

# CNC Laser Process Machining

Kaan Engineering is proud to announce the latest addition to its machining capabilities: a state-of-the-art CNC laser cutting system for metal and plastic sheet stock.

The system uses a 1500 watt CO<sub>2</sub> laser under CNC control to cut simple or intricate flat shapes from steel, aluminum, plexiglass and other materials. It provides unparalleled speed, accuracy and economy for prototype and short-run production jobs. Compared to punching operations, hole and edge quality is radically superior and deburring is virtually eliminated! Camber and die impressions in finished parts are things of the past! When cutting out complex patterns, savings of up to 150% can be realized over conventional punch press methods due to drastically reduced setup and machining times.

The laser system accepts up to a 48 inch by 96 inch sheet and is easily programmed from your drawing to maximize yield and minimize scrap. You'll benefit from shorter run times, cleaner part processing and elimination of high tooling costs. The necessity of custom designing punches (for unusual shapes) is now obsolete, further enhancing turn-around times.



- 48 inch by 96 inch cutting area
- Cold-rolled steel to .375 inch thick
- Stainless steel to .105 inch thick
- Aluminum to .125 inch thick
- Plexiglass & nonferrous to .500 inch thick
- Programming from .DWG or .DXF file format
- Submit files via e-mail ([kaan@atlas-mts.com](mailto:kaan@atlas-mts.com))

Please contact us for a quote or additional information on the capabilities of this unique laser cutting system. Or stop by any time to see it in action. We're sure you'll be impressed!



A Division of Atlas Electric Devices Co.  
1800 West Belle Plaine  
Chicago, Illinois 60613  
Phone (773) 248-3005  
Fax (773) 248-9027

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*"What we really want to be is a partner to our customers – not merely a vendor providing a product at commodity prices without really understanding their business problems."*

**Specialists in Machining and Assembly**



**FREE! 1/2" Conduit  
Bender Head & Handle  
with orders over \$500!**

# Buy Factory Direct and Save!

**GARVIN DIRECT SPECIALS**

**Nov. 1st - Dec. 31st  
2006**



GFCI15WH

## 15 AMP GFCI DEVICES

**\$5.75 Ea.**

- ▶ U.L. Listed & Approved
- ▶ Buttons Match Body Color
- ▶ Also Available in 20 Amp Models.

## 3-WIRE BX/MC LIGHT FIXTURE WHIP

**\$4.50 Ea.**

- ▶ 3-Wire with 2 Connectors
- ▶ Also available in 2 & 4 Wire,  
Plenum Version & Custom Lengths



WHP-3



MOLB-150

## 1-1/2" MOGUL CONDUIT BODY

**\$29.95 Ea.**

- ▶ Pre-Assembled with Cover & Gasket
- ▶ U.L. Listed & Approved
- ▶ Up to 4" Sizes Available

## 3-WAY DECORATIVE SWITCH

**\$1.09 Ea.**

- ▶ 15 Amp, White (also available in Ivory)
- ▶ U.L. Listed & Approved
- ▶ Also available: Single Pole, 4-Way &  
Illuminated



DS315W



CFS32105551

## SUPER-HIGH OUTPUT COMPACT FLUORESCENT

**\$1.50 Ea.**

- ▶ 500W of light at 105W of power usage!
- ▶ 6,720 Lumens, 5500K (other K available)
- ▶ Supply: 120V, Base: E26MED
- ▶ Also available: 13W to 200W CFLs

## Easy Ordering Options to Fit Your Schedule!

**Call Toll-Free  
877-353-2347**



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**GARVIN DIRECT SPECIALS**  
 Nov. 1st - Dec. 31st  
 2006

**CALL NOW!**  
 Volume Discounts Available!

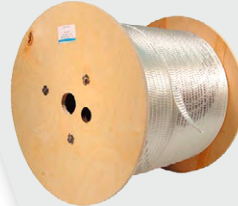


PL-230

## PULLING LINE

**\$19.99 Ea.**

- ▶ 6500 Feet Per Pail
- ▶ 230 Lb Tensile Strength
- ▶ Let Us Print *YOUR* LOGO on these Pull-Line Pails



PT18003K

## PULLING TAPE (5/8"W / 3,000 Ft.)

**\$175.99 Ea.**

- ▶ 1800 LBS Tensile Strength
- ▶ Pre-Lubed with Foot Markings.
- ▶ Also Available in 1/2" & 3/4" Widths

## 5/8" DRIVE RINGS

**\$0.07 Ea.**

- ▶ Galvanized Steel Construction
- ▶ 5/8" Loop with Nail Insert
- ▶ Also available: 1/2", 7/8" & 1-1/4"



DRV-5/8

## 1/2" INSULATING BUSHINGS

**\$0.03 Ea.**

- ▶ Press Fit Holds During Cable Pulls
- ▶ Meets NEC 2002 Requirements
- ▶ Up to 4" Sizes Available



IB-50



SP-3MS

## METAL STUD SAFETY PLATE

**\$0.15 Ea.**

- ▶ Now for Metal Studs
- ▶ Peel & Stick No Tools Needed
- ▶ 3" Long by 1.5" Wide

**Call For  
Volume  
Discounts**



CMT-3000

## CONDUIT MEASURING TAPE (3,000 Ft.)

**\$35.49 Ea.**

- ▶ Sequential Foot Markings
- ▶ 180 LB Tensile Strength

## WIRE PROTECTOR PAN

**\$0.79 Ea.**

- ▶ Snaps In to Protect Wires During Drywall Work!
- ▶ Fits All Brands of Plaster Rings



WPP1

## QUICK SHOT BRIDLE RINGS (2")

**\$0.75 Ea.**

- ▶ One Shot Installation
- ▶ Works with ANY Powder Actuated Gun
- ▶ Also Available in 1-1/2" & 4"



