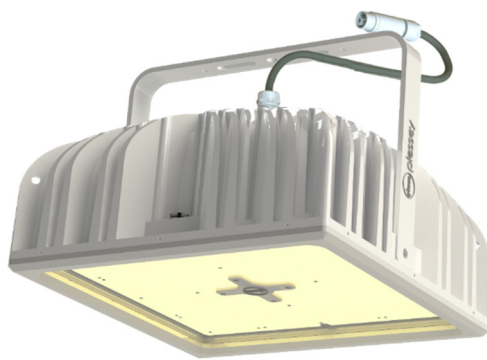


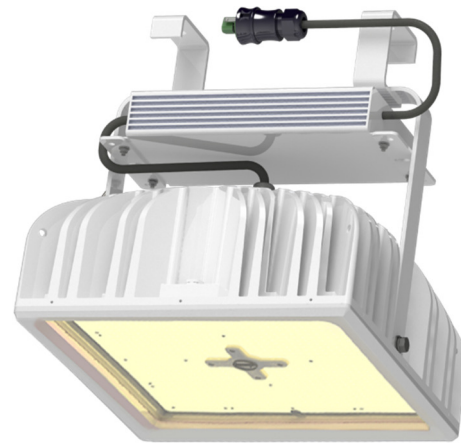


Hyperion White Light Broad Spectrum Horticultural LED Grow Light

Product Datasheet



Goalpost bracket with remote
230v driver (not shown)



Trellis bracket with integrated
415v driver

Key Features

- 720 micromoles/s fixture light output. Equivalent to 600w sodium grow lights
- 400W. 40% energy saving versus 600W sodium (plus 60W ballast)
- 1.8 $\mu\text{mol}/\text{joule}$ efficiency (after losses)
- IP66 rated (power wash)
- Proven broad white light spectrum (380nm -780nm)
- 230v or 415v driver
- 120° beam angle
- Up to 5-year warranty

Key Benefits

- Durable, die-cast alloy design
- Proven white light spectrum for a broad range of crops, grown indoors or in a greenhouse.
- Competitive pricing and crop yield vs leading HPS systems
- IP66 waterproofing
- Choice of mounting brackets and input voltages.
- Small footprint
- UK engineering and design

