



July 5, 2018

**ADDENDUM #1**

**IFB 18-38 Lighting Retrofit – Multiple Facilities (LoanSTAR #2)**

To all prospective proposers:

Please find the attached addendum #1 for the identified project.

**ITEM #1: Hayes Campus Lighting Retrofit (Drawing E30-H)**

**Please replace drawing E30-H with new Drawing Add1 E30-H.**

The spreadsheet listing the fixtures and scope of work has been rearranged for improved coordination with the building and Parking Garage Type “X” retrofits have been changed to new Type DDD”. The basis of design fixture is attached for reference. Contractor may submit alternatives for approved equal status.

**ITEM #2: Question from prospective Contractor:**

On your retrofit fixtures. Specifically, “D”, “L”, “O”, “R”, “S”, “T”, “U”, “HH” and “TT”, what fixture are they going into? ie POLE Light, Wall Pack, Canopy, Recessed Can. I would like to know each because there could be savings in replacing the fixture entirely because of the labor. Additionally, by having a fixture built for LED you have less of an issue with fans, removing heat etc.

**ANSWER:** Per the drawings that are included with the project, it is possible to identify which existing fixtures are receiving the specific assignment of retrofit equipment.

**ITEM #3: Question from prospective Contractor:**

On the spreadsheet titled “Proposed Lighting Project Equipment” item “WWW” list quantities as To Be Determined. Is there are budgetary number that the contractor should account for? Attic stock inventory states 10 lamps. Should we include additional product above this 10 lamp quantity?

**ANSWER:** Per the revised Heinen drawings that are included with this addendum, the Contractor should provide and install thirty (30) Type WWW lamps at Heinen and also supply ten (10) attic stock quantities of Type WWW lamps.

**ITEM #4: Heinen Theater Lighting Retrofit (Drawings E7a-E7d)**

**Please replace drawings E7a-E7d with ADD1 E7A through ADD1 E7D.**

The drawings have been adjusted to reflect the thirty (30) Type WW and 80 Type EEE lamps.



**ITEM #5: Willie Lee Gay Hall (Drawing E15 WLG)**

**Please replace drawing E15 WLG with ADD1 E15 WLG.**

The drawing was adjusted to reflect the 2-lamp bank switched fixtures that exist at the facility.

**ITEM #6: Educational Development (Drawing E4 ED)**

**Please replace drawing E4 ED with ADD1 E4 ED.**

HCC has already installed LED fixtures in the Multi-Purpose Room (Gymnasium).

**ITEM #7: Katy Campus (Drawing E28 KT)**

**Please replace drawing E28 KT with ADD1 E28 KT.**

There were an additional canopy 2-lamp fixtures and 400-watt flag highlighter fixtures noted during the pre-proposal walkthrough.

**ITEM #8: JB Whitely Building (Drawing E8B JBW)**

**Clarification: Do Not Retrofit the 2-story T5 biax lamps at the Plan Northeast corner of the building as noted by the red-hatched area on the floor plan.**

**ITEM #9 Responses for questions submitted to HCC Procurement by the Question deadline:**

Q1. There are references to several exhibits that are to be provided as separate documents which I do not see posted. Can electronic copies of these exhibits be provided?

- a. Exhibit #3 (DETAIL ITEMIZED EQUIPMENT UNIT COST TABLE)
- b. Exhibit #4 (FACILITIES LIST COST TABLE)
- c. Exhibit #5 (SAMPLE CONSTRUCTION CONTRACT, UGC & CONSTRUCTION BONDS). **Response: All above mentioned Exhibits already posted on HCC website. However, we have posted in excel formate Exhibit # 3 & 4 .**

Q2. The bid documents appear to only contain a consolidated bill of material and not a detailed audit or set of plans which will be needed to properly quote and fill out Exhibit #4. Can more detail be posted or provided?

**Response: The detailed set of drawings was not originally included on the HCC Procurement webpage. They will be made available as a result of this Addendum #1.**

Q3. Given the tight timeline and potential long lead times for BAA materials, are TAA compliant materials also acceptable?

**Response: The materials and equipment installed in this project must satisfy the Buy American requirements of the project or be specifically approved by the federal government as exempted from the Buy American requirements in a waiver. There are no exceptions for TAA compliant or FAR documents.**



Q4. Can you tell me how much bid bond we need for this project?

**Response: Education does not require bid bond.**

Q5. Is the bid still scheduled for 07/12/2018 at 2:00 pm?

**Response: Yes.**

Q6. Can I get a copy of any addenda that have been released to date?

**Response: There have been no addenda issued prior to this document. There was a Solicitation Amendment No. 001 that has been posted to the HCC Procurement Website as 183800\_Solicitation Amendment No. 001.**

Q7. Can I get a copy of the planholders list?

**Response: HCC has posted the pre-proposal meeting sign-in sheet on the HCC Procurement Website as Document 183801\_Sign In Sheet.**

Q8. Do you have an Engineer's Estimate?

**Response: As was included with the solicitation (IFB, Page 7 of 43), the Engineer's estimated cost of construction is between \$2,750,000 and \$3,250,000.**

Q9. What is the plan deposit for acquiring the plans and specs? Is that deposit refundable?