BR-200-SSC

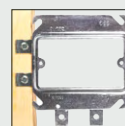


JFC-3816

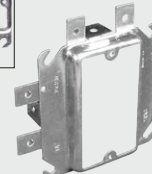
## JUNIOR FITTERS TOP BEAM CLAMP

**\$X.XX / Ea.**

- ▶ 3/8-16 Clamp with Jam Nut
- ▶ Made of Ductile Iron
- ▶ Other Sizes: 1/2-13, 5/8-11, 3/4-10



**A Perfect  
90° Everytime!**



SLR-1

## 4" SELF-LEVELING DEVICE RING

**\$0.59 Ea.**

- ▶ For Low Voltage Device Installs
- ▶ Vertical or Horizontal Mount
- ▶ Available in 1-Gang or 2-Gang



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3700 Sandra St.,  
Franklin Park, IL 60131  
Corporate: 847-455-0188

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hardware  
SUPER STORE!**

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DM1106



**2" BRIDLE RING**

**\$0.59 Ea.**

- ▶ 1/4-20 Threaded
- ▶ Zinc Plated
- ▶ Don't be caddie & overpay!  
Make a beeline for Garvin Direct

BR-200



**Stop overpaying for electrical products!**



**Buy Direct from the manufacturer!**



**WEATHERPROOF BOX**

**2" Deep (3) 1/2" Holes**

**\$1.69 Ea.**

- ▶ Rugged Cast Aluminum
- ▶ Gray Powder Coated
- ▶ Also Available in 4 & 5 Hole  
3/4" & 1" threaded Holes

WP-2503

**Look Inside!**

**Value-Engineered Savings Specials**

**Welcome to GARVIN DIRECT!**

- ▶ Garvin is a **UL-listed** manufacturer
- ▶ Over **116 years** of experience
- ▶ Manufacturer of the **Top Industry Brands**  
that you *already* use and trust!

**3-1/2" DEEP PAN DECK BOX**



52181-DEK

**Only  
\$5.95  
Each!**

- ▶ Fits into Corrugated Deck Pan Ceilings
- ▶ 34% More Wiring Space
- ▶ 1/2" & 3/4" Knockouts
- ▶ HUGE LABOR & MATERIAL SAVER

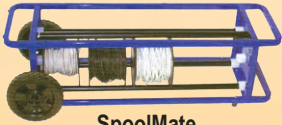
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**192-page Factory-Direct catalog.**





# Buy Direct and **\$ave!**

Prices valid July 1 – 31, 2007



**SpoolMate**

**\$55.99**

See Pg. 24



**3-1/2" Deep Boxes**

**\$5.99**

See Pg. 24



**EMT Connectors**

**\$0.21**

See Pg. 24



**Weatherproof Boxes**

**\$6.50**

See Pg. 24



**Decorative Receptacles**

**\$0.85**

See Pg. 24



**Lamp Holders**

**\$1.99**

See Pg. 24

Tired of getting  
ed  
on material costs?

*Buy direct and*  
**BANK**  
**THE SAVINGS!**



**Conduit Benders**

**\$12.04**

See Pg. 24



**Service Entrance Caps**

**\$1.85**

See Pg. 24



**GFCI 2003**

**\$3.49**

See Pg. 24



**Toggle Switches**

**\$0.39**

See Pg. 24



**Conduit Bodies**

**\$3.49**

See Pg. 24



**Duplex Receptacles**

**\$0.69**

See Pg. 24



**65W Fluorescent**

**\$19.99**

See Pg. 24



**Ground Clamps**

**\$1.10**

See Pg. 24

**Call Now: 1-877-353-2347**

# GARVINDIRECT.COM



## NORTH AMERICAN ENERGY GROUP

*illuminating results.*

### Lighting & Energy-Saving Products



Compact Fluorescent Lamps



LED Traffic Signal Lamps



T5 Troffers



DJ & Stage Lasers



Halogen Lamps



LED Display Signs



Hand Dryers

North American Energy Group has focused on meeting the demand for energy-efficient products in the lighting industry in compliance with the objectives of the U.S. Green Building Council and its LEED Rating System. Our product line includes Compact Fluorescent Light bulbs (CFLs), Halogen lamps, wind power turbines, troffers, EXIT signs, LED advertising boards, LED traffic-signal lights, laser systems for DJ stage lighting and electric hand dryers.

Allied Partner In:



## Compact fluorescent light bulbs (CFLs) are the energy-saving wave of the future.

### What makes these new bulbs a better lighting alternative?

#### ★ Very Low Energy Consumption

Only 18% of that consumed by incandescent bulbs. You **save 82%** on your electric bill while conserving energy! **Get paid to be green!**

#### ★ Very Long Operating Life

Typical CFL life is a whopping **10,000 hours!** Incandescents typically last only 1000 hours. So you would **replace only 1 CFL instead of 10 incandescent bulbs!** At 6 hours of use per day for a 100W-equivalent bulb, and 8¢/kWh, that's a **\$64 savings! And the CFL lasts 4½ years!**

#### ★ Full-Spectrum Color Rendering

The CRI (or Color Rendering Index) for CFLs is 82-86 on average, typically better than those for other CFLs on the market. Their balanced red-green-blue output is easier on the eyes and won't cause undesirable tints in photos and home videos.

#### ★ Safe, Low-Temperature Operation

Compact fluorescent lamps operate well below 100°F. This puts significantly less load on your air conditioning system while also ensuring safe conditions for children, pets and fire prevention. Incandescent bulbs can burn your hands while halogen bulbs, typically operating near 1000°F, can start fires!

### *Imagine this scenario:*

If just one incandescent bulb in every American home was replaced with a CFL, we would save enough energy to light more than 2.5 million homes for a year and prevent greenhouse gas emissions equivalent to that of nearly 800,000 cars!

### Outstanding Features

VOC-FREE components per LEED Standard  
Reliable operation down to -25°C (-13°F)  
Phosphor: HI-VISION  
RGB colors balanced  
Electronically switchable (by photocells, etc.)  
High Output up to 300W (1,500W incandescent equiv.)

