol/J}$
Beam Angle FWHM	105° Telos Bat Wing Distribution

PHOTO BIOLOGICAL SAFETY COMPLIANCE

Electrical Safety Class	Class 1
Photo biological Safety class	Class 1
Approvals	CE, UKCA



TELOS DYNAMIC 1200 PPFD MAP

988	991	981	966	962	958	945	963	978	989
978	990	999	994	994	988	1000	1005	996	983
973	1012	1033	1031	1030	1029	1036	1037	1013	981
960	1014	1037	1033	1031	1035	1037	1038	1011	970
968	1005	1032	1029	1027	1030	1033	1030	996	959
974	1011	1038	1034	1033	1033	1038	1035	1003	974
971	1011	1037	1036	1026	1028	1037	1039	1013	961
980	1007	1032	1033	1024	1029	1030	1035	1016	974
981	983	996	994	986	995	987	1001	1001	978
985	975	971	962	960	958	957	969	976	984

This Is the light map for the Telos Dynamic 1200 light fixture. It shows the even distribution of light across the room.

The optimum hanging height is 55cm from the canopy. You can use this map to see how many fixtures you need for the area of your grow room. This grow room is 1.0m<sup>2</sup>, you can see for this area to get 1000  $\mu\text{mol}/\text{m}^2/\text{s}$  you would need one fixture running at 89%.

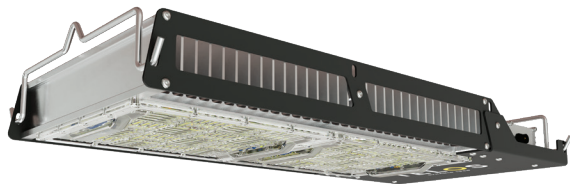
Fixture	Dynamic 1200
Room Size	1.0m x 1.0m
Optimal Hanging Height	55cm
Uniformity (Min:Avg)	>90%
Uniformity (Min:Max)	>85%
Average PPFD	1004 $\mu\text{mol}/\text{m}^2/\text{s}$
Minimum PPFD	945 $\mu\text{mol}/\text{m}^2/\text{s}$
Maximum PPFD	1039 $\mu\text{mol}/\text{m}^2/\text{s}$

Homebox Ambient, 83.3% efficiency

GROW SETTINGS

	0-10V Percentage	Power Consumption (W)	Efficiency ( $\mu\text{mol}/\text{J}$ )
Propagation (200 $\mu\text{mol}/\text{m}^2/\text{s}$ )	17%	73.4	3.3
Vegetative (450 $\mu\text{mol}/\text{m}^2/\text{s}$ )	38%	165.0	3.3
Flower (1000 $\mu\text{mol}/\text{m}^2/\text{s}$ )	89%	399.0	3.0

## TELOS DYNAMIC 1960 / 650W

PPF 3  $\mu\text{mol/J}$  / PWS1 Polar white spectrum

## ELECTRICAL

Input Voltage	120~305Vac
Power Consumption	650W
Frequency range	47~63Hz
Input Current	2.96A /230VAC
Dimming range	10~100%
Dimming to off	Yes
Method of dimming	Growcast or 0-10V

## MECHANICAL

System Weight	8.28KG
Waterproof Rating	IP66
Cooling	Natural Convection / Passive
Ambient operating temperature	0-40°C
Chassis Materials	Anodised Aluminium / Stainless steel
Length Width Height mm	596 x 268 x 71

