HALOGEN

LIGHTING PRODUCTS CORPORATION

Excellence in Machine and Industrial Lighting

2012 Industrial Edition



America's Brightest Industrial Lighting
Halogen • LED • Fluorescent

HALOGEN LIGHTING

EXCELLENCE IN MACHINING & INDUSTRIAL LIGHTING

IMPROVING YOUR PRODUCT QUALITY

Beginning with the Industrial Revolution, advances in machine tool technology have progressed at astonishing rates, resulting in an unparalleled demand for greater speed, increased output, and more complex products than at any other time in history. Along with the demand for faster output is the equally crucial demand for ever-tighter competitive specifications. Amazingly enough, what has been lagging in this historically phenomenal growth is the realization that machine tool operations require dedicated lighting to help meet these 21st century precision tolerances!

Halogen Lighting Products Corporation - an industry leader in machine tool lighting applications - produces fixtures that are designed and built to endure the harshest machine and industrial applications in the world. Our fixtures have been proven and field tested in rigorous industrial, machine, food processing, and manufacturing sectors successfully for two decades. We know from experience that there is a very real correlation between the amount of quality, direct, intense lighting a machine operator uses and the degree of precision achieved in the manufacturing process. This can best be summarized as:

The better the operator can see, the finer the precision of the part.

The finer the precision of the part, the higher the quality of the product.

The higher the quality of the product, the lower the cost of manufacturing.

The lower the cost of manufacturing, the higher the profit margin.

The higher the profit margin, the more competitive the product.

The more competitive the product, the higher the sales volume.

What we ship to our customers is the highest quality industrial lighting found in North America. What our customers are buying from us is an investment in improved product quality. Quite often, the minor investment in correct machine lighting can be recovered within the very first hour of operation-simply by installing the intense, natural white light demanded by precision machining. Providing machine operators with proper direct illumination is a simple and cost-effective way to reduce the risk of injury and lower the cost of manufacturing. If our proven machine lighting fixtures can improve your overall product quality by just a fraction of one percent, can you imagine the impact to your corporate profits?

We believe Halogen Lighting Products Corporation offers the highest quality, best engineered and broadest selection of industrial fixtures available in North America. Our product quality and customer service is second to none.

We are very excited to announce our new LED product line, merging new LED (Light Emitting Diode) light engines with water-tight machine housings that have been field tested for two decades. This new LED technology will take us through the 21st century with intense white illumination and very low energy consumption. "Changing a bulb" once every decade becomes the new standard in lighting maintenance.

We take great pride that Halogen Lighting Products machine and industrial fixtures play such a vital role in virtually every market and manufacturing segment in North America, helping to substantially improve our customers' product quality and productivity.

We are so very grateful to our customers old and new alike, for their friendship, support, loyalty and continued business.



Gratefully yours,
Gloria E Stewart
President
Halogen Lighting
Products Corporation
(a small, woman-owned business)



HALOGEN LIGHTING PRODUCTS CORPORATION"

Telephone: 1-800-HALOGEN

Fax: 1-800-700-6166 (U.S. and Canada)

Visit our website www.halogen-lighting.com

HALOGEN LIGHTING

EXCELLENCE IN MACHINING & INDUSTRIAL LIGHTING

TABLE OF CONTENTS	
LETTER FROM THE PRESIDENT	1
TABLE OF CONTENTS	2
► LED DOCK LIGHTING "DOCKMASTER"™	3 4
► DIRECT LED REPLACEMENTS T8 Fluorescent to LED direct replacement bulbs	4
SECOND GENERATION HEAVY-DUTY MACHINE LIGHTING	5
90-260 Volt, IP69K lighting. LED-712, LED-719, LED-730 SECOND GENERATION SUNFISH SERIES LED MACHINE LIGHTING	6
SECOND GENERATION SUNFISH SERIES LED MACHINE LIGHTING SECOND GENERATION TOOLHELPER SERIES LED MACHINE LIGHTING	7
SHATTERPROOF ² FLUORESCENT LIGHTING	8
IP67 (Waterproof Under Pressure) fluorescent lighting	
FLUORESCENT MILLENNIUM SERIES	9
IP67 (Waterproof Under Pressure) fluorescent lighting	
FLP-1300 (13-Watt), FLP-2600 (26-Watt), FLP-3600 (36-Watt), FLP-5500 (55-Watt)	
FLP-8000 (80-Watt)	
MILLENNIUM SERIES PRICING	10
FLUORESCENT MACHINE TOOL & PRESS LIGHTING FLD 1112 (12 Wotto) FLD 2215 (15 Wotto)	11
FLP-1113 (13 Watts), FLP-2215 (15 Watts)	
► FLUORESCENT MOUNTING BRACKETS	12
■ FILOBAL SERIES WATERPROOF FLUORESCENT LIGHTING	13
Auto-adjusting 90-260 Volt, IP67 Machine Lighting	
26-Watt, 36-Watt, 55-Watt, 80-Watt	14
► HALOGEN OL' RELIABLE™ SERIES (LARGE HEADED FIXTURES) - IP 65 120 Volt Version: HLP-002A, HLP-002B	14
24 Volt Version: HLP-001A, HLP-001B, HLP-001C	
► HALOGEN WATERTIGHT TOUGH GUY™ SERIES	15
(LARGE HEADED FIXTURES) - IP 67	10
120 Volt Version: HLP-2000S, HLP-2000M, HLP-2000L	
24 Volt Version: HLP-1000S, HLP-1000M, HLP-1000L	
► HALOGEN OL' RELIABLE™ (SMALL HEADED FIXTURES)	16
120 Volt Version: HLP-003AT, HLP-003BT, HLP-003CT	
12 Volt Version: HLP-003A, HLP-003B,	
24 Volt Version HLP-003C	
► HALOGEN AND FLUORESCENT GOOSENECKS	17-18
► HALOGEN FLOODLIGHT: 24 VOLT VERSION ONLY	19
MAGNET ASSEMBLY (8" X 8")	19
PHOTO OF HALOGEN BULBS	19
SCHEMATICS SAFETY INFORMATION	20-25
► SAFETY INFORMATION ► GLOSSARY	25 26



HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: **1-800-HALOGEN**Fax: 1-800-700-6166 (U.S. and Canada)

LED DOCK LIGHTING

Certification: IP65 (Waterproof)

(E RoHS

LED DOCK LIGHTING







The Dockmaster is also energy efficient, consuming only 6% of the energy of an incandescent equivalent. With a virtually indestructible head, it's easily replaceable and retrofits to most, if not all existing dock light arms, reducing installation labor costs.

SUPERIOR FEATURES

- With light intensity of 1,200 lumens while consuming only 18 watts of electricity, this dock light is also highly energy efficient.
- Head is detachable allowing for easy replacement or upgrade to existing dock light arm configurations.
- Housing is designed solely for durability and reliability. A heavy-duty cast aluminum and polycarbonate head enables this fixture to withstand severe impact.
- LED technology eliminates the risk of breakage to any glass bulbs and/or filaments found in incandescent and fluorescent bulbs.
- Ideal for food and beverage areas, where potential glass and mercury contamination is unacceptable.
- Double-strut arm comes standard, providing a strong, versatile, solid mount for the fixture.
- Designed with wet environments in mind, this fixture is rated as IP65 (Waterproof)
- Voltage input is 100-240 VAC 50/60hz.

- Offers 50° of illumination.
- Intelligent driver automatically detects and adjusts to incoming power automatically.
- 5,000 Kelvin color temperature provides a pure white light, eliminating any discoloration effects.
- 15° optics provide even, wide, and long disbursement of light throughout the entire trailer.
- Recessed backplate, toggle switch, and waterproof cord protector offer further reduced risk of damage by equipment in busy dock locations.
- Operates between the temperatures of -20°F to 105°F
- Meets CA 20 Appliance Efficiency Regulation.



All prices are U.S. Dollars. Prices are subject to change.