**Response: All documents that will be made available will be available on the HCC Procurement website and are available for download with no plan deposit.**

Q10. Can we submit "equivalent" products made in the USA that meet or exceed the specifications of the current lighting systems. And we will provide supporting documentation and literature for all products we propose.

**Response: Yes, if the products meet the performance and warranty requirements of the basis of design equipment and materials, as well as satisfy the Buy American requirements.**

**ITEM #10: Stafford Fine Arts (Drawing E32 SFA)**

**Please replace drawing E32 SFA with ADD1 E32 SFA.**

Exterior pole lights will receive new fixtures instead of just a lamp retrofit; two additional wall paks were found during the pre-proposal walkthrough and have been added to the scope of work.

**ITEM #11: Stafford Learning HUB (Drawing E33 S)**

**Please replace drawing E33 S with ADD1 E33 S.**

Revised drawing gives an allowance of 150 can light CFL retrofits with Type G lamps.

**ITEM #12: Clarification on ballast disposal**

**All ballasts in the project bypassed in a Type B retrofit will be removed from the fixture and properly disposed per specification requirements. Contractor will provide a copy of the proper disposal documentation to the Owner.**



ESA Energy Systems Associates, Inc.  
1111 N IH35, Suite 212  
Round Rock, Texas 78664

Consulting Engineers

**ITEM #13: Alief Workforce Building (Drawing E29 AWF)**

**Please replace drawing E29 AWF with ADD1 E29 AWF.**

Revised drawing retrofits 2 each 250 watt HID flag highlighter fixtures.

**ITEM #14: Training Tower (Drawing E23 TT)**

**Please replace drawing E23 TT with ADD1 E23 TT.**

Revised drawing identifies additional 2 lamp F32T8 fixtures.

**ITEM #15: Burn Building (Drawing E18 BB)**

**Please replace drawing E18 BB with ADD1 E18 BB.**

Changed wattage of flood lights to 400 watts; deleted 100-watt canopy lights due to potential exposure to heat from fire; added 4 each 2-lamp F32T8 to be retrofit.

**ITEM #16: NE Learning HUB (Drawing E20 NELH)**

**Please replace drawing E20 NELH with ADD1 E20 NELH.**

All references to 2-lamp F17T8 have been replaced with tags for 2-lamp CFL Biax to be retrofit with Type GGG lamps.

**ITEM #17: SW Gulfton (Drawing E31 G)**

**Please replace drawing E31 G with ADD1 E31 G.**

Spreadsheet revised to show spaces originally omitted from the sheet.

**ITEM #18: Revised Proposed Lighting Project Equipment Spreadsheet**

Please replace 2 references in specification manual with the attached Proposed Lighting Project Equipment Spreadsheet and refer to the attached new basis of design cut sheets for Types DDD, EEE, FFF and GGG.