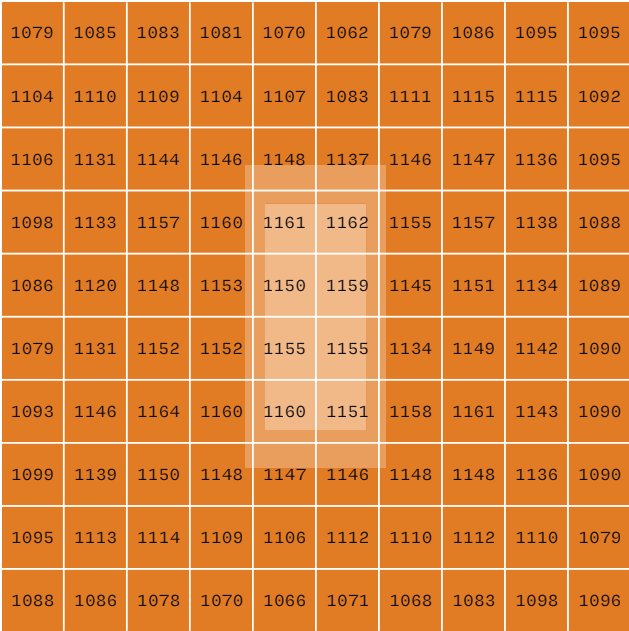
## PHOTOMETRIC PARAMETER

PPF Output (@Full Power)	1960 $\mu\text{mol/s}$
PPF Efficiency (@Full Power)	3.0 $\mu\text{mol/J}$
Beam Angle FWHM	105° Telos Bat Wing Distribution

## PHOTO BIOLOGICAL SAFETY COMPLIANCE

Electrical Safety Class	Class 1
Photo biological Safety class	Class 1
Approvals	CE, UKCA

TELOS DYNAMIC 1960 PPF D MAP



This Is the light map for the Telos Dynamic 1960 light fixture. It shows the even distribution of light across the room.

The optimum hanging height is 65cm from the canopy. You can use this map to see how many fixtures you need for the area of your grow room. This grow room is 1.4m<sup>2</sup>, you can see for this area to get 1000  $\mu\text{mol}/\text{m}^2/\text{s}$  you would need one fixture running at 79%.

Fixture	Dynamic 1960
Room Size	1.2m x 1.2m
Optimal Hanging Height	65cm
Uniformity (Min:Avg)	>90%
Uniformity (Min:Max)	>85%
Average PPFD	1121 $\mu\text{mol}/\text{m}^2/\text{s}$
Minimum PPFD	1062 $\mu\text{mol}/\text{m}^2/\text{s}$
Maximum PPFD	1164 $\mu\text{mol}/\text{m}^2/\text{s}$

Homebox Ambient, 82.36% efficiency

GROW SETTINGS

	0-10V Percentage	Power Consumption (W)	Efficiency ( $\mu\text{mol}/\text{J}$ )
Propagation (200 $\mu\text{mol}/\text{m}^2/\text{s}$ )	16%	106.8	3.3
Vegetative (450 $\mu\text{mol}/\text{m}^2/\text{s}$ )	36%	240	3.3
Flower (1000 $\mu\text{mol}/\text{m}^2/\text{s}$ )	79%	563.6	3.1

## TELOS DYNAMIC 2400 / 800W

PPF 3  $\mu\text{mol/J}$  / PWS1 Polar white spectrum

## ELECTRICAL

Input Voltage	120~305Vac
Power Consumption	800W
Frequency range	47~63Hz
Input Current	3.64A /230VAC
Dimming range	10-100%
Dimming to off	Yes
Method of dimming	Growcast or 0-10V

## MECHANICAL

System Weight	8.8KG
Waterproof Rating	IP66
Cooling	Natural Convection / Passive
Ambient operating temperature	0-40°C
Chassis Materials	Anodised Aluminium / Stainless steel
Length Width Height mm	596 x 308 x 71

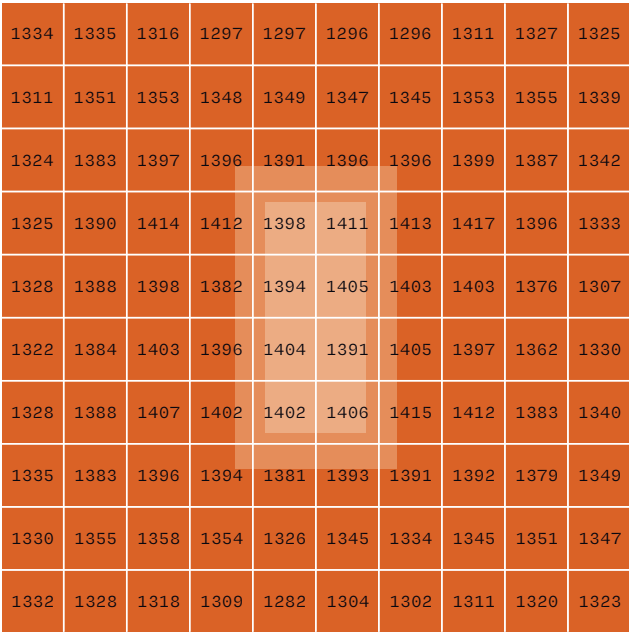
## PHOTOMETRIC PARAMETER

PPF Output (@Full Power)	2400 $\mu\text{mol/s}$
PPF Efficiency (@Full Power)	3.0 $\mu\text{mol/J}$
Beam Angle FWHM	105° Telos Bat Wing Distribution