### CFL Specifications

**Lumens Per Watt:** 76.5 Average  
**Color Rendering Index:** 86 Average  
**Color Temperatures:** 2700K, 3200K, 4100K, 5500K, 6500K  
**Life span:** 10,000 hrs  
**Power Factor:** > 0.65  
**Total Harmonic Distortion:** <9.8  
**Operation:** Flicker-free, silent  
**Start-up:** Instant (within 1/12 of a second)  
**Initial Illumination:** 95% at start-up  
**Time to 100% of initial lumens:** 2.78 seconds  
**Operating Frequency:** less than FCC, CFR, Pt. 18 limits.  
**Ballasts:** Electronic



# COMPACT FLUORESCENT LIGHTS & FIXTURES



## SUPER-HIGH-OUTPUT 200W & 300W COMPACT FLUORESCENT LIGHT BULBS

- ▶ **100V to 300V Universal Voltage**
- ▶ **Up to 300W (1,500W incandescent equiv.)**
- ▶ **82% Energy Savings over incandescents**
- ▶ **Silent, Flicker-Free operation**
- ▶ **10,000 Hour Rated Life Span**
- ▶ **Electronic Ballast - Instant Start**
- ▶ **Suitable for Indoor & Outdoor use**
- ▶ **High CRI: 82**
- ▶ **Reliable Operation down to -13°F (-25°C)**
- ▶ **Works with electronic switches**
- ▶ **Mogul Socket Base**
- ▶ **Earn LEED Credits**



**CF12Q66 300W (Mogul)**  
12 Plug-in Lamps (26W Ea.)

**Each Plug-in lamp  
is independently replaceable!**

TYPE DSGN.	WATTS	EQUIV. INCAN. OUTPUT (W)	OPERATING VOLTAGE	STYLE	LUMENS	COLOR TEMP.	BASE TYPE	OVERALL LENGTH
CF12Q66	200W	1,000	110-277	12Q	14,400	5500K	MOGUL	12-3/4"
CF12Q66	300W	1,500	110-277	12Q	21,600	5500K	MOGUL	13-1/2"

## COMPACT FLUORESCENT LIGHT BULBS (2-PIN BASE)

(Plug-in Replacements for CF12Q66 models above)

**ALTO®-Equivalent Low-Mercury**  
**10,000 Hour Rated Life Span**

Use 18W for CF12Q66-200W

Use 26W for CF12Q66-300W



TYPE DSGN.	WATTS	EQUIV. INCAN. OUTPUT (W)	STYLE	LUMENS	COLOR TEMP.	BASE TYPE	LENGTH
CF2UPLC	18W	90	2U	1,200	5500K	G24D-2	5-1/2"
CF2UPLC	26W	130	2U	1,800	5500K	G24D-3	6-1/4"

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# COMPACT FLUORESCENT LIGHTS & FIXTURES



## SUPER-HIGH-OUTPUT 105W COMPACT FLUORESCENT LIGHT BULBS

- ▶ **105W (500W incandescent equivalent)**
- ▶ **82% Energy Savings over incandescents**
- ▶ **Silent, Flicker-Free operation**
- ▶ **10,000 Hour Rated Life Span**
- ▶ **Electronic Ballast - Rapid Start**
- ▶ **Suitable for Indoor & Outdoor use**
- ▶ **High CRI: 86, RGB Balanced**
- ▶ **Reliable Operation down to -13°F (-25°C)**
- ▶ **Works with electronic switches**
- ▶ **Earn LEED Credits**



**105 Watts**  
(500W incandescent equivalent!)

TYPE DSGN.	EQUIV. INCAN.			STYLE	LUMENS	COLOR TEMP.	BASE TYPE	LENGTH
	WATTS	OUTPUT (W)	VOLTS					
CFS32	105W	500	120	SPIRAL	6,720	3200K	E26 MED.	10-5/8"
CFS32	105W	500	120	SPIRAL	6,720	5500K	E26 MED.	10-5/8"
CFS32	105W	500	120	SPIRAL	6,720	6500K	E26 MED.	10-5/8"
CFS32	105W	500	277	SPIRAL	6,720	6500K	MOGUL	10-5/8"

## HIGH-OUTPUT COMPACT FLUORESCENT LIGHT BULBS

*All the great features listed above plus a variety of wattages and color temperatures!*

TYPE DSGN.	EQUIV. INCAN.			STYLE	LUMENS	COLOR TEMP.	BASE TYPE	LENGTH
	WATTS	WATTS	VOLTS					
CFS24	45W	200	120	SPIRAL	2,880	3200K	E26 MED.	6-3/4"
CFS24	45W	200	120	SPIRAL	2,880	5500K	E26 MED.	6-3/4"
CFS24	55W	250	120	SPIRAL	3,520	3200K	E26 MED.	6-3/4"
CFS24	55W	250	120	SPIRAL	3,520	5500K	E26 MED.	6-3/4"
CFS30	65W	300	120	SPIRAL	4,160	3200K	E26 MED.	7"
CFS30	65W	300	120	SPIRAL	4,160	5500K	E26 MED.	7"
CFS30	85W	400	120	SPIRAL	5,500	3200K	E26 MED.	8-1/2"
CFS30	85W	400	120	SPIRAL	5,500	5500K	E26 MED.	8-1/2"
CFS30	85W	400	120	SPIRAL	5,500	6500K	E26 MED.	8-1/2"



### Lighting Glossary

<b>Color Rendering Index (CRI):</b>	expresses the effect of a light source on the color appearance of objects. Values for common light source vary from about 20 to 99. The higher the number, the more realistic and true to life the objects appear.
<b>Color Temperature:</b>	indicates the color appearance of light in Kelvin degrees from 2700°K perceived as Warm, through 4100°K(White), up to 500°K (Day Light).
<b>Lumen:</b>	is the quantity of light emitted by a source. For example, a dinner candle provides about 12 lumens. A 60-watt Soft White incandescent bulb provides about 840 lumens.
<b>Efficacy:</b>	measures the total of lumens emitted by a light source divided by the total lamp power input, expressed as lumens per watt. Average efficacy for CFLs is 50-83 lm/Watt.