**End of Addendum #1. Prepared by Chris Carter. Reviewed and sealed by Brian Clark.**



Proposed Lighting Project Equipment												
PROJECT TAG	Make	Model	LED Retrofit Classification (Type)	NEW Tombstones Required?	CCT (K)	CRI	Watts	Lumens	Estimated Life (hours)	Warranty (Years)	Buy American <sup>(2)</sup>	Quantity in Project <sup>(1)</sup>
A	Energy Focus	LEDFLT8-840-208-2B2F	B	Non-shunted	4000	>80	8	960	L70>60,000	10	Yes	461
B	Energy Focus	LEDFLT8-840-413-IT3BF	A	NO	4000	>80	13	1,560	L70>60,000	10	Yes	456
C	GE	LED19GX24Q-H/840	A	n/a	4000	80	18.5	1,950	L70=50,000	5	Waiver	622
D	Energy Focus	LEDWP-656VFL-RFK	Retrofit Kit	n/a	5000	73	54	4,345	L70>50,000	?	Yes	22
E	Sylvania	LED11WA19	N/A	n/a	2700	80+	11	800	L70>25,000	3+	Waiver	260
F	Green Creative	97895-12T8/3F/840/BYP	B	Non-shunted	4000	82	13	1,550	L70>50,000	5	Waiver	340
G	GE	LED19GX224Q-V/840	A	n/a	4000	80	18.5	1,950	L70=50,000	5	Waiver	1,243
H	Energy Focus	LEDFLT8-840-413-3B2F	B	Non-shunted	4000	>80	13	1,560	L70>60,000	10	Yes	24,540
J	Energy Focus	LEDFLT8-840-415-2B2F	B	Non-shunted	4000	>80	15	1,800	L70>60,000	10	Yes	8,260
K	Energy Focus	LEDFLT8-840-418-3B2C	B	Non-shunted	4000	>80	18	2,340	L70>60,000	10	Yes	2,363
L	GlobalTechLED	GTR-UNVSB-1x5498-BL-MH-SV-T2-E40	A	n/a	4000	70+	85	Unknown	100,000+	5	Yes	73
N	Sylvania	LED17WA21	N/A	n/a	2700	80+	17	1,600	L70>25,000	3+	Waiver	248
O	GlobalTechLED	GTR-UNVSB-1x5498-BL-HO-SV-T2-E40	A	n/a	4000	70+	135	13,164	100,000+	5	Yes	52
P	Sylvania	LED13PAR30/PRO/935/FL40/P3	N/A	n/a	3500	94	13	875	50,000	5	Waiver	48
R	GlobalTechLED	GTSOL5498-BL-SOLY-120/277-HO-L2-MGL	Per Instructions	n/a	4000	?	135	13,164	L70>100,000	10	Yes	377
S	GlobalTechLED	GTR-YK-30W-25%-SV-BL-T2-E40	A	n/a	4000	?	30	2,679	L70>100,000	10	Yes	48
T	GlobalTechLED	GTR-YK-50W-75%-SV-BL-T2-E40	A	n/a	4000	?	50	4,594	L70>100,000	10	Yes	93
U	GlobalTechLED	GTSOL5498-BL-SOLY-120/277-ML-L2-MGL	A	n/a	4000	?	75	7,814	L70>100,000	10	Yes	109
V	AAMSCO	LED20CWMG-DOME	B	n/a	4000	85	23	3,400	50,000	7	Waiver	18
X	RAB	VXLED26NDG	New Fixture	n/a	4000	82	27	1,735	LM80>100,000	5	Yes	0
Y	RAB	VANLED20NF USA	New Fixture	n/a	4000	78	23	2,811	L70>100,000	5	Yes	5
Z	RAB	FFLED39N	New Fixture	n/a	4000	71	42	5,651	L80>100,000	5	Yes	9
BB	RAB	WPLED3T105N/PCT	New Fixture	n/a	4000	72	105	12,042	L80>100,000	5	Yes	2
CC	RAB	WPLED26N	New Fixture	n/a	4000	71	29	3,468	L80>100,000	5	Yes	6
DD	RAB	WPLED2T50N/PCT	New Fixture	n/a	4000	72	55	6,824	L80>100,000	5	Yes	1
TS	Energy Focus	LEDFLSLH-G13NS-SNETGW	NS tombstones	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Yes	36,130
FF	AAMSCO	LED20CWMD	N/A	n/a	4000	85	23	2,600	50,000	7	Waiver	72
GG	LIFEBULB	LBU6B16411	B	Non-shunted	4100	83	16	2100	n/a	5	Waiver	166
HH	GlobalTechLED	GTR-YK-40W-50%-SV-BL-T2-E40	A	n/a	4000	?	40	3,742	L70>100,000	10	Yes	4
LL	DECO	VINCI-LED-10-40-UNV-BZ-PC	New Fixture	n/a	4000	82	10.3	1200	L70>125,000	10	Yes	11
EL	Energy Focus	Red Cap Emergency LED Lighting System	B	Included	4000	>80	11	1560	L70>50,000	5	Yes	329
96CK	Texas Fluorescents	8RB-422 OR 502-S48W5650L-MV-40K	Retrofit Kit	N/A	4000	N/A	48	5650	N/A	N/A	Waiver	1
96CKHO	Texas Fluorescents	8RB-422 OR 502-H72W8200L-MV-40K	Retrofit Kit	N/A	4000	N/A	72	8200	N/A	N/A	Waiver	8
VV	DECO	VINCI-LED-30-40-UNV-BZ-PC	New Fixture	n/a	4000	82	28	3310	L70>125,000	10	Yes	84
MM	GlobalTechLED	GTR-YK-30W-25%-SV-BL-T2-E27	A	n/a	4000	?	30	2,679	L70>100,000	10	Yes	16
PG	NEPTUN	LED-12-040-UNV-010VDIM-740-BRZ	New Fixture	N/A	4000	>80	41	4400	L70>100,000	5	Yes	257
NN	Lifebulb	LBT5F1641	A	N/A	4100	N/A	13	1650	L70>50,000	5	Waiver	161
HO	Lifebulb	LBT5F3341	A	N/A	4100	N/A	31	3300	L70>50,000	5	Waiver	54
PP	TCP	LED13A21DOD41K	A	N/A	4100	82	13	1150	25,000	5	Waiver	55
QQEB	Lithonia	WL4-30L-LP840-EL7L	New Fixture	N/A	4000	82	28.2	3251	60,000	5	Waiver	12
RR	Satco	9WPLH/LED/835/DR/2P	A	N/A	3500	82	9	850	50,000	5	Waiver	8
SS	Green Creative	8.5PLH/840/DIR	A	N/A	4000	82	8.5	1020	50,000	5	Waiver	27
TT	GlobalTechLED	GTR-AR-112-G2-HI(300w)-SV-BL(4000K)-NL-GT-LSP-240	A	N/A	4000	n/a	300	35,000	L70>150,000	5	Yes	33
UU	TCP	LED14P30D30KSP (Dimmable narrow spot)	A	n/a	3000	80	14	1100	L70>25,000	5	Waiver	20
XX	STRAITS	SL923FLF-150W	A	n/a	4000	n/a	60	7200	n/a	1	Yes	8
WW	SATCO	4CTA/AMB/LED/E12/22K/120V Antique Filament 4 watt LED AMBER C11 candelabra and platinum E12 to E26 medium base adapter	A	n/a	2200	n/a	4	n/a	15,000	N/A	Waiver	30
YY	TCP	LED14P30D24KFL (Dimmable LOW CT Flood)	A	n/a	2400	80	14	950	L70>25,000	5	Waiver	18
ZZ	TCP	LED12P30SD41KFL (Dimmable MED CT Flood)	A	n/a	4100	80	12	925	L70>25,000	5	Waiver	31
BBB	Orion	LDRE1-A1-UNV-FDXX-840-22 2x2 fixture conv kit/EB	n/a	n/a	4000	>80	22	2331	L70>100,000	5	Yes	29
BBBE	Orion	LDRE1-A1-UNV-FDXX-840-22-BB 2x2 fixture conv kit/EB	n/a	n/a	4000	>80	22	2331	L70>100,000	5	Yes	5
CCC	Orion	LDRE1-EA-UNV-FDXX-840-24-M-ST 2x4 fixture conv kit	n/a	n/a	4000	>80	37	3968	L70>100,000	5	Yes	500
DDD	Independence	NF-Independence VT2-413-40K-NN	New Fixture	n/a	4000	85	26	3950	L70>100,000	10	Yes	517
EEE	Fulight	2 watt Stumble Step replacement lamp for F4T5	B	n/a	6000	n/a	2	200	L70>50,000	3	No	80
FFF	Neptun	Area Parking Lot Fixture	A	n/a	5000	>80	402	51,000	L70>100,000	10	Yes	28
GGG	Energy Focus	LED Twin Tube 2G11 for CFL Biax	B	n/a	4000	>80	14	1,105	L70>60,000	5	Yes	28