## PHOTO BIOLOGICAL SAFETY COMPLIANCE

Electrical Safety Class	Class 1
Photo biological Safety class	Class 1
Approvals	CE, UKCA

TELOS DYNAMIC 2400 PPF D MAP



This Is the light map for the Telos Dynamic 2400 light fixture. It shows the even distribution of light across the room.

The optimum hanging height is 65cm from the canopy. You can use this map to see how many fixtures you need for the area of your grow room. This grow room is 1.4m<sup>2</sup>, you can see for this area to get 1000  $\mu\text{mol}/\text{m}^2/\text{s}$  you would need one fixture running at 64%.

Fixture	Dynamic 2400
Room Size	1.2m x 1.2m
Optimal Hanging Height	65cm
Uniformity (Min:Avg)	>90%
Uniformity (Min:Max)	>85%
Average PPFD	1364 $\mu\text{mol}/\text{m}^2/\text{s}$
Minimum PPFD	1282 $\mu\text{mol}/\text{m}^2/\text{s}$
Maximum PPFD	1417 $\mu\text{mol}/\text{m}^2/\text{s}$

Homebox Ambient, 81.84% efficiency

GROW SETTINGS

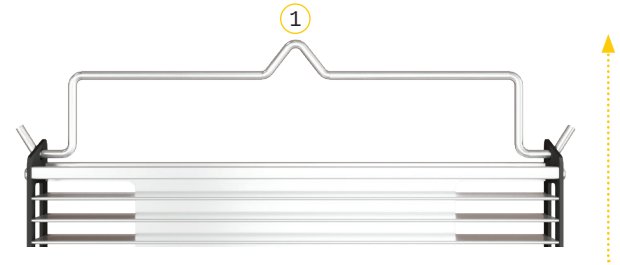
	0-10V Percentage	Power Consumption (W)	Efficiency ( $\mu\text{mol}/\text{J}$ )
Propagation (200 $\mu\text{mol}/\text{m}^2/\text{s}$ )	13%	107.8	3.3
Vegetative (450 $\mu\text{mol}/\text{m}^2/\text{s}$ )	28%	242.8	3.3
Flower (1000 $\mu\text{mol}/\text{m}^2/\text{s}$ )	64%	553.4	3.2
CO <sub>2</sub> Flower (1200 $\mu\text{mol}/\text{m}^2/\text{s}$ )	78%	682.2	3.1

## HANGING INSTALLATION

Each light comes with two stainless steel mounting bracket so the fixture can be installed horizontally with the LED modules flat, facing the ground.

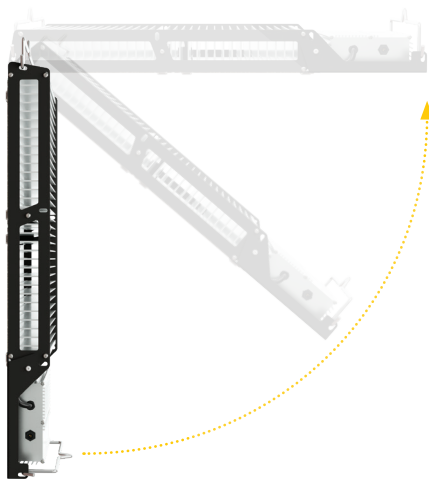


To hang the fixture with a chain or ratchet system, first lay the system flat below the optimal installation position. Push the hanging hooks (1) through the outer two mounting points (2) indicated above, firmly hooking one side at a time into the holes on the steel brackets.