# COMPACT FLUORESCENT LIGHTS & FIXTURES



## SPIRAL COMPACT FLUORESCENT BULBS

*The same illumination as incandescents at 82% lower energy use!*

*Lasts 10 times longer! Energy Star approved!*

*The perfect replacement for hotel table lamps!*



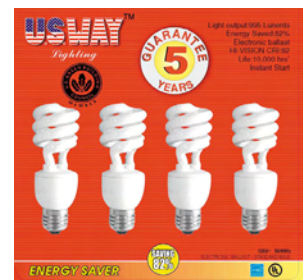
TYPE DSGN..	EQUIV. INCAN.			STYLE	LUMENS	COLOR TEMP.	BASE TYPE	LENGTH
	WATTS	OUTPUT (W)	VOLTS					
CFS20	27W	130	120	SPIRAL	1,700	2700K	E26 MED.	6"

## MINI COMPACT FLUORESCENT BULBS – CONVENIENT 4-PACK

*82% Energy Savings with these warm-white bulbs!*

*10,000 Hr. Life. Energy Star approved! CRI: 82!*

*Universal application throughout the house or office.*



TYPE DSGN.	WATTS	EQUIV. INCAN.		STYLE	LUMENS	COLOR TEMP.	BASE TYPE	LENGTH
		WATTS	(W)					
CFS17	20W	90	120	SPIRAL	1,290	2700K	E26 MED.	5-1/4"

## COMPACT FLUORESCENT REFLECTOR SPOTLIGHT – 15 WATTS

*Replaces 75W PAR spotlight and provides 82% energy savings!*

*A great alternative for recessed lights in apartments & hotels!*

TYPE DSGN.	WATTS	INCAN.		COLOR TEMP.	CRI	LIFE (HRS.)	LUMENS
		WATTS	(W)				
CFR28F	15	75	120	2700K	82	10,000	1150



## PLUG-IN COMPACT FLUORESCENT LIGHT BULBS (4-PIN BASE)

*Higher lumen output than competitor's bulbs and at lower cost!*

*Energy Star approved! Shorter than its German DULUX equivalent.*

TYPE DSGN.	EQUIV.			STYLE	LUMENS	COLOR	BASE	LENGTH
	WATTS	INCAN. (W)	VOLTS			TEMP.	TYPE	
CF3UPLC	13W	65	120	3U	825	2700K	GX24Q-1	3.8"
CF3UPLC	18W	90	120	3U	1250	2700k	GX24Q-2	4.3



# COMPACT FLUORESCENT LIGHTS & FIXTURES



## LOW & HIGH-BAY REFLECTORS FOR SUPER-HIGH OUTPUT BULBS

- ▶ *Brushed or Polished Aluminum*
- ▶ *Use with our Deck Pan ceiling boxes*
- ▶ *Mogul base socket (CS-3202)*

KIT PART NO.	BAY CEILING HEIGHT	HOUSING HEIGHT
CAR-108	LOW/MED	14"
CS-3202	HIGH	17-23/32"
MOG-SOCK (MOGUL SOCKET FOR CS-3202)		



Pan Deck Box Mounting with Hands-Free Hanger



CS-3202



CAR-108

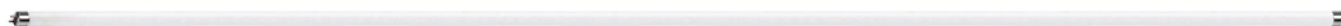
## COLLOIDAL REFLECTOR BULBS

*Ideal for recessed cans and ramp lights!  
20% more light than from standard CF reflectors!*

TYPE DSGN.	WATTS	EQUIV. INCAN. (W)	VOLTS	LUMENS	COLOR TEMP.	BASE TYPE	DIA.
CFC38	23W	135	120	1600	5500K	E26 MED.	4-3/4"



## T5 FLUORESCENT TUBES

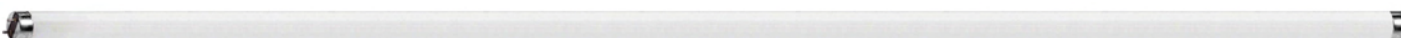


- ▶ *Instant Start (0-122°F)*
- ▶ *20,000 Hr. Life*
- ▶ *Triphosphor 2nd Coating*
- ▶ *Excellent Color Rendering*
- ▶ *Double Coat 95% High Lumen Maintenance*

PART NO.	WATTS	VOLTS	LUMENS	CRI	COLOR TEMP.	BASE	LENGTH
F54T5/835	54W	120	4700	86	3500K	G5	45-3/4"
F54T5/841	54W	120	4900	86	4100K	G5	45-3/4"
F54T5/850	54W	120	5100	86	5000K	G5	45-3/4"



## T8 FLUORESCENT TUBES



- ▶ *ALTO®-Equivalent Low-Mercury*
- ▶ *3500K & 4100K Available*
- ▶ *Instant Start*
- ▶ *Excellent Color Rendering (TL841)*
- ▶ *20,000 Hr. Life*

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PART NO.	WATTS	VOLTS	LUMENS	CRI	COLOR TEMP.	BASE	LENGTH
F32T8/TL735	32W	120	2730	78	3500K	Med. Bipin	48"
F32T8/TL741	32W	120	2710	78	4100K	Med. Bipin	48"
F32T8/TL841	32W	120	2800	86	4100K	Med. Bipin	48"

**\$6.25 Ea.**





# COMPACT FLUORESCENT LIGHTS & FIXTURES

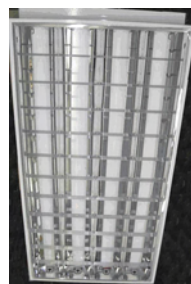


## T5 HIGH-POWER SPECULAR TROFFERS ( 6 X 54W, 3 X 54W & 4 X 54W )

**UNIVERSAL VOLTAGE 100V-300V**  
**UNIVERSAL MOUNT (chain, surface, and recess)**  
**SAVE 60% COMPARED TO T12**  
**5000 LUMENS EACH TUBE!**  
**LIGHTWEIGHT DESIGN**  
**CRI: 86 PF > 1**  
**INSTANT START**  
**EFFICACY: 119-137 lm/Watt**  
**HIGH-BAY APPLICATIONS TO 45 FT.**  
**PLUG-IN OCCUPANCY SENSOR**  
**OPTIONAL: MAGNETIC LENS COVER**