Notes:

(1) Quantity on project is the total number of items expected to be required of this equipment.

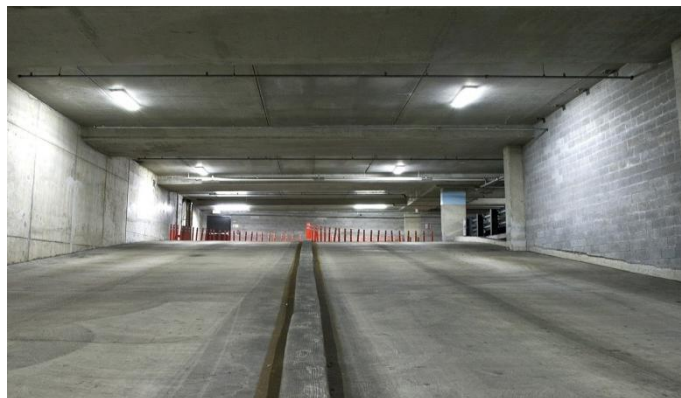
(2) Buy American requirements are in effect for this project. No person, the Owner, or the Funding Authority has the authority to waive this requirement. "Waiver" has been applied to products that cannot satisfy Buy American and a statement of exemption will be required.



# LED VAPOR TIGHT SYSTEM

## THE HIGH PERFORMANCE

*LED Luminaire Series for Parking Garages, Stairwells, Wet Locations Coolers and General Illumination*

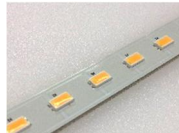


### KEY FEATURES INCLUDE:



#### Multiple Color Options

Ensure that the new lighting will match your current aesthetics, and allows for custom color options.



#### Long Lasting LED Chips

L<sub>90</sub> in excess of 101kHrs



#### 10 Year Warranty

Industry Leading 10 Year Warranty on all LED and external drivers.



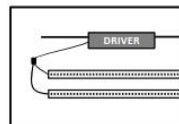
#### High Color Rendering

Colors are enhanced due to the use of LEDs selected directly on the black body curve.



#### Manufactured in America

With domestic and imported components. Factory: Southeastern PA. Higher quality control, faster delivery times, and new domestic job creation.



#### Independent Class II Driver

Safety, improved thermal management, and extended lifetime are gained by locating the driver remote from the LEDs.



8.28.2017

Philadelphia Headquarters: 487 Devon Park Drive, Suite 204, Wayne, PA 19087

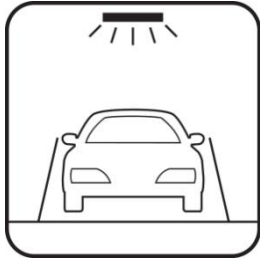
[www.independenceLED.com](http://www.independenceLED.com) (484) 588-5401