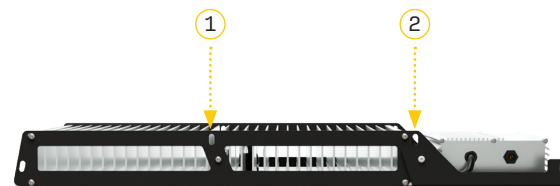
Lift the light fixture from the front mounting bracket, making sure to keep the length of the bracket stands upright and is parallel to the ground, as pictured.

Connect the light fixture to the hanging chain or ratchet system at the apex of the mounting bracket (1).



Whilst holding the weight from the front bracket, raise the rear bracket until the LED modules are parallel to ground. Connect the second chain or ratchet system to the apex of the rear mounting brackets.

The mounting brackets provided should not be used with any angular mounting and are only intended for the horizontal hanging applications as described.



The Dynamic 1960 & 2400 have an additional two central mounting points (1 & 2).

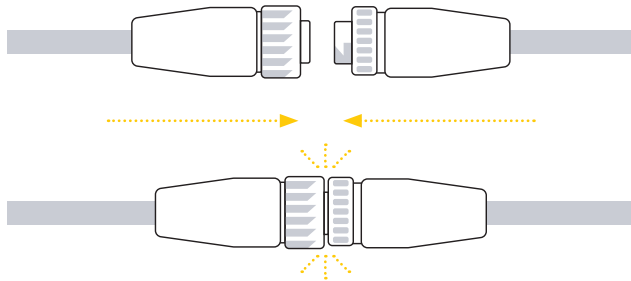
These are intended for use with our Unustrut mounting bracket. Separate instructions for this are provided with the additional mounting bracket.

## CONNECTING POWER

Every model of the Telos Dynamic series comes with a power cable.

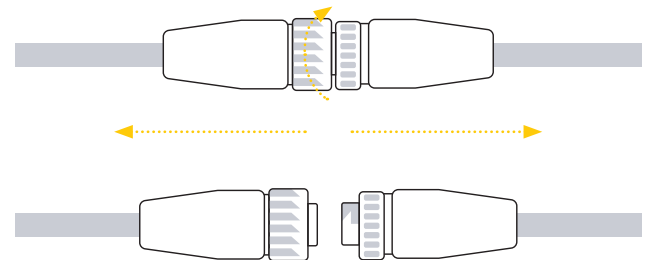
### CONNECT

To connect the power supply, simply push the two twist-lock connectors together until you hear an audible 'click'.



### DISCONNECT

To disconnect the power supply, twist the locking ring until the white arrow is pointing to the unlocked position and then pull the two connectors apart.



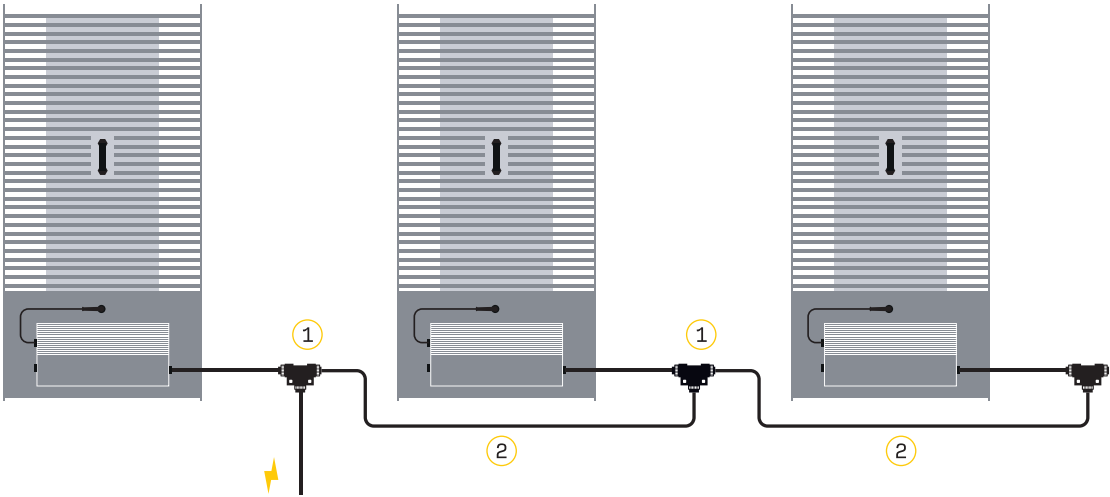


OPTIONAL EXTRA - POWER LINK

By using a Telos Power Link T-connector (1) and Telos Power Link Cable (2), multiple Telos units can be connected using one wall outlet as shown below. These accessories are sold separately. Please observe the maximum quantity of units that can be connected to one wall outlet in the accompanying table.