Product Labelling

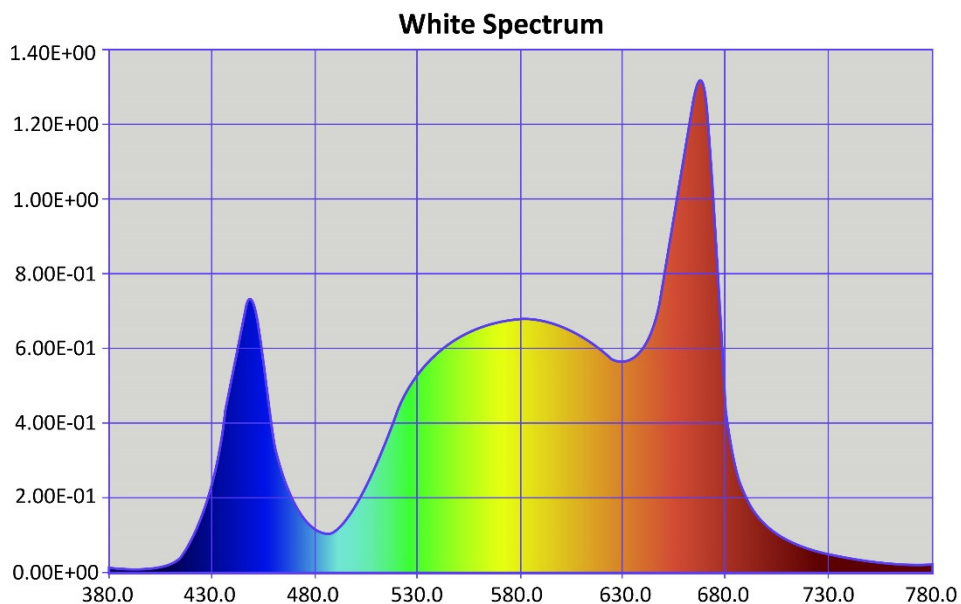
CE, UL (Pending), RoHS, IP66

Summary Description

Plessey's Broad Spectrum Hyperion LED Horticultural Grow light fixture is designed to provide indoor and greenhouse grown plants with Photosynthetically Active Radiation (PAR) from the highest quality LEDs. This is achieved by replacing natural daylight with a broad, white light spectrum proven to enhance plant growth rates and yields. The Product is suitable for commercial and hobby installations.

The fixture is constructed from die cast aluminium with a corrosion proof white powder coating. The light engine is made up of state of the art LEDs arranged to maximize output and uniformity.

Spectrum



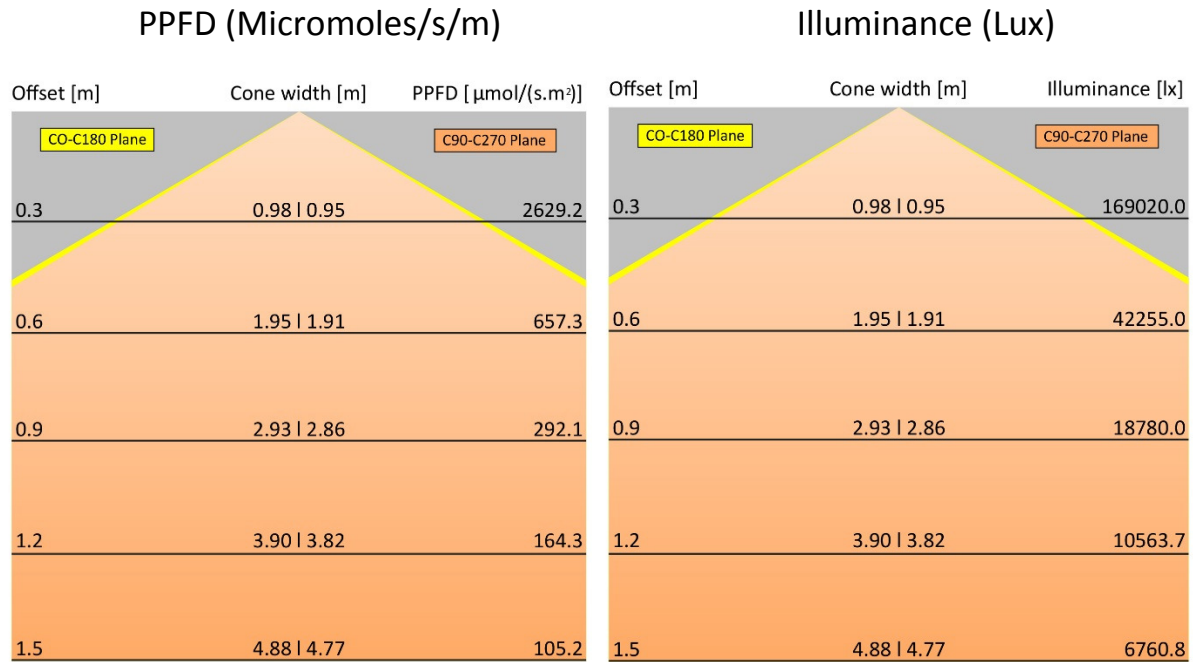
Blue spectrum light (460nm) particularly affects vegetative growth during early growth stages to produce compact plants with strong stem and leaves.

Yellow and green spectrum light (480-600nm) is more efficiently transmitted through the plant to tissues not directly exposed to light and enhances biomass.