LED Lighting | Forged in America™

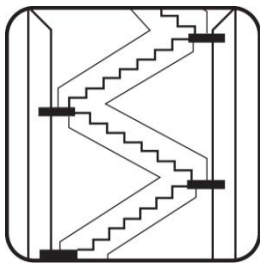
# LED VAPOR TIGHT SYSTEM

## 24/7 APPLICATIONS



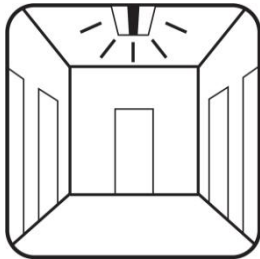
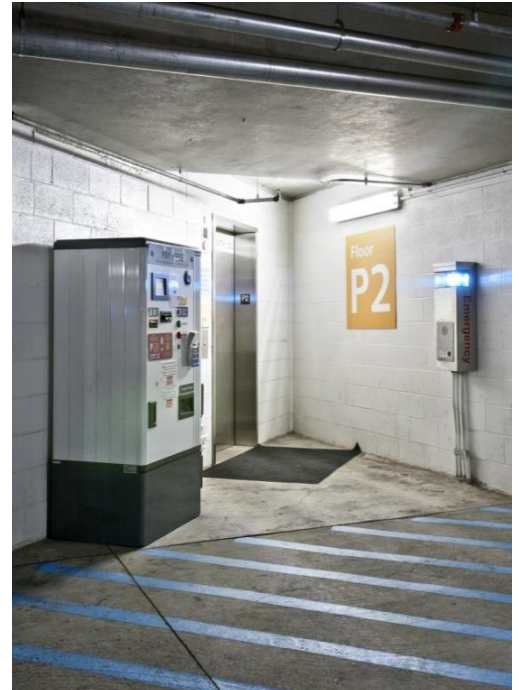
### PARKING

Structures, surface and underground garages



### STAIRWELL

24/7 fire stairs for any property type



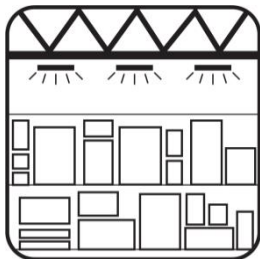
### HALLWAY

Hotels, hospitals, multi-family & dorms



Before LED RetroFit

After LED RetroFit



### INDUSTRIAL HIGH BAYS

Factories, warehouses & distribution centers





LED Lighting | Forged in America™

# LED VAPOR TIGHT SYSTEM

## LENGTH OPTIONS:

2' & 4' – standard, 8' - special order

## OUTPUT WATTAGE (See table below)

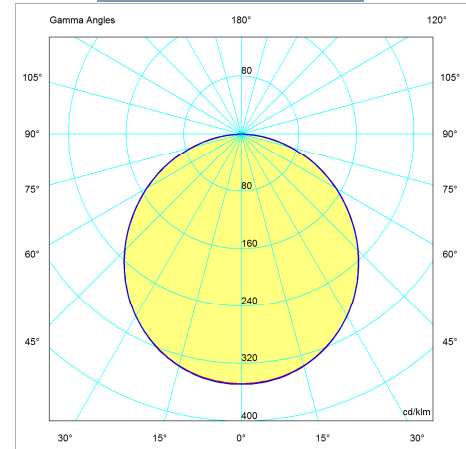
## COLOR OPTIONS:

3000K, 3500K, 4000K, 5000K standard<sup>5</sup>

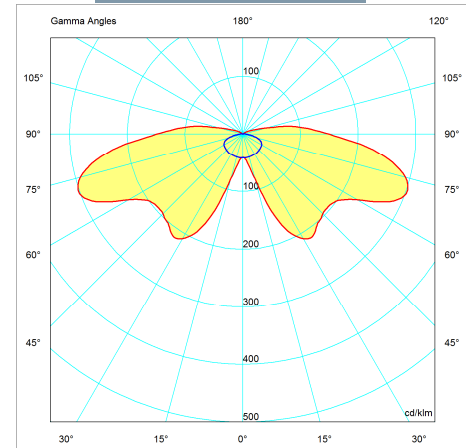
CRI – 85

DIMMING - standard

## Normal (60°)- VT2



## Wide (180°) VTW2



Specification Table	
Environmental	Suitable for Damp Locations up to IP67 per EN60529
Ambient Operation	-25°F to 104°F/(-31°C to 40°C) <sup>6,7</sup>
Storage	-25°F to >185°F/(-31°C to >85°C)
Wattage	See table below <sup>12</sup>
Input Voltage (nominal)	100-277VAC 50/60Hz .8-.3A [120-300VDC] <sup>9</sup> 347-480VAC 50/60Hz via internal autotransformer
Power Factor (PF)	>0.9
Total Harmonic Distortion (ATHD)	<20%
Life Time	>100khrs
Rated Life-LEDs per TM-21 -	Calculated L <sub>70</sub> (10k) = 378kHrs <sup>16</sup>
LED Driver <sup>7</sup>	Calculated L <sub>90</sub> (10k) = 101kHrs <sup>16</sup>
Lifetime - MBTF <sup>2</sup> -	Reported L <sub>70</sub> (10k) >60kHrs
LM80 Data	NVLap Accreditation
LED Type	SMD 5630
Efficiency (some models)	>130lm/W (See table below) <sup>12</sup>
Normal	160°FW, 120°FWHM
Wide	180°FW, 180°FWHM
Certifications	cUL, UL, FCC, DLC
Warranty <sup>17</sup>	LED Driver - 10 years
	LED - 10 years
	Fixture - 10 years
Dimming	<20%-100% (See below) 0-10V
Off State Power Consumption	0 Watts
On State	Instantaneous

Package Information	
Standard Package	Case
Quantity	1
Sales Units	1
Package Items	1 Unit Complete
Weight lbs(kg)	4' - 18 (9) // 2' - 9 (5)