Part#	Length	Lumens	Watts	Description	Rated Hours	Technical Drawings	Price
DOC-LED-300	42"	1200	18	Complete Assembly, 100-240V, 50/60hz	100,000	EE, page 25	325.00
DL-5000-ARM	42"			Replacement Arm for Docklight			140.00
SP-5000-HEAD		1200	18	LED Dock Light Head, 120-240V, 50/60hz	100,000		200.00



HALOGEN LIGHTING PRODUCTS CORPORATION"

Telephone: 1-800-HALOGEN

DIRECT LED REPLACEMENTS





Our LED-T8-5000 is the ONLY direct T8 replacement for any existing fluorescent fixture in current use today...



Self-adjusting/self-conforming to all existing ballast systems! These drop-in LED replacements provide **instant** high efficiency alternatives to the old fashioned, and costly, fluorescent tubes of the past!

LED Technology Beyond the Expected

Truly a direct replacement. No ballast circumvention

INSTALLATION INSTRUCTIONS:

- 1) Turn off power source to fixture
- 2) Remove fluorescent bulb
- 3) Place LED direct replacement in socket, ensure a secure fit
- 4) Power on fixture

Light output - 1,800 lumens Average Power - 19-22 watts

CRI - 85

Color Temperature - 3500/4000/5000K

Average Lifespan - 10 years

Non-toxic - No glass, mercury, phosphors

Operates well at low temperatures

Meets CA20 Appliance Effeciency Regulation

All prices are U.S. Dollars.

Prices are subject to change.

Part #	Length	Lumens	Watts	Description	Rated Hours	Price
LED-T8-5000	47.75"	1600	25	LED 120 volt fixture 5000K	43,800 +	195.00



HALOGEN LIGHTING PRODUCTS CORPORATION

Telephone: **1-800-HALOGEN**Fax: 1-800-700-6166 (U.S. and Canada)

Visit our website www.halogen-lighting.com

APPLICATION

These powerful, industrial strength, LED (Light Emitting Diode) fixtures provide exceptionally bright and natural white light (5,000 Kelvin), over a wide surface area. They are built to endure the harshest machine and industrial environments, including severe levels of water/coolants/lubricants, vibration, dust and flying metal debris. Ideal for machining centers under high pressures and temperatures where lighting is needed in an area where serviceability would be difficult - no maintenance or complications beyond installation for 10 years.







LED-719 - 28 WATTS - 2,240 LUMENS



LED-712 - 16 WATTS - 1,248 LUMENS

SUPERIOR FEATURES

- Fixture is powered with voltages between 90 to 260 VAC. Driver automatically detects and adjusts to line voltage and hertz.
- Longer LED service life of 50,000 hours.
- Pure bright white illumination at 5000K.
- Enclosure is rated IP69K, ensuring superb protection from high-pressure/steam cleaning applications.
- · Solid aluminum construction serves as premium heatsink ensuring long life and cool operating temperature.
- · Fixtures ship standard with 12 feet of SJT oil resistant cabling and grounded plug.

- With these fixtures made of anodized aluminum and cover made of tempered glass, these strip LEDs can handle repetitive washdown from almost any type of coolant and/or lubricant under high pressure and temperatures.
- The external driver is in-line with the cord. this allows the fixture to be used in hostile applications while keeping the driver dry and out of harm's way.
- · Provides 80° of illumination
- · Ships complete
- Import
- Meets CA20 Appliance Efficiency Regulation

Part#	Length	Lumens	Watts	Description	Rated Hours	Technical Drawings	Price
LED-730	30"	4160	52	30", 90-260V Heavy-Duty LED fixture	50,000	A page 20	548.49
LED-719	19"	2240	28	19", 90-260V Heavy-Duty LED fixture	50,000	B page 20	525.49
LED-712	12"	1248	16	12", 90-260V Heavy-Duty LED fixture	50,000	C page 20	501.34



HALOGEN LIGHTING PRODUCTS CORPORATION TO A CORPORATION TO

Telephone: 1-800-HALOGEN

Fax: 1-800-700-6166 (U.S. and Canada)

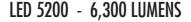
Visit our website www.halogen-lighting.com

LED SERIES

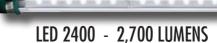
THE SUNFISH™







LED 4000 - 4,500 LUMENS



IFD 1100 - 900 LUMFNS





These powerful, industrial strength, LED (Light Emitting Diode) fixtures provide exceptionally bright and natural white light (5,000 Kelvin), over a wide surface area. They are built to endure the harshest machine and industrial environments, including severe levels of water/coolants/lubricants, vibration, dust and flying metal debris. Ideal for machining centers, inspection stations, presses, EDMs, screw machines and industrial task lighting.

SUPERIOR FEATURES

- Average LED life of 43,800 hours. "Changing bulbs" every decade becomes a new standard.
- Pure bright white illumination at 5000K.
- · Totally watertight IP67 (waterproof under pressure) to withstand heavy levels of water and coolants.
- · The casing is built with Super Acrylic tubing. It is virtually unbreakable even in the most

- hostile environments of heat, vibration, and metal debris.
- · The external ballast is in-line with the cord, this allows the fixture to be used in hostile applications while keeping the expensive driver dry and out of harm's way.
- · Provides 80° of illumination
- Wired 120 Volts.
- Fixtures ship standard with 25 feet of SJT oil resistant cabling

- and grounded plug.
- · A wide variety of mounting brackets are available.
- · Meets CA20 Appliance Efficiency Regulation
- · Ships complete
- Import



SEE PAGE 12 FOR BRACKETS

Part #	Length	Lumens	Watts	Description	Rated Hours	Technical Drawings	Price
LED-5200	52"	6300	40	LED 120 volt fixture 5000K, 25 foot cord	43,800 +	D page 20	489.75
LED-4000	40"	4500	30	LED 120 volt fixture 5000K, 25 foot cord	43,800 +	E page 20	476.95
LED-2400	24"	2700	18	LED 120 volt fixture 5000K, 25 foot cord	43,800 +	F page 20	456.95
LED-1100	11"	900	6	LED 120 volt fixture 5000K, 25 foot cord	43,800 +	G page 20	435.95

All prices are U.S. Dollars. Prices are subject to change.

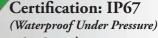


HALOGEN LIGHTING PRODUCTS CORPORATION

Telephone: 1-800-HALOGEN

LED SERIES

THE TOOL HELPER MARK II





APPLICATION

Machine Lighting: Totally watertight/ waterproof LED (Light Emitting Diode) fixture built to meet the harshest machine and industrial application in terms of heavy coolant, vibration and metal debris. These fixtures offer the same Exceptional Quality and Superior features as "The Tough Guy" Series (Page 9) that are second to none in America.



SUPERIOR FEATURES

- · Twice the brightness same price
- Totally watertight fixture receiving the IP67 certification (waterproof under pressure). Chip resistant glass lens. High Quality 6 foot SJT (oil resistant) grounded cable and plug.
- 60 degrees of optimized illumination supplied through a 50mm convex optical lens.
- Average life of the light engine is roughly 44,000 hours or 10 years of service life.

 Fixtures are made of anodized aluminum that will not rust or corrode in harsh environments.

LED 1000M

- Available either in 120-277 VAC or 24V AC/DC
- Meets CA20 Appliance Efficiency Regulation
- · Ships complete
- Import

LED 1000S



SUPERIOR FEATURES

- Certification IP54 (splash proof)
- The 2-1/2" diameter head is rated splash proof. Ideal for dry and light mist environments.
- Exceptionally bright white illumination offering 300 lumens giving pure white illumination.
- Transformer built into the base wired 120 volt with plug providing "plug and light" operation.
- Designed with plastic beads; the neck will not loosen over time.
- Magnets, machine brackets and surface plates are available.
- Meets CA20 Appliance Efficiency Regulation
- · Ships complete
- Import

 All prices are U.S. Dollars.

 Prices are subject to change.