**60% ENERGY SAVINGS!**



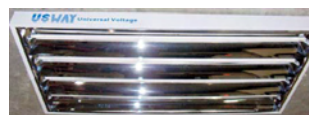
XH4  
Stainless Steel



XH3 Reflective  
Aluminum



XH4 Décor  
Matte Aluminum



**Discard your HID "heaters"**  
**and start \$aving!**

PART NO.	ENERGY USED	NO. OF TUBES	LUMENS	PKG.QTY
YW354T5	109 W	3	15,000	6/CTN.
YW454T5	146 W	4	20,000	6/CTN.
YW654T5	200W	6	30,000	6/CTN.
XH349T5	147 W	3	15,000	6/CTN.
XH354T5	162 W	3	15,000	6/CTN.
XH380T5	240 W	3	20,000	6/CTN.
XH449T5	147 W	4	20,000	6/CTN.
XH454T5	162 W	4	20,000	6/CTN.
XH480T5	240 W	4	26,000	6/CTN.

Self-ballasted Multi-Quad CF Clusters and High-Power T5 Fluorescent Troffers emit up to 21,600 lumens at only 40% of kilo-Watts you are utilizing now. Both those High Bay lamps work with electronic switches at lukewarm temperature, no autotransformer and at Universal Voltage input from 100V up to 277V. Color Temperature of your choice.

In addition, our T5 Fluorescent Troffers have been conveniently designed for Universal Mount (chain, surface, and recess), they are flat on surface - no bump to hold ballasts, and they are ready for the Occupancy Sensor to be plugged in. Mirror aluminum reflectors add to their splendor. Available with 3, 4, and 6 T5 tubes in 2 x 4 ft. fixture that fits into a standard drop ceiling grid. Affordable price of the fixture also includes the tubes!



# ELECTRIC HAND DRYERS



## SUPER JET HAND DRYERS

- **MAINTENANCE FREE!**
- **SAVES 90% OVER PAPER TOWELS!**
- **WIND VELOCITY: 51 FT./SEC. - 35 MPH!**
- **AIRFLOW VOLUME: 275 CU. FT./MIN!**
- **HANDS DRY IN 7 SECONDS!**
- **MOISTURE-RESISTANT & VANDAL-PROOF**
- **PAINTED, CAST-ALUMINUM HOUSING**
- **HAND SENSOR\* ACTIVE FROM 2" TO 12"**
- **ADJUSTABLE "ON" TIMER: 30-60 SEC.**
- **AUTO POWER OFF AFTER 2 MIN.**
- **WALL MOUNT (4 BOLTS INCLUDED)**

(\*Automatic model only)



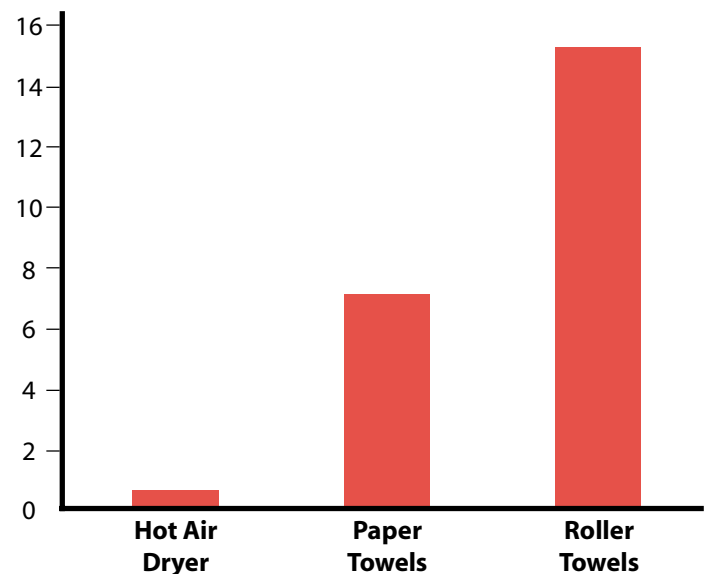
HDAUT  
(Automatic Start)



HDMAN  
(Pushbutton Start)

**Quit throwing away dollars  
in paper towels!!**

**Relative Cost Comparison  
for 100 Hand Drying**



PART NO.	DESCRIPTION	STD. PKG.
HDAUT	HAND DRYER - AUTO	1
HDMAN	HAND DRYER - MANUAL	1

## HIGH-SPEED HAND DRYER

### Description: HK-JA

New Generation  
High-Speed Hand Dryer

### Safety Components:

Motor assembly designed with 105°C thermostat and over current fuse.

Heater assembly designed with 87°C thermostat and thermal cut-off.

2 vandal-proof lock screws and key wrench.

Power cuts off automatically in case of irregular use over 40 seconds.

### Dual Jet Airflow Outlet:

Dual jet airflow drying with airspeed rate of 115 m/s achieves high-speed drying in about 10 seconds.