POWER LINK WILL POWER UP TO

Telos Dynamic 930	4 units @ 120VAC	7 units @ 220VAC
Telos Dynamic 1200	3 units @ 120VAC	6 units @ 220VAC
Telos Dynamic 1960	2 units @ 120VAC	4 units @ 220VAC
Telos Dynamic 2400	1 unit @ 120VAC	3 units @ 220VAC



- Each Power Link box contains:
- 1. Power Link 'T' Connector
  - 2. 2m Power Link Cable

Caution - Only use TELOS cables with TELOS products.

## GROWCAST

Growcast is a next generation, cutting-edge, decentralised wireless control technology. Designed for seamless integration, it can be operated from any smart device via the Telos app, available on both Android and iOS.

With Growcast, users can fine-tune their grow lights' settings to ensure that the intensity and PPF output align perfectly with their plants' natural growth stages and photosynthetic behaviours. The system also allows for precise scheduling, enabling growers to match the circadian cycles of their crops across different growth phases.

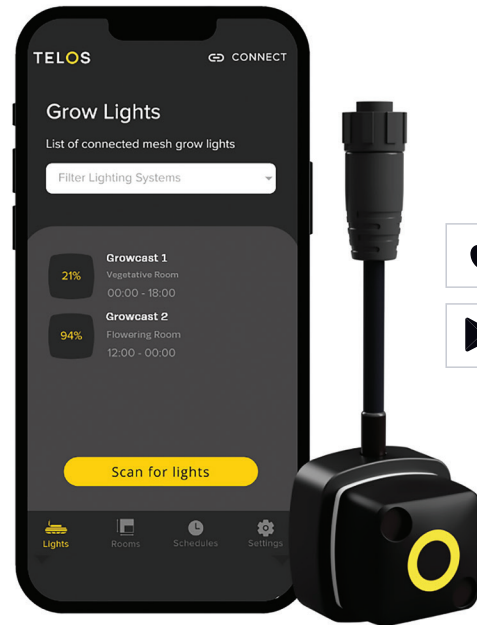
Additional features, such as Sunrise and Sunset modes, gradually dim lights from standby, encouraging natural growth behaviours and minimising plant stress.

Optimised for the Dynamic Series, Growcast draws power directly from the lights, eliminating the need for additional power cables. The Telos app includes pre-programmed photosynthetic output data for each light in the range, allowing users to specify the exact model and number of lights connected to Growcast.

A single Growcast can control up to 24 Dynamic lights, delivering exceptional value for money. It enhances energy efficiency and boosts yields, ensuring a quick return on investment and making it an indispensable tool for growers.