Part #	Description	Watts	Lumens	Voltage	Rated Hours	Technical Drawings	Price
LED-2000L-MKII	5000K Long Arm	18	1200	120-277	43,800 +	H, page 21	518.50
LED-2000M-MKII	5000K Medium Arm	18	1200	120-277	43,800 +	I, page 21	495.50
LED-2000S-MKII	5000K Head & Base	18	1200	120-277	43,800 +	J, page 21	484.00
LED-1000L-MKII	5000K Long Arm	18	1200	24 AC/DC	43,800 +	H, page 21	461.00
LED-1000M-MKII	5000K Medium Arm	18	1200	24 AC/DC	43,800 +	I, page 21	438.00
LED-1000S-MKII	5000K Head & Base	18	1200	24 AC/DC	43,800 +	J, page 21	426.50
LED-005	Beaded Gooseneck	3	360	120	43,800 +	K, page 21	374.75
HLP-30	Magnet Base Assembly						74.95
HLP-22-2000	Wall Mounting Bracket						16.75
HLP-24-005	Magnet						25.75
HLP-29-005	Surface Plate						31.95
FLP-8	Magnetic Cord Holder						16.95



HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

Fax: 1-800-700-6166 (U.S. and Canada)

Visit our website www.halogen-lighting.com

SHATTERPROOF²

SHATTERPROOF FLUORESCENT LIGHTING



Bulb Certifications:

FDA and USDA approved. Meets and exceeds all federal regulations.

FOR CONTAMINATION-FREE ENVIRONMENTS

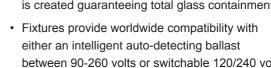
"SHATTERPROOF SQUARED"

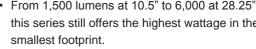


A) The Needlefish (FLP-80W 90V - 260V) - 80 Watts - 34.375" - The Lanternfish (FLP-55W 90V - 260V - S or N) - 55 Watts - 34

SUPFRIOR FFATURES

- The bulbs are permanently fused with a patented nylon derivative compound of crosslinked polymers and nylon, a sealed beam unit is created guaranteeing total glass containment.
- either an intelligent auto-detecting ballast between 90-260 volts or switchable 120/240 volt ballast.
- From 1,500 lumens at 10.5" to 6,000 at 28.25", this series still offers the highest wattage in the smallest footprint.
- · Meets CA20 Appliance Efficiency Regulation
- Import





- · Provides 120° of Illumination
- · Ships complete

F) The Ladyfish (FLP-26W-120V - S or N) - 26 Watts - 15.375"

B) The Devilfish (FLP-36W 90V - 260V - S or N) - 36 Watts - 28.5"

C) The Sailfish (FLP-8000) - 80 Watts - 28.25

D) The Lanternfish (FLP-5500) - 55 Watts - 26.25"

E) The Devilfish (FLP-3600) - 36 Watts - 34.375'

G) The Ladyfish (FLP-1300) - 13 Watts - 10.5" The Ladyfish (FLP-2600) - 26 Watts - 10.5"

Global Series





APPLICATION

Fixtures ideal for food, beverage, pharmaceutical, cosmetic, and where other applications and/or environments requiring industrial lighting no glass contamination is mandatory

All	prio	es	are	U.S	D	ollars.
Pric	es	are	sub	iect	to	chanae.

Model	Page Ref.	Lumen Rating	Volts	Length	Technical Drawings	Bulb	Price
FLP-80W-90-260V-S2	А	6,000	90-260, 50/60hz	34.375"	L, page 21	*PLL80W841	354.95
FLP-55W-90-260V-S2	A	4,800	90-260, 50/60hz	34"	N, page 22	* DLL55W/841/4P	270.75
FLP-36W-90-260V-S2	В	2,900	90-260, 50/60hz	28.5"	M, page 22	* FT36DL/841	255.75
FLP-8000-S2	С	6,000	120/240 50/60hz	28.25"	P, page 22	*PLL80W841	310.50
FLP-5500-S2	D	4,800	120/240 50/60hz	26.25"	Q, page 22	* DLL55W/841/4P	287.75
FLP-3600-S2	E	2,900	120/240 50/60hz	22.5"	R, page 22	* FT36DL/841	276.25
FLP-2600-S2	G	1,500	120/240 50/60hz	10.5"	G, page 21	* PL-C-26W-4	269.50
FLP-26W-120-S2	F	1,500	120/240 50/60hz	15.375"	L, page 21	* PL-C-26W-4	248.75
FLP-1300-S2	G	900	120/240 50/60hz	10.5"	G, page 21	* PL-13/41CW	216.50



HALOGEN LIGHTING PRODUCTS CORPORATION

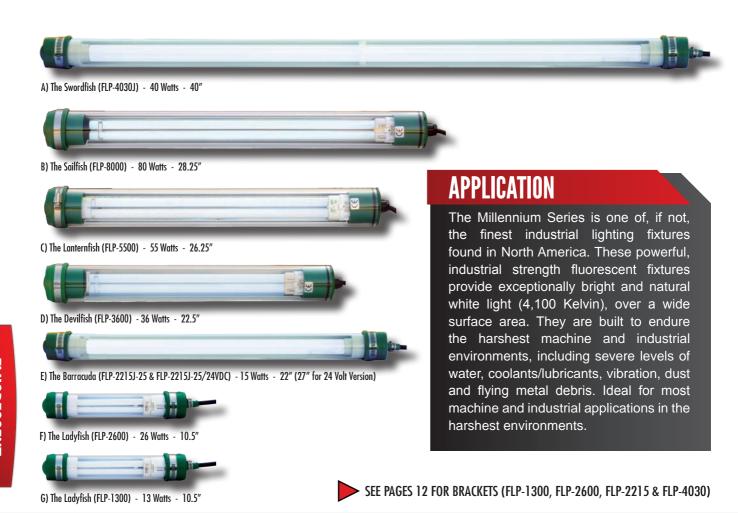
Telephone: 1-800-HALOGEN

WATERPROOF FLUORESCENT

Certification: IP67 (Waterproof Under Pressure)



THE MILLENNIUM SERIES™



VIRTUALLY INDESTRUCTIBLE ACRYLIC LENS

The "Super Acrylic" outer casing (lens) is remarkably resilient, virtually unbreakable, and watertight for use in the most hostile environment. It is built to endure extreme vibration while remaining waterproof in the wettest conditions. Optional polycarbonate and borosilicate lenses are also available to meet your needs.

Detailed specification sheets for the Millennium Series and all Halogen Lighting Products fixtures can be found at halogen-lighting.com

LARGEST SELECTION & HIGHEST QUALITY

Whether you need a 26 watt light in a small area, or need to illuminate a large EDM tank with 80 watts, THE MILLENNIUM SERIES is the right fluorescent fixture for even the harshest industrial applications. They are specifically designed for your machine tool and production machinery. The entire series is rated IP67 (waterproof under pressure) assuring watertight enclosures for moisture and coolant drenching. Secure bulb mounts ignore machine vibration. Provides 120° of illumination. Standard off the shelf, bulbs are available worldwide offering an average life of 10,000-12,000 hours. "Super Acrylic" lenses resist flying debris and chips. Oil resistant (SJT), 25ft., grounded, cording is standard. All fixtures ship complete with bulb for "Plug N Light" installation.



HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

Fax: 1-800-700-6166 (U.S. and Canada)

Visit our website www.halogen-lighting.com

PARTS AND PRICES

Certification: IP67
(Waterproof Under Pressure)