### Specifications:

Automatic operation

Dual-jet airflow

Power supply : 110/230Vac 50/60Hz

Power consumption : 1100W (motor-380-800W, heater-100-300W)

Rated current : 5.2A

Air speed (adjustable) : 75-115 m/s

Designed heater switch : Heater can choose between switch-on and switch-off

Drying time : 10-15 s

Sound level : 65-75 dB

227(W) x 274(H) x 177(D)

Weight : 3.8 kgs unpacked



**HK-JA**

### Casing Options:

HK-JA 01-Stainless steel; #4 satin finished. (AISI 304 t: 1.5mm)

HK-JA 02-Stainless steel; bright finished. (AISI 304 t: 1.5mm)

HK-JA 03-Stainless steel; vibration finished. (AISI 304 t:1.5 mm)

HK-JA 04-Steel cover; bright chromed. (t: 1.5mm)

HK-JA 05-Stainless steel; Printable. (AISI 304 t:1.5mm)

## HEAVY-DUTY HAND DRYER

### Description: HK-QA

Heavy duty Hand Dryer

Superior waterproof

### Specifications:

PARAMETER	PERFORMANCE DATA
Operating Voltage	230-240 Vac, 50/60Hz, 2.0-2.2 kW(110-120Vac, 1.8-2.2kW)
Warm Air Volume Output	458.5m <sup>3</sup> /h(269CFM)
Warm Air Temp Output	60°C at ambient T = 20C
Motor Type	1/4HP, 4.2krpm, Brush Type, Dual Ball Bearings
Motor Thermal Protection	Auto Resetting Thermostat turns unit off at 105°C, (221F)
Heater Element	2000W @ 240 Vac 2000W @ 120Vac
Heater Thermal Protection	Auto Resetting Thermostat turns unit off at 87°C, (189°F) Thermal fuse shuts unit off at 141°C, (286°F)
Drying Time	Less than 15 seconds
Circuit Operation	Infrared, Automatic, self-adjusting
Sensor Range	Adjustable; standard 18cm – 2cm
Timing Protection	2 minutes auto shut off
Timing Duration	2 seconds delayed turn off after last sensor read
Cover Type	Stainless steel, 1.5mm thick
Cover Finish	Satin finished / Bright finished / Chromed
Net Weight	6.0kg (13.2 lbs)
Shipping Weight	6.4kg (14.0 lbs)
Unit Size	W x H x D (314mm x 217mm x 179mm)



**HK-QA**

### Front Plate:

Stainless Steel #304 t:1.5mm (satin finished/bright finished)

### Front Plate Finish Options:

HK-QA 01-Stainless steel; #4 satin finished. (AISI 304 t:1.5mm)  
 HK-QA 02-Stainless steel; bright finished. (AISI 304 t:1.5mm)  
 HK-QA 03-Stainless steel; vibration finished. (AISI 304 t:1.5mm)  
 HK-QA 04-Steel cover; bright chromed. (t:1.5mm)  
 HK-QA 05-Stainless steel; Printable. (AISI 304 t:1.5mm)

### Dual Plate:

High grade ABS, (colorable)

## HAND DRYER w/ DIGITAL DISPLAY

### Description: HK-2200SA(DP)

HAND DRYER with DIGITAL DISPLAY

LCD Monitor: 7" TFT-LCD panel

### Support memory card:

Compact flash type I/II , Microdrive, MMC, SD,  
Smart Media , MS, MS-Pro

### Support file format :

MP3, WMA, JPG, M-JPG, MPEG-1, MPEGII.  
MPEG4(.asf , simple profile)



**HK-2200SA(DP)**

### Specifications:

PARAMETER	PERFORMANCE DATA
Operating Voltage	230-240 Vac, 50/60Hz, 2.0-2.2 kW (110-120Vac, 1.8-2.2kW)
Warm Air Volume Output	314.5m <sup>3</sup> /h (185°CFM)
Warm Air Temp Output	60C at ambient T = 20C
Motor Type	1/4HP, 4.2krpm, Brush Type, Dual Ball Bearings
Motor Thermal Protection	Auto Resetting Thermostat turns unit off at 105°C, (221°F)
Heater Element	2000W@240 Vac/2000W@120Vac
Heater Thermal Protection	Auto Resetting Thermostat turns unit off at 87°C, (189°F)  Thermal fuse shuts unit off at 141°C, (286°F)
Drying Time	Less than 15 seconds
Circuit Operation	Infrared Automatic, self adjusting
Sensor Range	Adjustable; standard 18cm – 2cm
Timing Protection	2 minutes auto shut off
Timing Duration	2 seconds delayed turn off after last sensor read
Cover Type	Stainless steel, 1.5mm thick
Cover Finish	Satin finished / Bright finished / Chromed
Net Weight	7.0kg (15.4 lbs)
Shipping Weight	8.0kg (17.6 lbs)
Unit Size	W x H x D (278mm x 418mm x 133.5mm)



# ELECTRIC HAND DRYERS

## AUTOMATIC SOAP DISPENSER

### Description: HK-RSD

Auto Soap Dispenser  
Automatic operation.

### Features:

Operation: One drop of soap is dispensed without touch.  
One drop: 1~1.5 CC.

Green light means standby for dispensing.  
Red light means battery low.

Power on automatically after casing closed.  
Power off automatically after casing opened.

### Smart design:

All key parts are independent for easy maintenance.  
Container assembly and mechanism are 100% separable.  
Thus mechanism remains free from damage by soap.

Battery life : 10000 drops/cycles or one year.

Weight : 0.7kgs unpacked ; 1.0kgs packed.

### Specifications and Dimensions

Housing Dimensions(mm)				
Volts	W	H	D	Capacity
4.5VDC	110	270	115	900CC

Casing: Stainless steel / Aluminum Steel (t : 1.0mm).

### Warranty

ONE-YEAR



**HK-RSD**

# TRAFFIC SIGNAL LIGHTS



## LED TRAFFIC SIGNALS

### for Vehicles and Pedestrians

LED TRAFFIC SIGNALS USE 80~90 PERCENT LESS ELECTRICITY than traditional incandescent traffic signals.

LED TRAFFIC SIGNALS LAST 5~10 TIMES LONGER. This longer life translates into substantial maintenance savings.

LED TRAFFIC SIGNAL LAMPS INCREASE VISIBILITY due to non-use of any type of diffusing lensing (optional).

CONSTRUCTED in compliance to DOT/ GFS Standard No: N-0650-09-03 and ITE VTCSH (Vehicle Traffic Control Signal Head Standard) of June 27, 2005.

Available in polycarbonate housing, 192 LEDs per head.