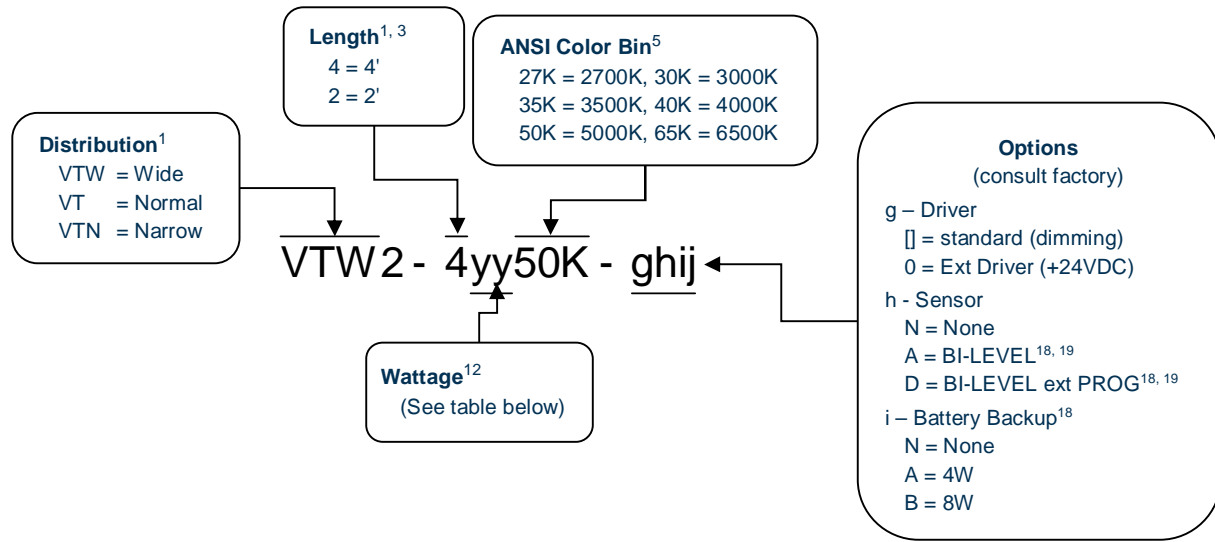


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# LED VAPOR TIGHT SYSTEM



**Accessories:**

- Mounting Brackets (188-9005204)
- Handheld Remote Bi-Level PROG Sensor (182-0000520)

**Options**


- SS = Stainless Steel Latches

**Most Popular**

VTW2-41850K-DA

VTW2-41350K-DA

VT2-42850K

<b>DLC V4.2 // Premium //</b>	
	VTW2-21450K VTW2-41350K VTW2-41850K VTW2-42850K
<a href="#">Click Here</a>	

Length (ft)	Specified Wattage (yy) (W)	Nominal Wattage <sup>12</sup> (W)	Lumens <sup>1,12</sup> @5000K (-12%/ to 2700K)	
			VTW2	VT2
2	09	18	2500	2550
	14	28	3475	3900
4	09	18	2500	2650
	13	26	3600	3950
	18	36	4650	5050
	24*	48*	6850	7475
	28	56	6850	7475

\* – 0 (Ext 24VDC Driver)



## Notes

1. Not all model combinations are available
2. MBTF per MIL-HDBK-217F
3. Extended lead times and minimums maybe required for some models
4. N/A
5. Other ANSI Color bins available
6. Operation to -40°F/-40°C is available
7. Some low wattage models -4°F to +140°F/(-20°C to 60°C), consult factory.
8. Extended warranties are available
9. Non-UL applications (Some Models)
10. N/A
11. Specifications and availability subject to change without notice
12. Varies depending on color temperature, CRI, LED driver and lens ( $\pm 10\%$ )
13. N/A
14. EPC Act -179d tax incentive ready product given dimming bi-level switching requirements
15. Certain chemicals that may exist in end-user locations release airborne contaminants that can impact the integrity and safety of key fixture components that contain acrylic or polycarbonate material.
16. Worst case temperature for VTW2-428 @25°C ambient.
17. Consult website for further details.
18. Conforms to basis of NFPA 101, ICB 1006, NYC BC 1006 when used with bi-level control and/or battery backup. Please consult factory for proper specification and installation. IndependenceLED is not responsible for improper installation, maintenance, and/or specification.
19. Bi-Level Dimming, when used at the 50% level, wattage is reduced by  $\frac{1}{2}$ . For example 36W goes to 18W.

## Compliance Standards

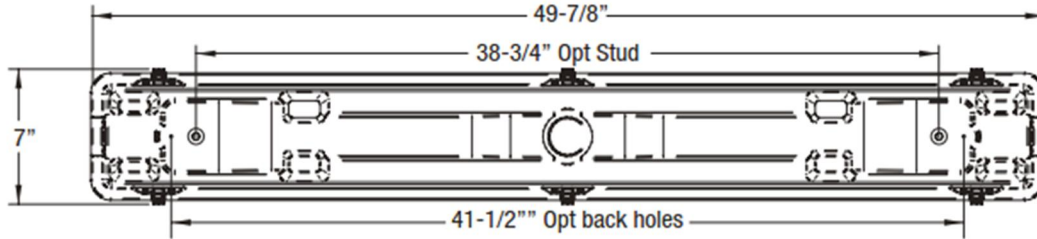
- UL 1993 - Self-Ballasted Lamps and Lamp Adapters, Ed. 4: 2012
- UL 1598 - Luminaires
- UL 1598C - Light-Emitting Diode (LED) Retrofit Luminaire Conversion Kits
- UL 8750 - Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products, Ed. 1: 2009
- CSA C22.2 No. 250.13 - Light emitting diode (LED) equipment for lighting applications, Ed. 1222012
- EN 55015:2006 - Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
- EN 61000-3-2:2006 - Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions
- EN 61000-3-3:2008 - Electromagnetic compatibility (EMC). Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems
- FCC Part 15, Subpart B, Class B -
- ANSI/ANSL G C78.81-2010 - Electric Lamps-Double-Capped Fluorescent Lamps-Dimensional and Electrical Characteristics
- ANSI/NEMA/ANSL G C78.377-2008 - American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products
- IEC 60529-2004 - Degrees of Protection Provided by Enclosures (IP Code)
- DOH Article 81.19 (b) - Lighting and ventilation
- FDA Article 6-202.11 - Light Bulbs, Protective Shielding