CE A

TÜVRheinland

THE MILLENNIUM SERIES™

MILLENNIUM FLUORESCENT LIGHT FIXTURES - COMPLETE

Model	Previous Page Ref.	Watts	Lumen Rating	Volts	Hertz	Switch	Length	Technical Drawings	Bulb	Price
FLP-8000	С	80	6,000	120/240	50/60	Υ	28.25"	P, page 22	PLL80W841	264.50
FLP-8000/N	С	80	6,000	120/240	50/60	N	28.25"	P, page 22	PLL80W841	264.50
FLP-8000/glass	С	80	6,000	120/240	50/60	Y	28.25"	P, page 22	PLL80W841	359.75
FLP-5500	D	55	4,800	90-260	50/60	Υ	26.25"	Q, page 22	DLL55W/841/4P	237.75
FLP-5500/N	D	55	4,800	90-260	50/60	N	26.25"	Q, page 22	DLL55W/841/4P	237.75
FLP-5500/glass	D	55	4,800	90-260	50/60	Y	26.25"	Q, page 22	DLL55W/841/4P	326.50
FLP-4030J-25	А	30	2,200	120	60	Y	40"	R, page 22	F30T8CW	239.50
FLP-4030J-6	A	30	2,200	120	60	Υ	40"	R, page 22	F30T8CW	239.50
FLP-3600	E	36	2,900	120/240	50/60	Y	22.5"	S, page 23	FT36DL/841	226.25
FLP-3600/N	E	36	2,900	120/240	50/60	N	22.5"	S, page 23	FT36DL/841	226.25
FLP-3600/glass	E	36	2,900	120/240	50/60	Y	22.5"	S, page 23	FT36DL/841	315.00
FLP-2600	F	26	1,500	120/240	50/60	Υ	10.5"	G, page 21	PL-C-26W-4	219.50
FLP-2600/N	F	26	1,500	120/240	50/60	N	10.5"	G, page 21	PL-C-26W-4	219.50
FLP-2215J-25	E	15	870	110	60	Y	16"	F, page 20	F15T8CW	223.95
FLP-2215J-25/24VDC	E	15	870	24	N/A	Y	27.625"	T, page 23	F15T8CW	200.95
FLP-1113J-25/24VDC	G	13	900	24	N/A	Y	14.375"	S, page 23	PL-13/41CW	217.95
FLP-1300	G	13	900	120	60	Y	10.5"	G, page 21	PL-13/41CW	166.50
FLP-1300/N	G	13	900	120	60	N	10.5"	G, page 21	PL-13/41CW	166.50

Note: Glass lens fixtures are highly recommended for applications using water-based coolants.

LENSES

Lenses	Page Ref.	Length	Material	Price
8000 Glass	C, page 9	27.25"	Borosilicate Glass	86.95
8000 5mm	C, page 9	27.25"	Super Acrylic	40.95
80W-INT-GLASS	B, page 13	34"	Borosilicate Glass	86.95
80W-INT-Acrylic	B, page 13	34"	Super Acrylic	40.95
4030 lens	A, page 9	40"	Polycarbonate	33.95
5500 Glass	D, page 13	25.5"	Borosilicate Glass	86.95
5500 5mm	D, page 13	25.5"	Super Acrylic	40.95
3600 Glass	E, page 13	21.5"	Borosilicate Glass	86.95
3600 5mm	D 5mm E, page 13		Super Acrylic	40.95
1300 & 2600 Lens	F, G, page 13	10.5"	Polycarbonate	29.75

REPLACEMENT BULBS

All prices are U.S. Dollars.

Prices are subject to change.

Bulbs	Page Ref.	Watts	Lumen Rating	Rated Hours	Price
PLL80W841	B, pages 9, 13	80	6,000	10,000	45.75
DLL55W/841/4P	C, page 13	55	4,800	10,000	29.75
F30T8CW	A, page 9	30	2,200	10,000	25.95
FT36DL/841	D, page 9, 13	36	2,900	12,000	38.95
PL-C-26W-4	F, page 9	26	1,500	10,000	25.95
PL-13/41CW	G, page 9	13	900	10,000	25.95

All replacement ballasts are \$52.95 each.



HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

MACHINE TOOL & PRESS LIGHTING

FLUORESCENT



Ideal for portable light-duty applications





APPLICATION

Ideal for dry or damp locations where light portability is of high importance such as machine or automobile servicing.





SUPERIOR FEATURES

- Durable 1-3/4" diameter, shatterproof polycarbonate casing.
- 4100 Kelvin (pure white light) bulbs found locally.
- · PVC (poly vinyl chloride) end caps provide a water tight seal.
- Temperature tolerance is approximately 5° Fahrenheit to 140° Fahrenheit.

- These fixtures draw 0.2 to 0.6 amps.
- External in-line ballasts are encased in a ballast box for easy serviceability and cord adjustment.
- The Sawfish[™] and The Barracuda[™] are built with SJTOW-A oil resistant 16 gauge copper, 3 conductor cable.
- The 120 Volt fixtures have a 3 prong grounded plug.
- · We offer a variety of mounting brackets, see page 7. We do recommend two brackets per lighting fixture.



All prices are U.S. Dollars. Prices are subject to change.

Part Number	Voltage	On / Off Switch	Cord Length	Watts	Length	Lumens	Rating Hours	Technical Drawings	Price
FLP-1113-6 Sawfish™	120	Yes	6 ft.	13	11"	900	10,000	G, page 21	224.50
FLP-1113-25 Sawfish™	120	Yes	25 ft.	13	11"	900	10,000	G, page 21	224.50
FLP-2215-6 Barracuda™	120	Yes	6 ft.	15	22"	870	7,500	F, page 20	231.00
FLP-2215-25 Barracuda™	120	Yes	25 ft.	15	22"	870	7,500	F, page 20	231.00
FLP-1113-25/24VDC	24	No	25 ft.	13	14"	900	10,000	S, page 23	250.75
FLP-2215-25/24VDC	24	No	25 ft.	15	26"	870	7,500	T, page 23	257.50

Replacement Bulb Part Number	Watts	Equivalents to Incan- descent	Fixture length	Lumens	Rating Hours	Price
PL-13/41CW	13	100 watts	11" & 14"	900	10,000	25.95
F15T8CW	15	75 watts	22" & 26"	870	7,500	22.95

FOR HEAVY COOLANT AND WET APPLICATIONS, USE MILLENNIUM SERIES ON PAGE 9.



HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

MOUNTING BRACKETS

FLUORESCENT



FLP-1 Nylon Grip With Screw Hole (\$11.75 each)



FLP-2 90# Magnet with Nylon Grip (\$17.95 each)



FLP-3
Machine Bracket with Grip
(\$17.95 each)



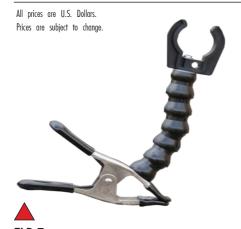
FLP-4 2" Clamp with Grip (2-3/4" Beads) (\$18.75 each)



FLP-5 58# Magnet with 8-3/4" Beads / Grip (\$21.75 each)



FLP-6 Machine Bracket with 8-3/4" Beads / Grip (\$28.75 each)



FLP-7 2" Clamp with 6-3/4" Beads / Grip (\$22.75 each)



FLP-8 90# Magnet with Cord Holder (\$16.95 each)



FLP-1J Super Sized Nylon Grip (\$19.75 each)



HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

90-260V FLUORESCENT

THE GLOBAL SERIES™









B) The Lanternfish (FLP-55W 90V - 260V - S or N) - 55 Watts -



C) The Devilfish (FLP-36W 90V - 260V - S or N) - 36 Watts - 28.5'



D) The Ladyfish (FLP-26W-120V - S or N) - 26 Watts - 15.375"



World Class Versatility

If your company has three of the same machines, each of them in different countries, and all machines require three different voltages. With the Global Series, this is no issue. Equipped with an intelligent electronic ballast located in the light head, these rugged luminaires can take any electrical input from 90 to 260 volts in either 50 or 60 hertz, eliminating the concern for electronic customization. Electrically universal. Providing 120° of illumination.

APPLICATION

These fluorescent luminary powerhouses are ideal for machining environments where high output lighting and varied voltage requirements are necessary. Able to handle any voltage between 90 to 260 in either 50 or 60 hertz included with mounting brackets, these fixtures Plug-N-Light anywhere in the world!

SEE PAGE 12 FOR BRACKETS (FLP-1J Only)

Model	Page Ref.	Lumen Rating	Volts	Length	Technical Drawings	Bulb	Price
FLP-26W-120V	D	1,500	120/240V 50/60hz	15.375"	L, page 21	PL-C-26W-4	198.75
FLP-36W-90/260V	С	2,900	90-260V 50/60-hz	28.5"	M, page 22	FT36DL/841	205.75
FLP-36W-90/260V/Glass	С	2,900	90-260V 50/60hz	28.5"	M, page 22	FT36DL/841	292.70
FLP-55W-90/260V	В	4,800	90-240V 50/60hz	34"	N, page 22	DLL55W/841/4P	220.75
FLP-55W-90/260V/Glass	В	4,800	90-260V 50/60hz	34"	N, page 22	DLL55W/841/4P	307.75
FLP-80W-90/260V	A	6,000	90-260V 50/60hz	34.375"	0, page 22	PLL80W841	304.95
FLP-80W-90/260V/Glass	А	6,000	90-260V 50/60hz	34.375"	0, page 22	PLL80W841	391.95

All prices are U.S. Dollars. Prices are subject to change.



HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

Fax: 1-800-700-6166 (U.S. and Canada)

Visit our website www.halogen-lighting.com

OL' RELIABLE[™] 001 & 002 Series

Certification: IP65
(Waterproof)

CE A

TÜV Rheinland

HLP-002A HLP-001A

HALOGEN

APPLICATION

The Halogen Ol' Reliable[™] Series of fixtures are ideal on machines with a dry to light mist environment, heavy vibration, and high levels of flying metal debris.

The Halogen Ol' Reliable™ Series fixtures are dust proof, coolant and vibration resistant. Their reliability has been field proven for over two decades. These fixtures have been successfully used in heavy-duty press (stamping) operations across North America.

The HLP-001 Series operates with an external 12 or 24 volt transformer or can be wired directly to the 12 or 24 volt outlet in the machine control panel.

The HLP-002 Series should be utilized in applications that require 120 volt power source, and a low volume of coolant.

FOR HEAVY COOLANT APPLICATIONS USE TOUGH GUY™ 2000 SERIES ON PAGE 15.

Part Number	Description	Voltage	Technical Drawings	Price
HLP-002A	5" Head Long Arm	120	U, page 23	347.00
HLP-002B	5" Head Medium Arm	120	V, page 23	347.00
HLP-001A	5" Head Long Arm	24	U, page 23	274.95
HLP-001B	5" Head Medium Arm	24	V, page 23	272.25
HLP-001C-12	5" Head and Base /12 Volt Bulb	12	W, page 23	239.25
HLP-001C-24	5" Head and Base / 24 Volt Bulb	24	W, page 23	239.25
HLP-50-BI-12	50 Watt Bulb 12 Volts Bi-pin	12		17.75
HLP-70-H3-24	70 Watt Bulb 24 Volts H3 style	24		17.75
HLP-75-BI-12	75 Watt Bulb 12 Volts Bi-pin	12		17.75
HLP-100-BI-12	100 Watt Bulb 12 Volts Bi-pin	12		17.75
HLP-75-BI-24	75 Watt Bulb 24 Volts Bi-Pin	24		17.75
HLP-T12/120	Coil Transformer 12 / 120 Volt	12/120		52.95
HLP-T24/120	Coil Transformer 24/120 Volt	24/120		52.95
HLP-ET12/120	Electronic Transformer 12/120 V	12/120		52.95
HLP-ET24/120	Electronic Transformer 24/120 V	24/120		52.95
HLP-22-001	Wall Bracket / Machine Bracket			16.75
HLP-23	'C' Clamp			20.95
HLP-30	Magnet Base Assembly (8" X 8")			74.95
FLP-8	Magnetic cord Holder			16.95
HLP-99-001	Fuse			1.75

All prices are U.S. Dollars. Prices are subject to change.



HLP-002B

HLP-001B

HLP-001C

- 67° of illumination provide accurate positioning
- 5" light head provides intense lighting quality and accurate light disbursement to work area
- Superior chip-resistant tempered glass lenses offer maximum safety to operator
- The large T-bar handle provides easy positioning and operator safety
- Five points of adjustment. Base offers 320° swivel
- Fixtures ship standard with 75 watt/24 volt bulbs
- Made of extruded anodized aluminum and comes standard with 6 feet of SJT oil-resistant cable
- Import





HALOGEN LIGHTING PRODUCTS CORPORATION

Telephone: 1-800-HALOGEN

THE TOUGH GUY™

Certification: IP67 (Waterproof Under Pressure)



HALOGEN

APPLICATION

The Halogen Lighting Products Tough Guy™ series light fixtures are designed and built to perform in the most hostile industrial environment heavy coolant / lubricants, vibrations, flying metal chips, etc. are all in a days work for the Tough Guy series of industrial fixtures.

SUPERIOR FEATURES

- 5" diameter cast anodized aluminum head is formed as a mono block, one piece unit without a leak-prone back plate.
 This provides a rigid, water tight housing against water or coolant intrusion; ensuring maximum reliability in harsh production applications
- Large, easy to grasp positioning knobs are standard. Once positioned, the fixture can withstand the most hostile coolant and vibration conditions without movement. Up to 5 points of adjustment and 320° swiveling allows pinpoint light distribution to the workplace area
- Chip resistant tempered glass lenses provide you with rugged maintenance free operation, and easy to clean lenses. No protective guards are needed that can diminish and distort illumination
- 67° of illumination, fully articulated arms, joints and bases are totally waterproof and

- ergonomically designed for ease of use in positioning fixture for optimum operator safety
- · HLP-2000 transformers built into base.
- T-bar handle and easy to grasp knobs provide easy positioning without special tooling or maintenance personnel. Bulbs are long life yet easily replaced by removing 6 screws and the gasketed tempered glass lens. 75 watt, 24 volt halogen bulbs are standard, offering intense white light for the operator.

The Tough Guy™ HLP-1000 series fixtures operate either with an external 24 volt transformer, or they can be wired directly to the 24 volt power source at the machine control panel. For a 12 volt application, simply replace with a 12 volt bulb.

Import

All prices are U.S. Dollars. Prices are subject to change

Part Number	Description	Voltage	Technical Drawings	Price
HLP-2000L	30.75" Long Arm 120 volt	120	H, page 21	325.25
HLP-2000M	17.125" Medium Arm 120 volt	120	I, page 21	311.75
HLP-2000S	Short Arm 120 volt	120	J, page 21	298.75
HLP-1000L	30.75" Long Arm	24	H, page 21	271.25
HLP-1000M	17.125" Medium Arm	24	I, page 21	269.25
HLP-1000S	Short Arm	24	J, page 21	244.75
HLP-75-B1-24	75 Watt Bulbs (photo on page 14)	24		17.75
HLP-50-B1-24	50 Watt Bulbs (photo on page 14)	24		17.75
HLP-70-H3-24	70 Watt Bulb (photo on page 14)	24		17.75
HLP-T24-2000	Replacement Transformer	120/24		52.95
HLP-30	Magnet Base Assembly (8" X 8")			74.95
HLP-22-2000	Wall Mounting Bracket			16.75







HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

Fax: 1-800-700-6166 (U.S. and Canada)

Visit our website www.halogen-lighting.com

OL' RELIABLE™ 003 Series

Certification: IP65
(Waterproof)

CE A

TÜV Rheinland

HLP-003A

HLP-003AT

HALOGEN

APPLICATION

The HLP-003 Series fixtures have a coolant resistant 2.5" diameter head. These fixtures should be used in a dry or light mist environment only. They utilize a highly efficient 120/12 volt transformer built into the lower arm. Fixture can be plugged directly into a 120 volt AC power supply.

FEATURES

- Ships complete with 50 watt halogen bulb.
- The T-bar positioning handle allows for easy positioning of the light to the work area.
- Minimal heat generation to the external casing of the fixture. The T-bar handles allow the operator to adjust the light to the work area safely.
- Comes standard with 6 feet of high quality SJT \oil-resistant cabling and 50 watt bulb.

Import



HLP-003 A, B, C

- · External 12 or 24 Volt Transformer
- The durability and reliability of these fixtures have been field proven for nearly two decades. The fixture head is 2-1/2" in diameter. Coolant resistant, the HLP-003 Series fixture accepts 35 and 50 watt halogen lamps.