# TELOS

## GROWCAST



Download on the  
**App Store**

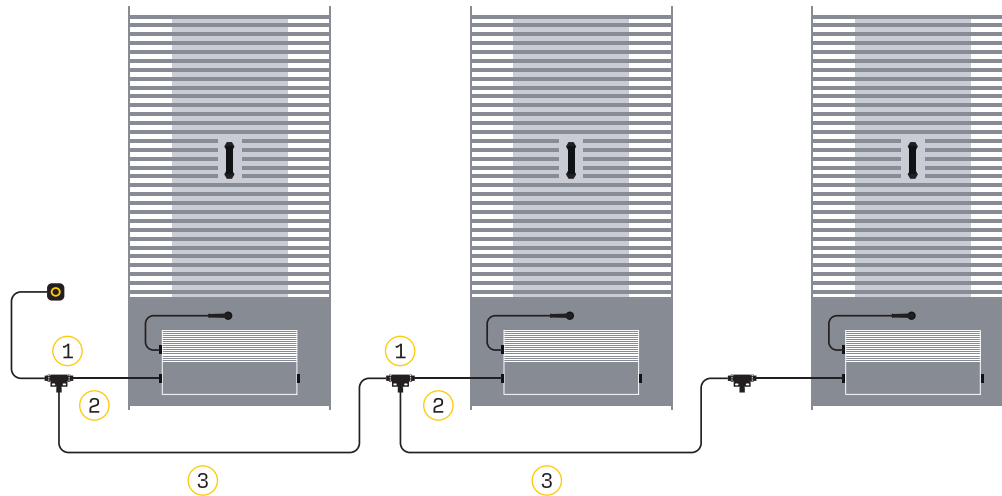
GET IT ON  
**Google Play**

## OPTIONAL EXTRA - DIMMING LINK

By using a Telos Dimming Link T-connector (1) and Telos Dimming Link Cable (2), multiple Telos units can be connected using one Growcast as shown below. These accessories are sold separately. Please observe the maximum quantity of units that can be connected to one Growcast in the accompanying table.

## DIMMING LINK WILL CONNECT UP TO

Telos Dynamic 930	<b>Not required due to built-in Growcast</b>
Telos Dynamic 1200	<b>24 units</b>
Telos Dynamic 1960	<b>24 units</b>
Telos Dynamic 2400	<b>24 units</b>



Each Dimming Link box contains:

1. Dimming Link 'T' Connector
2. 0.4m Driver Extension
3. 2m Controller Cable

Caution - Only use TELOS cables with TELOS products.

## SAFETY



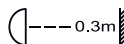
THE DYNAMIC **1200**, **1960** AND **2400** ARE ELECTRICAL CLASS 1 SYSTEMS WITH A PROTECTIVE EARTH/ GROUND CONNECTION. PERSONS INVOLVED WITH THE INSTALLATION, OPERATION AND GENERAL MAINTENANCE SHOULD BE COMPETENT AND FOLLOW TELOS GUIDELINES.



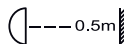
DO NOT STARE DIRECTLY AT THE LIGHT SOURCE WHEN THE GROW LIGHT IS SWITCHED ON. ALL MODELS SHOULD BE POSITIONED SO THAT PROLONGED STARING INTO THE LUMINAIRE AT ANY DISTANCE IS NOT EXPECTED.



THE DYNAMIC **930** IS AN ELECTRICAL CLASS 3 SAFE EXTRA LOW VOLTAGE (SELV) SYSTEM. PERSONS INVOLVED WITH THE INSTALLATION, OPERATION AND GENERAL MAINTENANCE OF THIS EQUIPMENT SHOULD BE COMPETENT AND FOLLOW TELOS GUIDELINES.



THE DYNAMIC **930** AND **1200** SHOULD NOT BE POSITIONED CLOSER THAN 0.3M FROM LIGHTED OBJECTS.



THE DYNAMIC **1960** & **2400** SHOULD NOT BE POSITIONED CLOSER THAN 0.5M FROM LIGHTED OBJECTS.



DO NOT REMOVE THE OPTICAL COVERING OF THE LED MODULE DUE TO RISK OF ELECTRIC SHOCK.

To maintain Telos systems in good working condition and to ensure safe operation, it is necessary for the user to follow the safety instructions and warning notes written by the manufacturer.

1. Before initial start-up, please ensure that there is no damage caused during transit. Should there be any, do not use the equipment and contact your supplier. A qualified Telos engineer must inspect the equipment before operating again.
2. Do not alter or modify the equipment unless you have direct instruction from the manufacturer.
3. Replacement of the LED module(s) contained in the light fixture should only be carried out by the manufacturer or a qualified, Telos approved professional.
4. Do not cover the light fixture with any thermally insulating material.
5. Observe the safety warnings given and ambient temperature limits specified.
6. Do not touch the light fixture whilst the system is switched on.
7. Turn off the light fixture and allow it to cool down for 30 minutes before handling.
8. Allow a minimum of 30cm clearance on all sides of the light fixture to allow for the free flow of air.
9. Observe the electrical specification data and correct installation instruction to avoid creating an electrical hazard.
10. Ensure the frame or fitting that you are mounting the light fixture to can support the fixture's weight. Telos recommends using fixings and framework that can support 2-3 times the fixture's weight at a minimum, to ensure the fixture is secured correctly.
11. The external mains power cable does not have an IP66 rating, this only applies to the lighting fixture. The power cable should only be used indoors in a dry environment. If the power cable of this luminaire is damaged, it should be replaced by a power cable exclusively available from Telos or an authorised Telos distributor.