# LED VAPOR TIGHT SYSTEM

## Mechanical

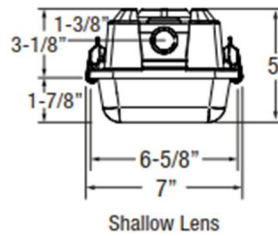
### TOP VIEW



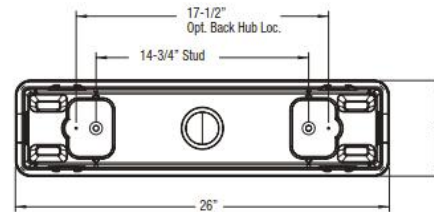
### SIDE VIEW



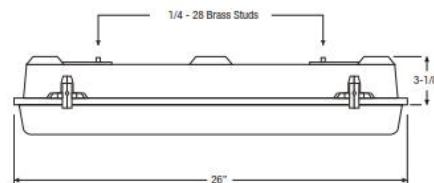
### END VIEW



### TOP VIEW

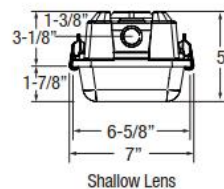


### SIDE VIEW



Note: Brass Studs on Inside of Unit are 10-32

### END VIEW





Optoelectronic Materials

CONTACT | SHOPPING | 0

Home / 6" T5 (Shop) / 110-120V F4T5 LED Tube Light-6"-Daylight 6000K

&lt; Prev | Next &gt;



This is a double-end input T5 6" LED tube light with 2W total input power to replace 4W energy-saving fluorescent F4T5. It is not dimmable and works at 110/120VAC. The installation is easy, please make sure that the LED Tubes must be directly wired to your 110/120VAC house current from the two input ends on both sides without the use of a ballast or starter.

## 110-120V F4T5 LED Tube Light-6"-Daylight 6000K

~~\$24.99~~ \$9.48

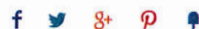
Quantity

[ADD TO CART](#)

### Details

- Actual length 6" overall (Including pins): Please measure your old bulb or light fixture to see if it fits or not before buying!
- Instant-On Daylight 6000K to replace 110V standard 6" F4T5 CFLs
- Rotatable: light forwarding angle can be adjusted by +90 degrees to fit any light fixture!
- Easy to Install: Fixture Rewiring Needed! However You don't need to buy anything to get the installation done (Just Follow the Installation Manual Enclosed Inside Your Package!)
- GREEN ECO FRIENDLY + SIGNIFICANT ENERGY SAVING: no flickering, no UV light, no buzzing ballast, no hazardous materials + Saving ~50% electricity
- Lifetime>50,000hrs; 3-Year Warranty.

--Brand: Fulight  
 --Part Number: HE80-T5-2W-6000K  
 --Origin Imported (China)  
 --Item model number: HE80-T5-2W  
 --Voltage: 110/120 volts  
 --Specific Uses: General Lighting Purpose  
 --Power Source: corded-electric  
 --Type of Bulb: LED  
 --Luminous Flux: 200 lm  
 --Wattage: 2 watts  
 --Bulb Features: Non-Dimmable  
 --Color Temperature: 6000 Kelvin  
 --Color Rendering Index (CRI): 82  
 --Bulb Diameter: 0.625 inches  
 --Bulb Length: 6 inches  
 --Lamp Power Factor: 95



COMPANY

PRODUCTS

SHOPPING CENTER

TECHNOLOGY

PARTNERS

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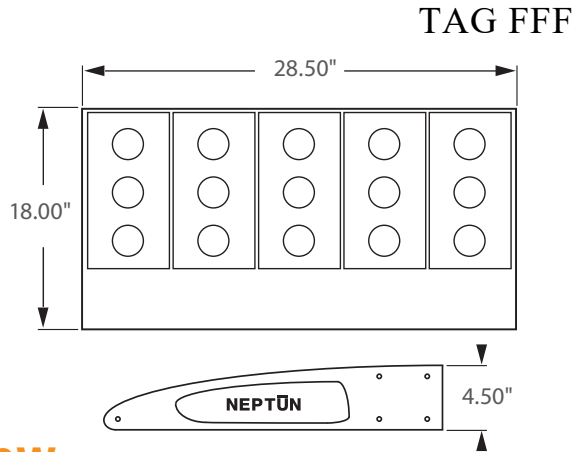
Not all products are qualified on the DLC QPL. To view our DLC qualified products, please consult the DLC Qualified Products List at [www.designlights.org/qpl](http://www.designlights.org/qpl)

