

MAINTENANCE - LED LUMINAIRES



IMPORTANT

Before commencing any maintenance work:

- Always turn off and lock out the branch circuit
- Ensure luminaires are completely cooled

LUMINAIRES

All P.L. Light Systems' luminaires are designed (and rigorously tested) to provide the specified level of protection against moisture ingress in accordance with their certified IP rating according to IEC-60529.

However, the real-world operating conditions within a horticultural environment are often more demanding than those specified under IEC-60529, which does not account for all potential effects of humidity, airborne pollutants and/or UV exposure within the CEA facility. As such, growers should take the following precautions to protect luminaires against potential water ingress:

- Luminaires should ideally be removed from mounting structure when cleaning ceiling / walls of facility. If that's not possible, luminaires should be properly bagged to protect from ingress of any water / cleaning agents
- Ensure that all connectors on the luminaire are capped when not in use to ensure safe operation and maintain IP integrity.
- Do not expose the luminaire to:
 - » condensing humidity, heavy mist, fog or direct spray of any pressure level;
 - » (ambient) temperatures outside the specified range;
 - » dust and contamination.

Never use a luminaire if either the lamp or power cord are damaged. Replace the power cord only with original CSA or UL equivalent certified cords.

DISCLAIMER:

The Triplane Linear system is modular in form but **not** interchangeable in LED module output configuration. Each LED module must be paired **only** with its correctly matched ballast (Low Output [LO] or High Output [HO]).

Do not mix, swap, or cross-pair different output LED modules and ballasts under any circumstances. Using a mismatched combination can result in **malfunction** and may cause **permanent damage** to the fixture which is not covered by warranty.

Always verify output compatibility before installation or service.

LUMINAIRE CLEANING INSTRUCTIONS

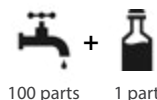
Check the product at regular intervals for build-up of dust and dirt. Clean the product if necessary. Contamination can lead to overheating and reduced performance.



Use low pressure compressed air to remove dust and/or debris between the heat fins on the driver housing and/or LED modules.



Wipe the luminaire housing down with a dry or slightly damp cloth.



To remove the build up of limescale on the lens, dampen a clean, soft cloth with a vinegar and water solution (1:100 ratio). Gently wipe lens with dampened cloth.



Allow luminaire to dry completely before powering on again.

NOTES:

- For your safety, when cleaning luminaires, always maintain the correct ratio and never add other chemicals to solution. Wearing hand and eye protection is advised.
- Never clean the luminaire with corrosive cleaning agents, abrasives or other aggressive liquids.
- Any luminaire maintenance should always be performed in accordance with local and national building; electrical and/or safety codes.



TESTED CHEMICAL SUBSTANCES*



When using any chemical substance(s):

- Always follow the manufacturer prescribed concentrations, instructions for use and safety precautions.
- Always ensure that the chemicals are approved for use in your jurisdiction.

P.L. Light Systems' LED luminaires have been tested and assessed to be able to withstand the use of the following chemical substances inside a controlled greenhouse environment:

Abamectine
Abamectine HF-G
Abir
Acarstin
Acramite 50WS
Acrobat Plus WG
Actara
Actara 25WG
Actara insecticide
Actinovate SP
Addit
Admiral
Admire 240
Admire WG
Agral Gold
Agrimec
Agriphage CMM
AGRITRAP
Agrotek Vaporized Sulphur
Agrozone
Alar 64 SP
Alar 85 SG
Alias 240SC
Aliette WG
Allure PT4
Altacor
Altacor Insecticide
AmberClean
Ambionet
Ambush 50 EC
Ambush 500EC
Amewash

Amistar
Amistar top
Ammoniumbifluoride
Apollo SC
Aprovia
Apuron
ARMICARB
Arubarin water dispersible granules
Aseptia Carex
Aseptia Neemazal
Avid 1.9% EC
Bachisuta wettable powder
Bactipal ELV
BACTURA DF
Beleaf 50SG
Benkoze Flowable
Benleate
Berelex 40 SG
BioCeres G WP
Bioprotec 3P DF
Bioprotec CAF
Biosentry 904
Biosoap
Biosolve
Biotracius Ca
Biotracius K
Bittersalt
B-Nine SG
Bonzi
Borneo
Botanigado ES
BotaniGard 22 WP
BotaniGard WP
Bravo ZN
Break-Thru
Buzz Ultra DF
Cabrio EG