## LED and INCANDESCENT COMPARISON

<u>PARAMETER</u>	<u>INCANDESCENT SIGNALS</u>	<u>LED SIGNALS</u>
Power Consumption	100W	5~10W
Sun Phantom	Need color light filter cover, easily produce sun phantom	High, brightness, pure color light, apparent brightness contrast, no sun phantom
Operating Life	4,000 hrs	70,000 ~ 100,000 hrs
Cost of Maintenance	High	Low (95% cost reductive)
Environmental	Increase of CO <sub>2</sub>	Environment-friendly

## LED SIGNAL ADVANTAGES and BENEFITS

<u>FEATURE</u>	<u>ADVANTAGE</u>	<u>BENEFIT</u>
Energy efficient LED, superior optically enhanced design	90% less consumption of electricity	Energy Conservation
Can be operated with Solar Systems/UPS	Signal operates during power failures	Reducing traffic jams/accidents
Maintenance-free to 100,000 hrs	Zero down time/no bulb replacement	Saves bulb/maintenance costs
3 year warranty	Cost effective operation & satisfaction	Reliability & sustainable design

# DIMMABLE HALOGEN SPOTLIGHTS



## HALOGEN SPOTLIGHTS

### FEATURES

- No additional can needed.
- Modular add-on units.
- Transformer and 50W bulbs included.
- Opt. finish: Titan, Brass, Chrome, Gun Metal.
- Surcharge and overheat protection: IP20
- Perfect for hallways, vestibules, entrance, show-windows
- Tiltable 4 in. reflectors, all-direction spotlight
- 6 in. by 6 in. opening in ceiling will fit DL233 Module.

### Description

Voltage: 12VAC

Max Wattage: 50W

Lamp: AR-111 12V/50W

Frame: Iron

Adjustable Spot Ring:

Die-Casting

Color: Titan/White/Black

Protection: IP20



## FEATURES

- **Color:** Exit signs come in two colors, green or red. Choosing what color is right for your facility is dependent on several factors, including aesthetics and local regulations. Check with your local building codes office or fire officials before purchasing any exit sign.
- **Battery Back-up:** To ensure a powered exit sign remains lit during an emergency if the building's electrical system is interrupted, many exit signs come with a battery back-up or offer this feature as an option. Some localities may require that a battery back-up be installed with any exit sign so consult your local building codes office or fire officials before purchasing.
- **Emergency Lighting:** Some exit signs have integrated emergency lighting; if your current exit sign has integrated emergency lighting you can replace it with a combined LED exit sign/emergency lighting unit or install emergency lighting separately from your exit sign.
- **Voltage:** LED exit signs are available that are compatible with either 120 volt or 277 volt power. Many models are variable voltage and will operate properly on both voltage levels.

## SAVE ENERGY, MONEY AND PREVENT POLLUTION WITH (LED) EXIT SIGNS

Illuminated exit signs are an important and legally required safety feature in your facility. In the case of an emergency such as a fire, their operation is critical in protecting the well being of your congregation's members. By design, exit signs operate 24 hours per day, and can consume large amounts of energy to operate. Many exit signs in today's buildings use older, incandescent and fluorescent/compact fluorescent lighting (CFL) technology. To make matters worse, many older exit signs require frequent maintenance due to the short life span of the lamps. For example, many older exit signs consume over 350 kilowatt-hours (kWh) and cost \$28 each annually to operate.

The high-energy usage and maintenance of many exit signs is completely unnecessary due to advances in lighting technology. Solid-state light-emitting diodes (LED) are those small colored lights that have been used extensively in



consumer electronics for decades. However recent advances in the technology have allowed exit sign manufacturers to develop signs that harness the advantages of this technology at competitive costs. In addition, exit signs are easy to install, if you can install a light switch or electrical receptacle you can install an exit sign.

## ADVANTAGES

- **Ultra-Low Energy Usage:** ENERGY STAR. labeled LED exit signs use approximately 44 kWh of electricity annually to operate. Low energy use not only means less pollution but also lower electricity bills as a LED exit sign usually costs less than \$4 annually to operate.
- **Low Maintenance:** To be ENERGY STAR labeled, a LED exit sign must be guaranteed to last at least 5 years, however, many manufacturers state that their lamps will maintain National Fire Protection Association compliant levels of luminance for 10 to 25 years. Exit Sign Energy Use by the Numbers Exit Sign Lighting Technology Annual Energy Use Annual Energy Cost Lamp Service Life Annual Carbon Dioxide (CO2) Pollution LED 44 kWh \$4 10+ Years 72 pounds Fluorescent/CFL 140 kWh \$11 10.8 months 230 pounds Incandescent 350 kWh \$28 2.8 months 574 pounds.
- **Safety:** LED exit signs are usually brighter than comparable incandescent or fluorescent signs, and have greater contrast with their background due to the monochromatic nature of the light that LEDs emit. EXIT LED acryl: acrylic w/metal housing, no part requires replacement, they work on the solid-state lighting system, aluminum housing



## Laser Effect & Pattern Lamps

### USW-628



Laser: >30mW GG/GR • Life: >5000 Hr. • Scan Angle: 60°  
Control: Sound, M/S, DMX • 110/220V 50-60 Hz • Weight: 4.0 kg

### USW-668



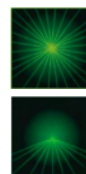
Laser: >120mW GR • Life: >5000 Hr. • Scan Angle: 60°  
Control: Sound, M/S • 110/220V 50-60 Hz • Weight: 6.5 kg

### USW-638



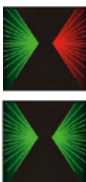
Laser: >30mW GGR • Life: >5000 Hr. • Scan Angle: 60°  
Control: Sound, M/S, DMX • 110/220V 50-60 Hz • Weight: 6.0 kg

### USW-288



Laser: >80mW GR • Life: >5000 Hr. • Scan Angle: 60°  
Control: Sound, M/S • 110/220V 50-60 Hz • Weight: 10.0 kg