HLP-003C HLP-003CT

Import

HLP-003 AT, BT, CT

- (T=Built-in Transformer. 120 Volts)
- · Certification: IP54 (Splashproof)
- Import



HLP-003B

HLP-003BT

Part Number	Description	Watts	Volts	Cord Length	Transformer	Arm Length	Technical Drawings	Price
HLP-003A	12V, 2-1/2" Head	50	12	70"	No	30"	X, page 23	264.25
HLP-003B	12V, 2-1/2" Head	50	12	70"	No	20"	Y, page 24	258.95
HLP-003C	24V, 2-1/2" Head	50	24	70"	No	Head & Base	Z, page 24	189.50
HLP-003AT	120V, 2-1/2" Head	50	120	70", w/ plug	Yes/arm	30"	X, page 23	329.95
HLP-003BT	120V, 2-1/2" Head	50	120	70", w/ plug	Yes/arm	20"	Y, page 24	317.25
HLP-003CT	120V, 2-1/2" Head	50	120	70", w/ plug	Yes/cord	Head & Base	Z, page 24	223.95
HLP-50-B1-12	50 Watt Bulb	50	12					17.75
HLP-50-B1-24	50 Watt Bulb	50	24					17.75
HLP-35-B1-12	35 Watt Bulb	35	12					17.75
HLP-T12/120	Coil Transformer		12/120					52.95
HLP-T24/120	Coil Transformer		24/120					52.95
HLP-ET12/120	Electronic Transformer		12/120					52.95
HLP-ET24/120	Electronic Transformer		24/120					52.95
HLP-22	Angle / Mounting Bracket							16.75
HLP-23	'C' Clamp							20.95
HLP-30	Magnetic Base (8" x 8")							74.95
FLP-8	Magnetic Cord Holder							16.95
HLP-99-001	Fuse							1.75



HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

GOOSENECKS

HALOGEN



HLP-003FT



APPLICATION

The HLP-003FT halogen fixture for a dry and light mist environment.

SUPERIOR FEATURES

- Certification: IP65 (Waterproof)
- 2-1/2" head is made of high quality extruded anodized aluminum that will not rust over time. Only the head is waterproof
- · Chip-resistant tempered glass lens
- 20" gooseneck design allows for easy positioning
- Built-in transformer allows the unit to be plugged directly into a 120 volt power supply
- T-bar positioning handle offers easy positioning for accurate light disbursement
- HLP-003FT comes standard with a 50 watt bulb and magnet
- Import





APPLICATION

Recommended for dry environments.

HLP-004WT

SUPERIOR FEATURES

- Certification: IP20 (Dust proof)
- 2-1/2" head offers 50 watts of halogen white natural light
- Heavy duty plastic shade and base provide maximum operator safety
- · Furnished with 70 inch cord and plug
- Built-In 12 volt transformer gives maximum bulb life while offering the convenience of plugging directly into a 120 volt power source
- · Magnet base included
- Import

All prices are U.S. Dollars.
Prices are subject to change

Part Number	Description	Technical Drawing	Price
HLP-003FT	20" Gooseneck with Magnet 50 Watts 120 Volts	BB, page 24	258.75
HLP-24-001	Magnet Base		25.75
FLP-8	Magnetic Cord Holder		16.95
HLP-35-BI-12	35 Watt Replacement Bulb	Page 19	17.75
HLP-50-BI-12	50 Watt Replacement Bulb	Page 19	17.75
HLP-004WT	20" Gooseneck 50 Watts 120 Volts	CC, page 24	205.50
HLP-24-004	Magnet Base		25.75
HLP-35-BI-12	35 Watt Replacement Bulb	Page 19	17.75
HLP-50-BI-12	50 Watt Replacement Bulb	Page 19	17.75



HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

GOOSENECKS

HALOGEN AND FLUORESCENT





APPLICATION

Recommended for dry environments.

SUPERIOR FEATURES

- Certification: IP54 (Splashproof)
- 35 watts of halogen natural white light ships standard.
- · Offers 36° beam angle
- Transformer built into the watertight base. Fixture can be plugged directly into a 120 volt power source.
- · Neck will not loosen over time.
- Heavy duty plastic head with on/off switch offers maximum safety
- Fixtures available with magnetic base or surface plate
- Magnets, machine bracket and surface plate available.
- · Built-in dimmer switch.
- Meets CA 20 Appliance Efficiency Regulation
- Import

Part Number	Description	Туре	Technical Drawings	Price
FLP-900-20	Long Neck - 20 Beads 13 Watts 120 Volts	Fluorescent	AA, page 24	197.75
HLP-005-20 & HLP-24-005	Long Neck - 20 Beads 35 Watts 120 Volts with magnet	Halogen	K, page 21	203.95
HLP-005-20 & HLP-29-005	Long Neck - 20 Beads 35 Watts 120 Volts with a surface plate	Halogen	K, page 21	209.95
HLP-005-14	Long Neck - 14 Beads 35 Watts 120 Volts	Halogen		172.95
HLP-005-20	Long Neck - 20 Beads 35 Watts 120 Volts	Halogen	K, page 21	178.75
HLP-24-005	Magnet			25.75
HLP-29-005	Surface Plate			31.95
FLP-8	Magnetic Cord Holder			16.95
PL-13/41CW	FLP-900 Replacement Bulb	Fluorescent		25.95
HLP-35-MR16-12	35 Watt 12 Volt Replacement Bulb	Halogen		17.75

All prices are U.S. Dollars. Prices are subject to change.





APPLICATION

The Series 900 design was created to offer exceptional functionality as well as to withstand the dry and light mist machine and industrial environments.

SUPERIOR FEATURES

- Certification: IP65 (Waterproof)
- Exceptionally bright (4100K) natural white light.
- Waterproof. Field proven water-tight base protects the expensive ballast.
- 10-1/2 inch acrylic lens is virtually shatterproof.
- 13 watts 4100K florescent bulb offers pure natural white light over a large surface area.
- 6 feet of SJT oil-resistant cabling with grounded plug.
- Use standard off-the-shelf Phillips or Osram bulb
- Import





Halogen

HI P-005-20

Outstanding as

a QC/Inspection

Light Source!

Telephone: **1-800-HALOGEN**Fax: 1-800-700-6166 (U.S. and Canada)

FLOOD LIGHT Series 700

MADE IN THE U.S.A. CE &

HALOGEN

APPLICATION

Any machine or surface that demands a wide area of intense illumination. The Series 700 eliminates the need on many machines that require two or more halogen fixtures. The Series 700 offers 67 degrees of intense halogen illumination.

SUPERIOR FEATURES

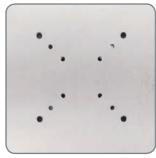
- · Water-resistant halogen fixture offers a flood pattern of 67° of intense halogen illumination
- * 70 watt, 24 volt quartz halogen fixture provides even flood lighting for visibility during machining processes. Bulb is included in each fixture
- · Shock mount base resists shock and vibration
- Dimensions: 8" x 7" x 5-1/2" with four mounting screws on each corner of the base
- NEMA pattern rating is 3'x5'



Part Number	Description	Technical Drawing	Price
HLP-700-24-70	Halogen Floodlight 24 Volt 70 Watt	DD, page 24	282.50
HLP-T24/120	Transformer		52.95
HLP-4213-700-24	24 Volt Floodlight Bulb		75.95

All prices are U.S. Dollars. Prices are subject to change.









The Tough Guy Magnet Base Assembly - 8" x 8"

H3 Style Halogen Bulb

Bi-pin Style Bulb



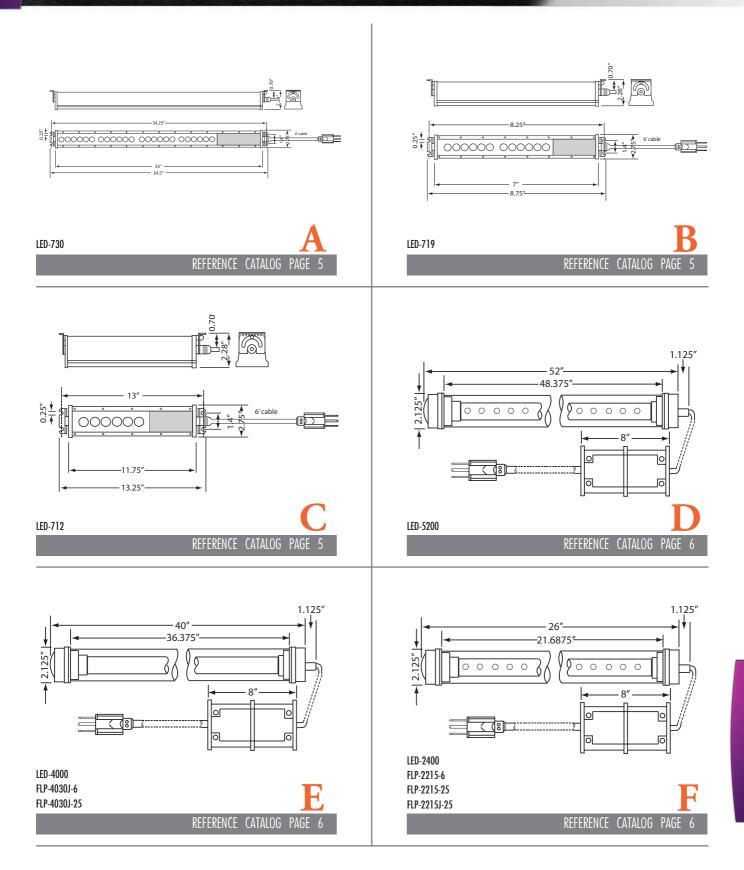
HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