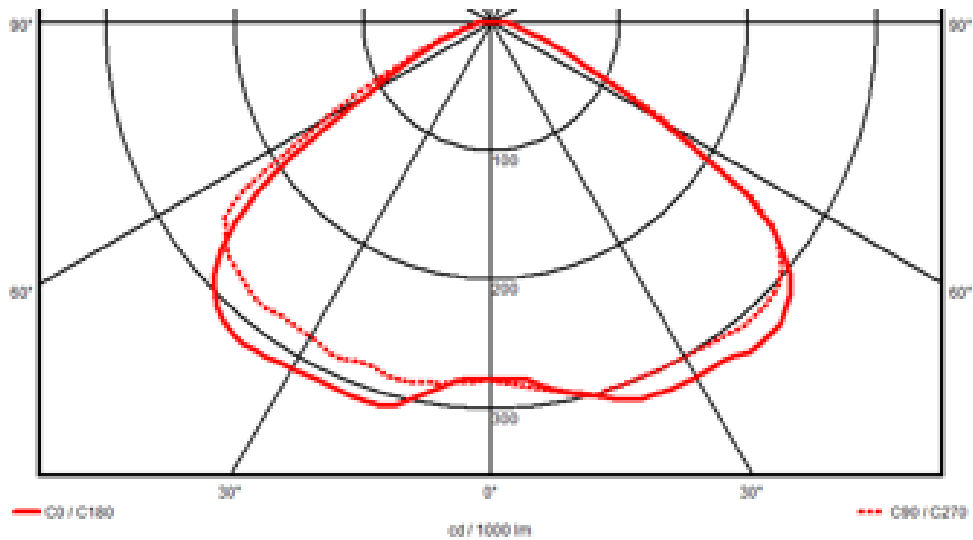
Red spectrum light (630-660nm) particularly affects the flowering / fruiting stages and can promote the number of buds/flowers to increase yield.

Far red spectrum light (730nm) is important in helping plants orient leaves to optimise plant growth.

Light intensity at different heights – single fixture

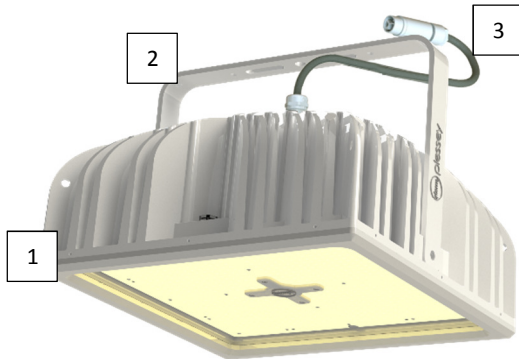


Radiation Plot

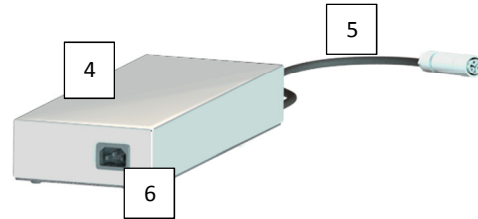


System Components

Goalpost bracket:

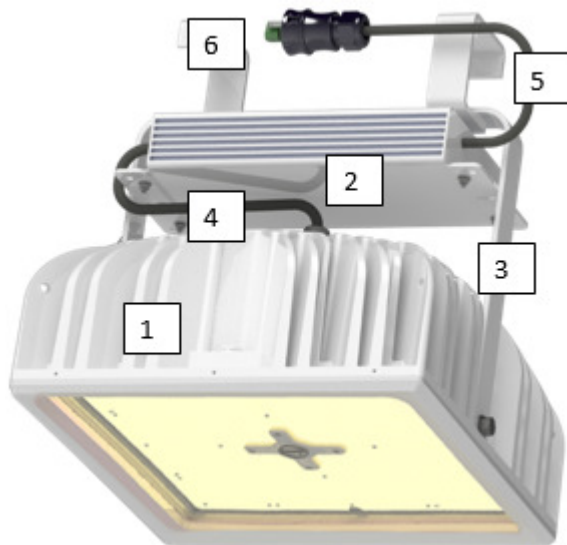


1. Fixture
2. Bracket
3. Cable with connector to driver



4. 230v Driver box
5. 4m cable with connector to fixture
6. IEC-C13 power cable socket