### USW-528



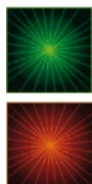
Laser: >50mW GG/GR • Life: >5000 Hr. • Scan Angle: 60°  
Control: Sound, M/S, DMX • 110/220V 50-60 Hz • Weight: 4.5 kg

### USW-M20



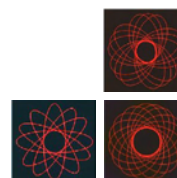
Laser: >80mW G • Life: >5000 Hr. • Scan Angle: 60°  
Control: Sound, M/S, DMX • 110/220V 50-60 Hz • Weight: 3.2 kg

### USW-L5



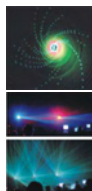
Laser: >30mW G/R • Life: >5000 Hr. • Scan Angle: 60°  
Control: Sound, M/S, DMX • 110/220V 50-60 Hz • Weight: 3.0 kg

### USW-308



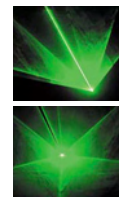
Laser: >10mW R • Life: >5000 Hr. • Scan Angle: 60°  
Control: Sound, Man/Auto • 110/220V 50-60 Hz

### USW-5008



Laser: >500mW RGB • Life: >5000 Hr. • Scan Angle: 60°  
Control: Computer • 110/220V 50-60 Hz • Weight: 24.0 kg

### USW-LT3



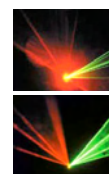
Laser: >60mW/473nm SCL Bulb B/G  
Control: Sound, Man/Auto • 110/220V 50-60 Hz • Weight: 2.8 kg

### USW-LT6



Laser: >100mW/473nm SCL Bulb RGB  
Control: Hand Console • 110/220V 50-60 Hz • Weight: 6.2 kg

### USW-LT11



Laser Diode: 10mW/15mW R/G • 32 Gobos • Scan Angle: ±30°  
Control: DMX, Auto, Music • 110/220V 50-60 Hz • Weight: 3.6 kg

## Scanners, Moving Head, Architectural Lamp & Fogger

### USW-LT12



Laser Diode: 8mW/10mW R/G • Scan Angle:  $\pm 30^\circ$   
Control: Automatic, Music • 110/220V 50-60 Hz • Weight: 1.8 kg

### USW-240



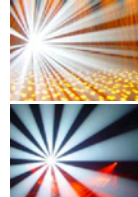
Lamp: MSD250W • Pan:  $180^\circ$ /Tilt:  $90^\circ$  • Color Whl: 14 • Gobo Whl: 14  
Shutter: 0-10kHz • Control: M/S Sound, DMX 4CH • 110/220V 50-60Hz

### USW-260



Lamp: MSD250W • Pan:  $180^\circ$ /Tilt:  $90^\circ$  • Color Whl: 7 • Gobo Whl: 7  
Shutter: 0-10kHz • Control: M/S Sound, DMX 6CH • 110/220V 50-60Hz

### USW-240EX



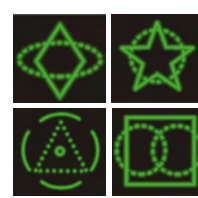
Lamp: MSD250W • Pan:  $180^\circ$ /Tilt: Any° • Color Whl: 11 • Gobo Whl: 14  
Shutter: 0-10kHz • Control: M/S Sound, DMX 4CH • 110/220V 50-60Hz

### USW-260EX



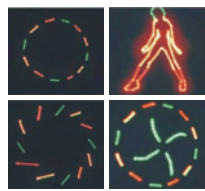
Lamp: MSD250W • Pan:  $180^\circ$ /Tilt:  $90^\circ$  • Color Whl: 7 • Gobo Whl: 7  
Shutter: 0-10kHz • Control: M/S Sound, DMX 6CH • 110/220V 50-60Hz

### USW-ML250



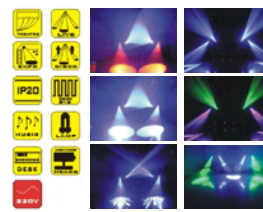
Laser: >100mW R/G • Life: >5000 Hr. • Scan Angle:  $540^\circ$   
Control: Sound, DMX • 110/220V 50-60 Hz • Weight: 16.5 kg

### USW-ML300



Laser: >300mW R/G/Y • Life: >5000 Hr. • Scan Angle:  $540^\circ$   
Control: Sound, DMX • 110/220V 50-60 Hz • Weight: 16.5 kg

### USW-SL250



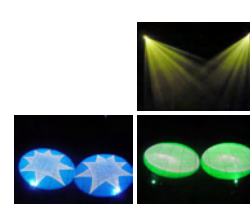
8 Colors • 8 Patterns • Prism Effect  
Scan Angle:  $450^\circ$  • Control: DMX512

### USW-850



Lamp: HT1 150W • Pan:  $540^\circ$ /Tilt:  $270^\circ$  • Color: 7 • Gobo: 7  
Shutter: 0-10kHz • M/S Sound, DMX 5CH • 110/220V 50-60Hz

### USW-LT300



Lamp: HT300W/DX 2-end discharge 6500°K  
• Pan:  $620^\circ$ /Tilt:  $270^\circ$   
• Color Whl: 9 + white  
• Gobo: 4 metal, 3 glass + light circle, 9 Step Motors w/11 cont. channels, auto focus, dual-slice dimmer • DMX 9CH • 110/220V 50-60Hz

### USW-317

Outdoor  
Wash



Lamp: CDM-T 150W, 4200°K, 127,000 L, R/Y/B/W • Life: 6000 Hrs.  
Waterproof • Protect: IP65 • Control: DMX512-KT Alone or M/S  
Fan Cooling • 6CH Control • Hi-Temp. Disc. • 220V 50-60Hz 250W

### USW-1022

Fogger



Output: 400 cu. ft./min. • Capacity: 1/4 Gall • Warm-up: 10 min.  
Galvanothermy Stick Power: 900W (Model U Remote)  
• 220V 50Hz (7A) •  $13'' \times 7'' \times 5''$  • Weight: 4.5 kg