Visit our website Fax: 1-800-700-6166 (U.S. and Canada) www.halogen-lighting.com

DIAGRAMS

SCHEMATICS

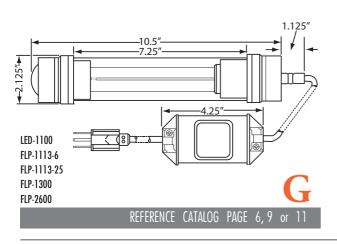


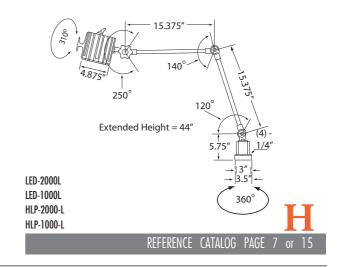


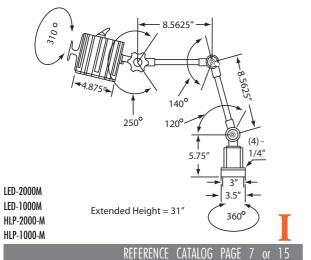
HALOGEN LIGHTING PRODUCTS CORPORATION™

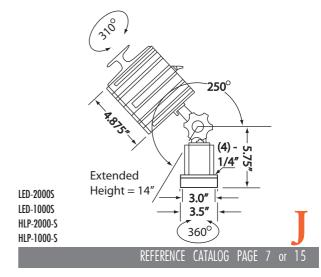
Telephone: **1-800-HALOGEN**Fax: 1-800-700-6166 (U.S. and Canada)

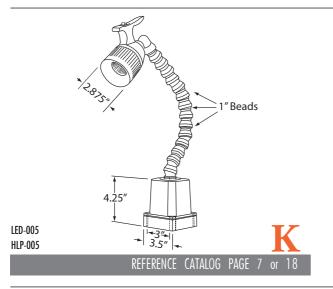
SCHEMATICS

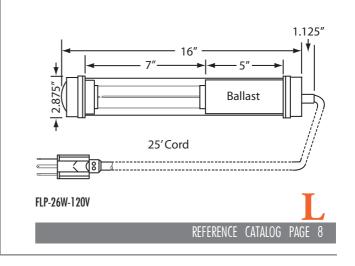














HALOGEN LIGHTING PRODUCTS CORPORATION™

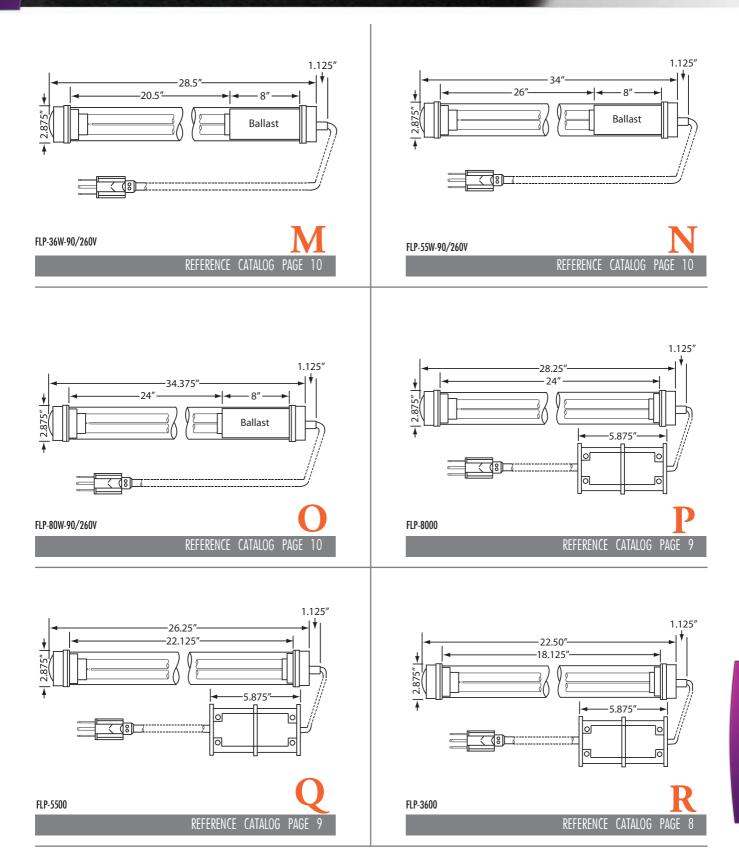
Telephone: 1-800-HALOGEN

Fax: 1-800-700-6166 (U.S. and Canada)

Visit our website www.halogen-lighting.com

DIAGRAMS

SCHEMATICS

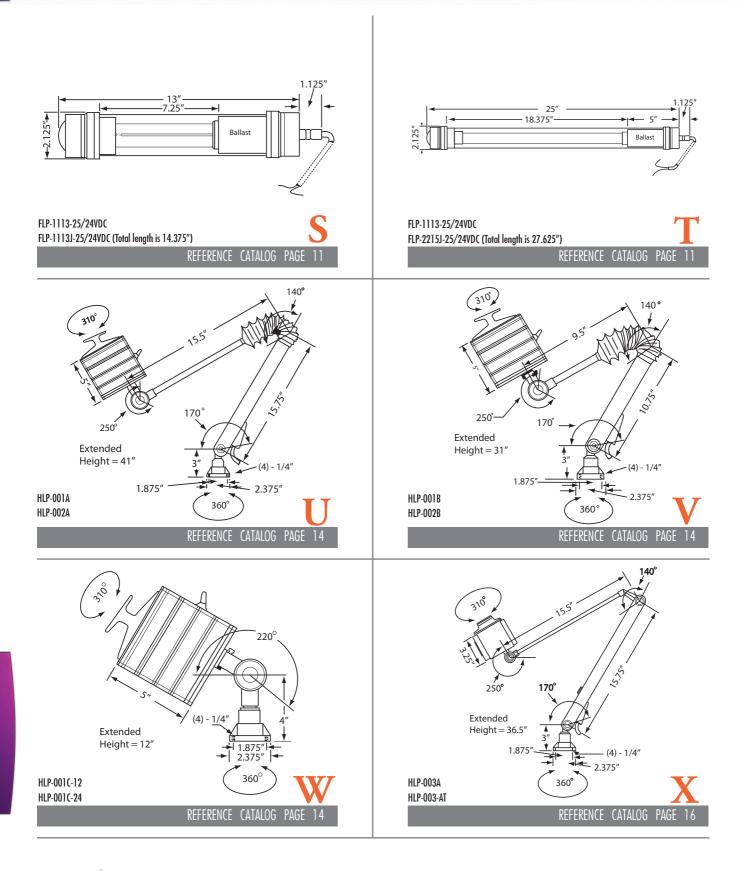




HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: **1-800-HALOGEN**Fax: 1-800-700-6166 (U.S. and Canada)