## REGISTERING YOUR WARRANTY

Telos Dynamic lights are sold with a 3-year warranty covering the electrical components (LED module and LED driver).

This warranty can be extended to 5 years by registering the product directly with Telos. Should you need to use the warranty during this period, Telos aims to provide an easy-to-install replacement part, so the fixture does not need to be returned to Telos for refurbishment. In the case that the fixture requires a part fitted by a qualified professional, the fixture would need to be returned to a Telos service centre. Warranty issues can be handled directly with Telos regardless of where the product was purchased. In some cases, retail stores may assist customers in the warranty process but in most situations, warranty claims can be handled quicker by contacting Telos directly.

Mechanical damage to the fixture's heatsink, brackets & optics and general wear and tear of the product are not covered in the warranty. It is important to inspect the fixture immediately after receipt for any damage that has occurred during transit. If there is damage to the new fixture, you have 14 days from receipt to contact Telos if purchased directly. If you purchased the light from a third-party retailer, you would need to contact them to find about their after-sales and return policies.

Telos prides itself on delivering a high level of after-sales care and aims to handle any warranty issues that do arise in a prompt and fair manner.

## REGISTERING YOUR WARRANTY

To activate the extended 5-year warranty, it is important to register your products directly with Telos.

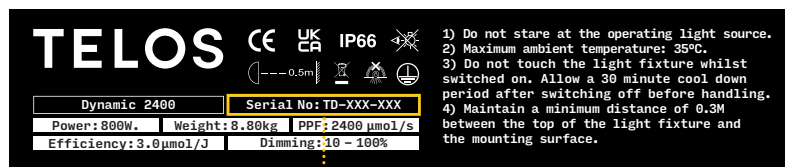
Each Telos Dynamic light has a unique identification code on the product information label, attached to the chassis of the light, which should be used to register the warranty.

This registration must be made in the first 6 months after receipt of the product. If the product warranty is not registered in the first 6 months, then the standard 3 year warranty will start from the date of purchase.

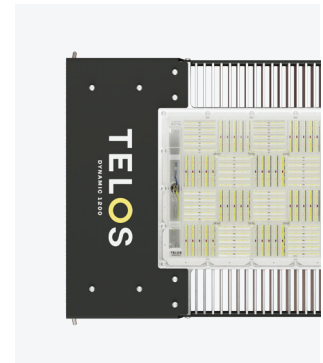
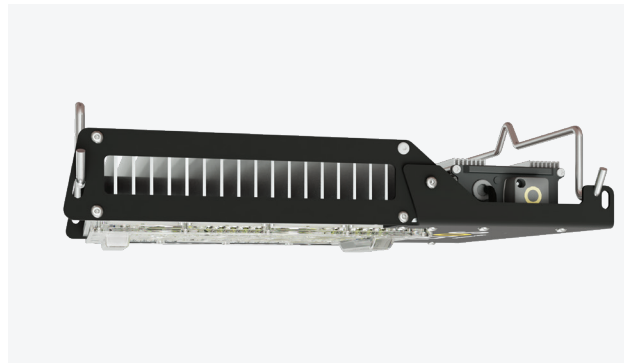
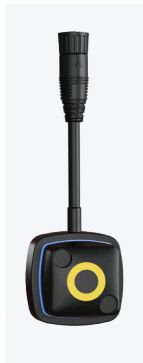
To register your product or make a warranty claim, a proof of purchase will be required.

You can register your warranty here:

[www.teloslighting.com/warranty](http://www.teloslighting.com/warranty)



Unique identification code



#### CONTACT INFORMATION

If you think you need to use the warranty service, contact Telos on the email below, providing your unique product code and a short description of the problem.

[Info@teloslighting.co.uk](mailto:Info@teloslighting.co.uk)



TELOS IS REGISTERED TRADEMARK OF GNUK LIMITED

[WWW.TELOSLIGHTING.CO.UK](http://WWW.TELOSLIGHTING.CO.UK)  
[INFO@TELOS.LIGHTING.CO.UK](mailto:INFO@TELOS.LIGHTING.CO.UK)