Trellis bracket:



1. Hyperion fixture/lamp
2. 415V Driver mounted on mounting hook
3. Fixture bracket arm with mounting hook
4. Fixture to driver connection cable
5. Power cable with male Wieland connector. Installer to provide power supply cable fitted with female Wieland plug (part number 96.031.4055.7.)
6. Bracket hooks for trellis mounting

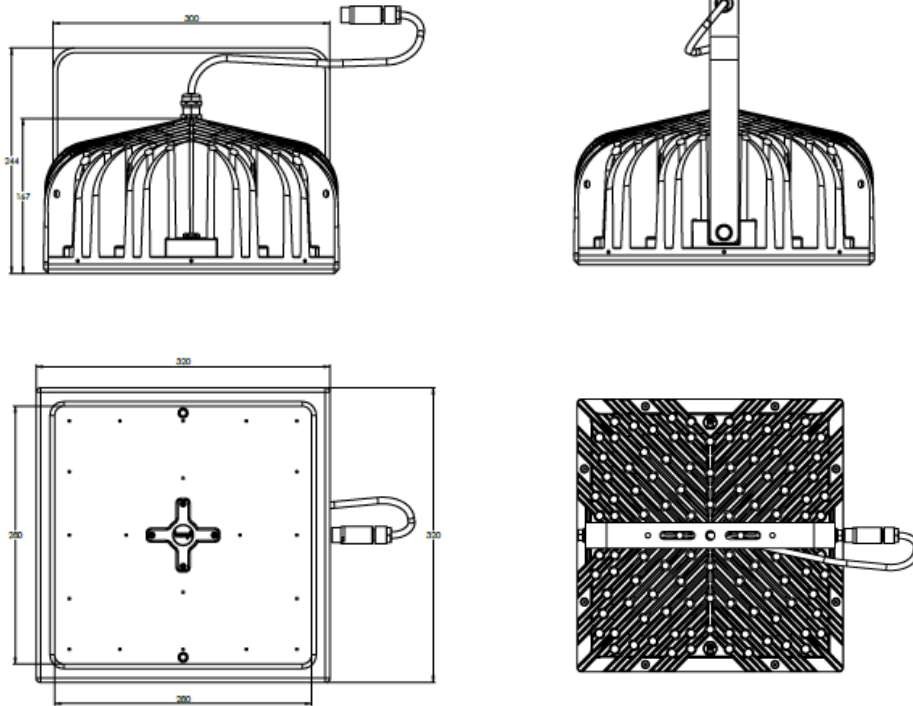
Packaging

Goalpost bracket - the components illustrated are packaged together in a box measuring 390 x 390 x 320 (mm). IEC-C13 power cable not supplied (country dependent).

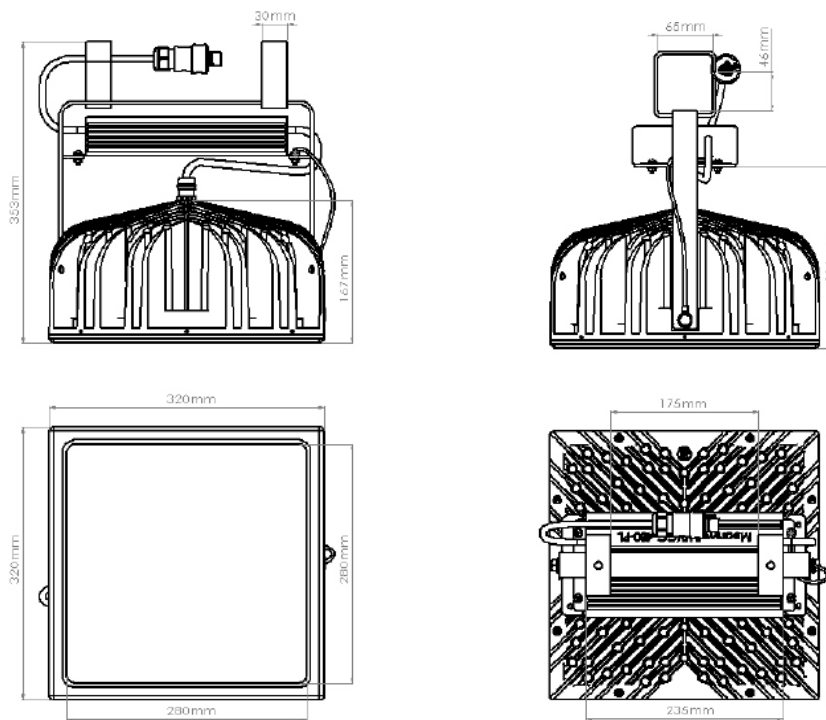
Trellis bracket - the components illustrated are packaged together in a box measuring 390 x 390 x 400 (mm).