SCHEMATICS



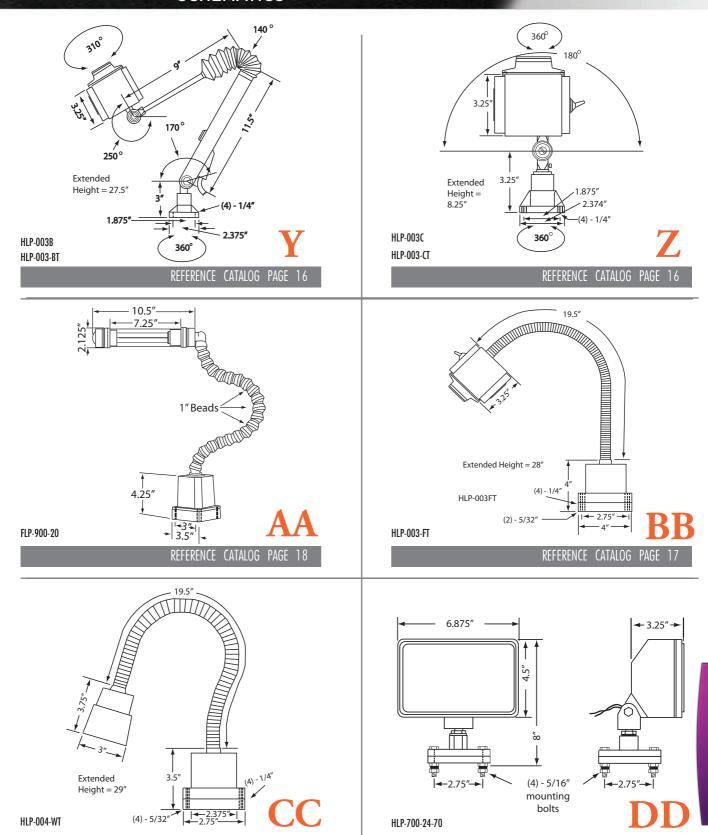


HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

DIAGRAMS

SCHEMATICS





HALOGEN LIGHTING PRODUCTS CORPORATION™

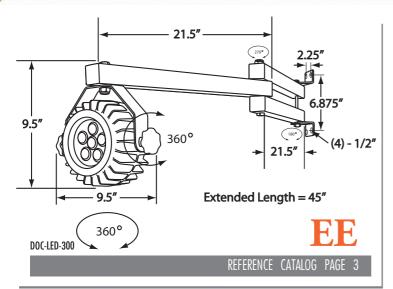
Telephone: **1-800-HALOGEN**Fax: 1-800-700-6166 (U.S. and Canada)

REFERENCE CATALOG PAGE 17

REFERENCE CATALOG PAGE 19

IMPORTANT

SAFETY AND POLICIES



WARNING

IMPORTANT SAFETY INFORMATION

- **1.** Power must be disconnected before performing **any** servicing to your light fixture. This includes but is not limited to: Replacing bulbs, adjusting ballast voltage, replacing ballasts, adjusting or replacing cording, or replacing any other parts of the fixture.
- 2. Never handle a powered fixture, or turn one on with wet hands. Never handle a powered fixture standing in water, or on any damp or wet surface.
- 2. Follow all applicable electrical and safety codes and regulations. All high-voltage lights should be plugged directly into a properly grounded 3-prong outlet. All wiring should be done by a qualified electrician.
- 3. Surfaces of halogen light fixtures will be hot to the touch and can cause burns. Before servicing and/or moving your fixture, be sure it has had time to cool to ensure safe handling.
- 4. Your fixture should only be plugged into a power source that meets its requirements.
- 5. These fixtures are not made for use in flammable/explosive environments as they are hot enough to ignite flammable or explosive vapors.
- 6. Do not operate these fixtures near combustible materials or substances.
- 7. Repair or replace damaged cords immediately.
- 8. All external transformers, ballasts, and plugs are **NOT** waterproof and must be kept away from damp or wet locations.

Servicing and Parts

Halogen Lighting Products provides its customers with full-service. This includes technical support, full repairs and/or refurbishing, fixture customization per customer specifications or requests, sale of all parts, and technical assistance via both telephone (800-621-0001) and online at halogen-lighting.com

Warranty

All fixtures are warranted for one year from the date of purchase and applies only to normal usage. This warranty does not apply to fixtures that have been altered, abused, neglected, or misused, and does not cover any deviation from the specified voltage and current that is specified for each fixture. This warranty is limited to repair, refurbishing, or replacement at the discretion of Halogen Lighting Products Corporation.

Return Policy

Any product may be accepted for return within 90 days of purchase when authorized by Halogen Lighting Products. Call us at 1-800-621-0001 for issuance of a return authorization number. Only new or unused fixtures can be returned for full credit less a 25% restocking fee (at a minimum of \$20) for handling, repacking, restocking, and shipment both ways. Halogen Lighting Products Corporation reserves the right to refuse any return at our discretion. Halogen Lighting Products is not responsible for error. Any custom-made or modified fixtures cannot be returned or refunded for any reason.

Damaged Goods

If an item is received damaged, customer must submit an insurance/damage claim with the carrier (i.e., UPS) and must also supply Halogen Lighting Products Corporation with a copy of the claim before any further action is taken to replace the fixture.

FAILURE TO FOLLOW ANY OF THESE SAFETY INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.



HALOGEN LIGHTING PRODUCTS CORPORATION™

Telephone: 1-800-HALOGEN

Fax: 1-800-700-6166 (U.S. and Canada)

Visit our website www.halogen-lighting.com

REFERENCE

GLOSSARY

Electrical and Photometric Units of Measurement

Ampere (Amp): The measure of the flow of electrical charge going through a circuit at any given time. Amp draw can be calculated by dividing wattage by voltage. (W / V = A)

Candela: The unit of luminous intensity in any given direction from its origin. I.e., one candle emitting light in a horizontal direction equates to one candela. This is the most basic measurement of light.

Lumen: A unit of measuring the total amount of visible light from a source such as a bulb or diode. The lumen is related to the candela by multiplying candelas by the light source's steradian, which is a measure of a direct cone-like or triangular solid angle projecting from the center of a sphere.

Lux: The total amount of visible light over a given area, regardless of direction. One lux is equal to one lumen falling perpendicularly, over a square meter. This can be measured with an instrument known as a luxometer.

Voltage: A measure of an electric charge through a medium, such as a power cord, between an outlet and a lighting fixture.

Watt: The standard unit used to measure power, which is equal to one joule per second. In electricity, wattage is equal to amperes multiplied by voltage. (W = A • V)

Electrical Safety Certifications

CE Mark: Also known as the European Conformity mark. This certification is required for all electronics to be sold in Europe. A product given the CE Mark adheres to all safety and health standards in European legislation.

CSA: The Canadian Standards Association is a safety standard organization that tests, evaluates, certifies, and marks products meeting safety requirements in Canada. They also offer a CSA-US mark to meet safety standards of the United States.

TÜV Rheinland: Independent safety certification provider originated in Germany. TUV is one of the strictest safety certification providers in the world.

UL: (Underwriters Laboratories) An independent safety certification provider originating in the United States. It is the most recognized safety certification provider in the world.

Waterproof Certifications

IP Code: Ingress Protection rating is the standard used to determine a product's protection against intrusion from solids or fluids. Under the format of IPXX, the first number indicates the amount of protection against solids, the second indicates the amount of protection against fluids.

IP20 (Dustproof): Protected against intrusion from objects up to 12.5mm in diameter with no protection against water.

IP54 (Splashproof): Completely watertight. While not entirely dustproof, any dust entering the fixture will not compromise the performance and safety of the product, and is also protected from splashing water from any direction up to 10 litres per minute.

IP65 (Waterproof): Completely protected from dust particles and intrusion of water from spraying jets.

IP67 (Waterproof Under Pressure): Entirely sealed from dust and can be submerged in water up to 1 metre deep.

IP69K (Waterproof Under High Pressure and Temperature): German standard exceeding the normal IP code rated for high temperature and high pressure washdown applications.

NEMA (National Electrical Manufacturers Association): Provides a list of ratings gauging the degree of protection against dust and liquids for electrical enclosures. NEMA and IP ratings can be compared. Some direct examples are: IP20 to NEMA 1, IP54 to NEMA 3, IP65 to NEMA 4 and 4X, and IP67 to NEMA 6.



HALOGEN LIGHTING PRODUCTS CORPORATION

Telephone: **1-800-HALOGEN**Fax: 1-800-700-6166 (U.S. and Canada)



HALOGEN LIGHTING PRODUCTS CORPORATION



1-800-HALOGEN **U.S. and Canada Telephone:** 1-800-700-6166 **U.S. and Canada Fax:** Corporate Website: www.halogen-lighting.com

Email: inquiries@halogen-lighting.com