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TESTED CHEMICAL SUBSTANCES*



Calcium Carbonate
Calcium chloride
Calypso 480 SC
Cantack
Cantus WDG
Captan 50WP
Captan 80 WG
Captan 80WDP
Captan 83 WP
Captan flow
Captosan 500 SC
Captosan 500 SC (5%)
Caramba
Carex 100SC
Carex 10SC
Cease
Champ DP Dry Prill
Champion++
Chess WG
ciro clean 55
Cleanbest 1120
Cleanbest 1220
Clear Saar flowable
Codacide
Codacide 2%
Collis
Colt
Concept
Confidor 70 WG
Confirm 240 F
Conserve SC
Contans WG
Copper 53W
Copper oxychloride
Copper skin (Kasumin Bordeaux)
Copper spray
Coppercide WP
Coragen
COSAVET DF
COSAVET Garden
Cueva
Cuprokylt
Cuprozin progress
Cyclone
Daconil 1000

Daconil 500
Danitron flowable
DDVP 20% EC
Decis 2,5 EC
Decis 5 EC
Decis EC
Decree 50 WDG
Delegate
Delegate WG
Desbest 400
Desogerme Bactibio
Desogerme Microchoc plus
Desogerme Microserre
Desogerme SP vegetaux
Diana SC
Dimanin
Dinoterfuran 20SG
DiPel 2X DF
Dipel DF
Distance
Dithane DG New Tec
Dithane M45
Dithane Neotec
Dithane Rainshield
Double Nickel 55
Double Nickel LC
Dynamec
Dynasty 100 FS
Dyno-mite WP
Echo 90DF
Eko-mist
Elasto G5
Electrolysed water
Emblem
Endeavor 50 WG
En-strip
Entrust
Entrust 80 WG
Entrust SC
Envidor
Envidor 2 SC
Envidor 240 SC
Eradicoat
ERII
Ethanol

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Ethanolamine
Ethephon classic
Ethoxylated alcohols 0.5%
Ethoxylated alcohols 1.0%
Ethrel A
Exalt 60 SC
Explicit
Fado
Fairy Liquid
Fame
Fantasista water dispersible granules
Farbanet plus
Fenomenal
Flint 50 WG
Flipper
Flonicamid
Floramite 240 SC
Floramite SC
Flordimex 420
Flusol Forte
Folicur 430 SC
Folicur SC
Folio Gold
Folpan 80 WDG
FONGIL FL
Foray 48BA
Forbid 240 SC
Formaline
Fortafol-S
Forum
Freebac
Fromalin
Frupica SC
Frupika flowable
Full Pika flowable
Fungaflash
fungaflor 100 EC
Fungei Bordeaux
Gazelle SG
Germany Bordeaux A
Getter
Gibberellin Kyowa solutions
Greenhouse Glassclean
Grapple2
Greenstim

Grisu
GS4
Hachi Hachi Emulsion
Headlandcopper
Heritage Fungicide
Hermosan 80 WG
Huwa San TR-50
Huwa San TR-50 (0.3%)
Huwa San TR-50 (theory)
Hydrochloric acid
Hydrogen peroxide
Hydrogen peroxide 1%
Hydrosan Sinq
Insegar 25 WG
Intra Hydrocare
Intrepid
Intruder
Iprodione 4L AG
Ishihara tomato tone
ISK
Isopropanol
Jet 5
Kanemite SC
Kara Green
KARATE ZEON
Karma
Kasumin 2L
KleenGrow
Kelpak bioactivator
Kenbyo FL
Kentan DF
Kickstart
Kenocid 210
Kocide 2000
Kocide 3000 DF
Kopa insecticidal soap
Koromaito emulsion
Kumar (via Karma)
Kumulus S/DF
Lan Man flowable
Lazulie
Lepinox plus
Limocide
Luna Privilege
Luna Sensation

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TESTED CHEMICAL SUBSTANCES*



Luna tranquility
Maestro 80DF
MAGISTER SC
Magnesium Nitrate
Magnesiumsulphate
Majestik SL
Manfil 75 WG
Manfil 80 WG
Manzate 200 WP
Manzate DF
Manzate Pro Stick
Manzate Pro-Stick
Matador 120EC
Match
Meltatox
Menno Clean
Menno Florades
Menno ter forte
Microthiol special
Milbeknock
Milbemectin
MilStop
Mimic 2LV
Minecto duo 40WG
Mirage plus 570 SC
Mospilan SG
Motto
Mushirappu
Mycostop
MYCOTAL
Naphtha light aromatic
Naturalis L
Neemazal TS
Nemathorin 10G
Nenchaku-kun
Nimezal
Nimrod
Nissorun
Nocturn
Nomolt
Nu-Cop 50 DF
Nu-Cop HB
Oberon
Oleate
Olie-H