Dimensions

Goalpost bracket



Trellis bracket



Full Specification

Lamp model	Hyperion White Spectrum
Lamp type	LED
Spectrum name	White light full PAR spectrum
Power consumption	402W
Light beam angle	120 degrees
Power input	230V (goalpost) / 415V (trellis)
Weight	15.3Kg heatsink + 3Kg driver box (goalpost) 19Kg total (trellis)
Operating frequency (Hz)	50/60
Certifications	CE. UL (pending)
Recommended min distance for plants	50cm
Thermal management	Passive heat sink
Ambient operating temperature Low (°C)	-20
Ambient operating temperature High (°C)	35
Ingress protect rate (IP)	IP66 fixture & IP54 remote driver (goalpost) IP 66 complete unit (trellis)
ROHS compliant	Yes
PPF (PAR)	696 $\mu\text{mol/s}$
PPF (PAR + NIR)	717 $\mu\text{mol/s}$
Light decay (%)	>90% after 10000hrs
Efficacy PAR ($\mu\text{mol/ W}$)	1.73 (400nm – 700nm)
Efficacy full spectrum ($\mu\text{mol/ W}$)	1.78 (380nm – 780nm)
CCT (K)	3500 – 3800
CRI (K)	85
THD (%)	<15%
Power Factor	>0.95
Warranty	Up to 5 years

Order Codes

Order Item	Spectrum	Description	Order Code
Hyperion fixture 230v	White	Fixture with goalpost bracket plus 230v driver with 4m cable	PHH52R3400A
Hyperion fixture 415v	White	Fixture plus 415V driver with trellis mounting bracket	PHH54S4400A

Mechanical Installation

The Hyperion fixture is suitable for installing indoors in grow tents & grow rooms as well as outdoor greenhouse growing environments, secured by bolts or other fixings using the holes in the top of the bracket (goalpost bracket) or hung from a greenhouse trellis (trellis bracket). Check that the integrity of the structure can withstand the overall and point load brought to bear by the installation of this fixture.

Care must be taken when assembling, fitting or handling to prevent personal injury or damage to the product. This light fitting must be installed by a competent person in accordance with the local Building and Electrical Regulations

Plessey cannot accept any liability for loss, damage or premature failure resulting from inappropriate use. Plessey can advise on installation requirements including how to achieve the desired amount of light and uniformity.

Electrical Installation

Goalpost bracket

The Hyperion grow light is supplied with an external driver which should be located separately to the fixture. The fixture cable needs to be connected to the driver cable. See images on page 4. The driver requires an IEC-C13 connection to a single phase, 230V mains power supply.

Trellis bracket

The Hyperion grow light is supplied with an integrated driver which is mounted on the hanging bracket supplied with the fixture. The driver requires a two-phase input from a 3 phase 415V supply.

The fixture is prewired with a Wieland male connector for attaching to the greenhouse lighting supply wiring. See image opposite.