Omega 500F
Ordoval
Ortiva
Ortiva 0.2%
Ortiva 0.3%
Ortiva 0.4%
Ortiva 0.5%
Ortiva 1.0%
Ortiva 2.0%
Ortiva 5.0%
Oxydate 2
Palladium WG
Paraat WP
Parasol WG
Penncozeb 75 DF
Pirimor G
Pirimor spuitkorrel
Plenum 50 wg
Pleo flowable
Pomarsol WG
Potassium bicarbonate
Potassium hydroxide
Potassiumhydrogencarbonate
PREFERAL WG
Prestop
Prestop mix
Prev Magnum
Prev-AM
PREV-B2
PREV-B2 12%
previcur energy
Previcur N
Pristine WG
PRM 12 RP
Procure 480 SC
ProFortum
prolectus
Proplant
Protect DF
Pyrethrum 5EC
Quadris
ranman Top
Reflect
Reglone
Revus

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Revus 250 s.k.
Rhapsody
Ridomil Gold 480 EC
Ridomil gold MZ 68 WG
Rimon10EC
Rizolex Vloeibaar
Rocket EC
Rovral Aquaflo
Rovral WG
Rudis
Runner 240 SC
Sanidate 5.0
San Might flowable
Sankei gardening Bordeaux
Sankei kumurasu
SanMite WP
Sanprox-P
Savior Flowable 20
Savologic 1%
Savona
Savona 20%
SB Plant Invigorator
SBInstant
Scala SC
SCHWEFAL® Schwefel-Linsen
Score 250 EC
Scurea Flowable
Serenade ASO
Serenade Opti
Serenade SC
Serenade soil
Serifel
Shirlan flow
Shuttle 15 SC
Signum
silwet gold
Silwett L77
Sodium hypochlorite 0.3%
Sodium hypochlorite 5.0%
Sonoma 40WSP
Spintor 480 SC
Spirato 480 FS
Sporgon 50 WP
Sportak EW
Spruzit

Spuitzwavel granulaat
Spuitzwavel poeder
Squad
Squash
Steward
StorOx
Strip-it (homemade mix)
Stuifzwavel
Success
Success 4
Sulphur
Sumicidin super
Sumicidin super (1%)
sunmite Flowable
Suporoxid 15
Supra Captan 80 WDG
Supra Captan 80WDP
Switch
Switch 62.5 WG
Systhane 20 EW
Systhane 24 EC
Systhane max
Taegro WP
Takumi SC
Talius
Teldor
Teppeki WG
Terraguard
Tetrasan 5 WDG
Thiram granuflo
Thuricide
Tianwangwei
Tilt 250 EC
Tivano
Tomatotone
Topas
Topaz 100 EC
Topcleaner
Topcleaner 10%
Topsin M ultra
Torrent 400SC
Tracer 480 SC
Transfer flowable
Transform WG
Trend 90

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Trigard 100 sl
TRIGARD 75 WP
Triggered solutions
Turex wp
ultiflora
Unifect-G
Urara DF
Vectine Plus
Vectobac 600L
Veni Biosulfur
Vertimec 018 EC
Vertimec Gold
Viragri plus VT49
virkon S
Virocid
Vivando SC
Voliam Xpress
Water
Wetcit
White Spirit
XENTARI WG
Z Bordeaux
ZAL PERAX II
ZAL PERAX II (1%)
ZAL PERAX II (2%)
ZAL PERAX II (3%)
ZAL PERAX II (40%)
Zipper

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The following chemical substances are NOT safe for use with P.L. Light Systems luminaires.

DO NOT USE:

Ethylene chloride
Glycerin
Methanol
Methyl ethyl ketone
Methylamine
Methylene chloride
N-propanol
Ozone, 1% in air

Potassium hydroxide, 1% in water
Sodium hydroxide (caustic soda), 1% in water
Styrene
Tetrachloroethane
Tetrachloroethylene
Trichloroethylene
Tricresyl phosphate
Xylene