The greenhouse lighting supply wiring should be terminated with the corresponding connector which is Wieland RST20i3 400v 3 pole female connector (green) to plug into the driver. Wieland part no. 96.031.4055.7. See image opposite.



For new build large installations it is recommended that a pluggable wiring system is pre-installed. Pre-made lengths of power cable with a female connector are available. Wieland part number 96.232.1035.7 through to 96.232.8035.7 (8x variants from 1m to 8m) See image opposite for an example of a pre-made cable.



Plessey can assist installers with cabling determinations and supply requirements.

⚠ Safety ⚠

The Hyperion fixture does not radiate harmful wavelengths of light but like many high power artificial lights users should not look directly at the fixture whilst it is on.

Care must be taken when assembling, fitting or handling to prevent personal injury or damage to the product. This light fitting must be installed by a competent person in accordance with the local Building and Electrical Regulations

Plessey cannot accept any liability for loss, damage or premature failure resulting from inappropriate use. Plessey can advise on installation requirements including how to achieve the desired amount of light and uniformity.

Maintaining Warranty

In order to maintain the product warranty, the following information must be observed.

Cleaning / Maintenance

- Depending on environment dust can collect in the metal heatsinks over a period of time. This should be removed periodically by a low-pressure air / water jet, appropriate PPE should be worn.
- It is recommended that the lenses be cleaned every 3 months. Lenses can be wiped clean with a damp cloth or hosed down. The unit should not be submerged.
- This fixture has no consumable / replaceable parts other than the driver. If you experience a failure or problem with your product, please contact Plessey Customer Service for Assistance

Important Information

- The Ingress Protection of any termination performed by the client must preserve the ingress protection of the fixture in order to maintain product warranty.
- It is important in large installations that the pairs of phases are swapped and evenly distributed throughout the installation to avoid overloading one phase of the supply.
- Once installed and connected to the fixed wiring system the product can be switched on with no further commissioning.

Disposal

When the light fitting comes to the end of its life please do not dispose of it within the general waste, please recycle where facilities exist. When you need to dispose of this fitting, check with your distributor or local authority for suitable options. New regulations require the recycling of Waste from Electrical and Electronic Equipment (European “WEEE Directive” effective August 2005—UK WEEE Regulations effective 2nd January 2007). Environment Agency Registered Producer: WEE/MM3672AA

Legal Notice

Product information provided by Plessey Semiconductors Limited (“Plessey”) in this document is believed to be correct and accurate. Plessey reserves the right to change/correct the specifications and other data or information relating to products without notice but Plessey accepts no liability for errors that may appear in this document, howsoever occurring, or liability arising from the use or application of any information or data provided herein. Neither the supply of such information, nor the purchase or use of products conveys any licence or permission under patent, copyright, trademark or other intellectual property right of Plessey or third parties.

Products sold by Plessey are subject to its standard Terms and Conditions of Sale that are available on request. No warranty is given that products do not infringe the intellectual property rights of third parties, and furthermore, the use of products in certain ways or in combination with Plessey, or non-Plessey furnished equipment’s/components may infringe intellectual property rights of Plessey.

The purpose of this document is to provide information only and it may not be used, applied or reproduced (in whole or in part) for any purpose nor be taken as a representation relating to the products in question. No warranty or guarantee express or implied is made concerning the capability, performance or suitability of any product, and information concerning possible applications or methods of use is provided for guidance only and not as a recommendation. The user is solely responsible for determining the performance and suitability of the product in any application and checking that any specification or data it seeks to rely on has not been superseded.

Products are intended for normal commercial applications. For applications requiring unusual environmental requirements, extended temperature range, or high reliability capability (e.g. military or medical applications), special processing/testing/conditions of sale may be available on application to Plessey.

Contact

Jonathan Barton
+44 (0) 7825 878003 | jonathan.barton@plesseysemi.com
www.plesseysemi.com/products/grow-lighting

Plessey Semiconductors Ltd | Plymouth
Tamerton Road, Roborough
Plymouth, Devon
PL6 7BQ
United Kingdom