**\*\* AVAILABLE \*\***

Bi-Level Dimming  
100% 50%

0 - 10V  
FULL DIMMING

Dark Sky  
FRIENDLY



**REPLACEMENT FOR 1000W HID**

**Incredible 100,000 hrs**

## GENERAL DESCRIPTION

Neptun's modular LED parking lot fixtures combine architectural form and versatility to make it an excellent choice for new construction or retrofit applications. The LED-31 series fixture is offered in a variety of wattages to provide maximum flexibility in all types of applications. The High output LED's and custom engineered optics provide excellent uniformity and efficiency. It can replace existing HID & HPS fixtures up to 1000W

## APPLICATION

- Parking Lot Lighting
- Street Lighting
- Walkway Lighting
- Area Lighting
- Security Lighting
- Storage Area Lighting

## STRUCTURE, MATERIALS, & FEATURES

- Heavy-gauge, die-cast aluminum housing.
- Corrosion resistant electrocoat grey finish (custom colors available).
- Slim, state of the art, low profile design for minimum wind load resistance.
- Continuous silicone gasket surrounds lens for weather tight seal.
- Correlated Color Temperature of (5000°K) for greater visibility and safety.
- High Output COB LED's with borosilicate glass lens optics.
- High power factor, low THD driver with 6kV/3kA surge protection.  
Optional 20kV/10kA surge protector available.
- InstantON flicker-free Cold Start and Hot Re-Start.
- Up to 20 years Maintenance free operation.
- 10 Year Warranty on complete fixture. (LED's, Driver, & Housing)
- **Optional:** 0-10V Dimming, Bi-Level Dimming, Wi-Fi Control, Remote Monitoring and ON/ OFF Control

## ORDERING INFORMATION

Sample Number: LED-31400-M5-UNV-0-10VDIM-SF-850-LD-T3-GRY  
Custom options and accessories available. Please consult factory

Series	Wattage	Voltage	Options	Mounting	CCT	Accessories	Optics	Color
<b>LED-31</b> = Area / Parking Fixture	<b>400-M5</b> = 400 W	<b>UNV</b> = 120-277 VAC <b>347V</b> = 347 VAC <b>480V</b> = 480 VAC	<b>0-10VDIM</b> = 0-10V Dimming <b>BL-DIM</b> = Bi-Level Dimming * * Includes Motion Sensor	<b>SA6</b> = 6" Side Arm <b>SA6R</b> = 6" Side Arm (round pole adapter) <b>WMO</b> = 0" Wall Mount <b>WM6</b> = 6" Wall Mount <b>SF</b> = Slip Fitter <b>YK</b> = Yoke Bracket * See Pg. 2 for mounting options	<b>830</b> = 3000°K <b>835</b> = 3500°K <b>841</b> = 4100°K <b>850</b> = 5000°K <b>AMB</b> = Amber (585-595nm)	<b>LD</b> = Twistlock Photocell <b>MD</b> = Motion Sensor ON/OFF <b>SP</b> = 20kV/10kA surge protector <b>FSP-211</b> = Wattstopper Sensor (used with bi-level dimming option)	<b>T3</b> = Type 3 <b>T5</b> = Type 5	<b>GRY</b> = Grey <b>BRZ</b> = Bronze * Custom Colors Available



**lightinnovations@work™**

### PRODUCT INFORMATION

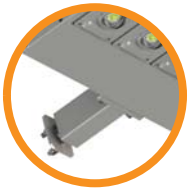
Model No.	Description	Input Watts	Delivered Lumens	Universal Line Voltage (VAC)	Max Line Current (Amp) 120 - 277	THD	Power Factor	Weight
LED-31400-M5-UNV	Area/Parking Fixture	402	51,000	120-277	4.08 - 1.51	<15%	>0.95	50 lbs.

### SPECIFICATIONS

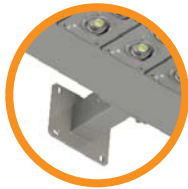
- Driver ..... Constant Current
- Start Method ..... InstantON
- Hot Re-start ..... InstantON
- Driver UL Rating ..... Class 1
- Driver UL Outdoor Rated ..... Wet Location
- Sound Rating ..... Class A
- ANSI Surge Protection ..... IEEE C62.41 C High
- Current Crest Factor ..... 1.5 maximum
- Load Regulation: 5% output current variation across load range
- Line Regulation: 1% output voltage variation across voltage range
- Driver Off-State Draw ..... 0 Watts
- Vibration Compliance ..... 3G
- Universal Input Line Voltage ..... 120-277 VAC
- Input Line Frequency ..... 50/60 Hz
- Projected (L70) @ 25°C ..... > 100,000 hrs.
- CoColor Temperature ..... Multiple (± 300°K)
- Color Rendering Index (CRI) ..... > 80
- Minimum Starting Temperature ..... -40°C
- Maximum Starting Temperature ..... +50°C
- Lumens per Watt ..... > 120
- Shock / Vibration Resistant ..... Yes
- Power Factor ..... > 0.95
- Total Harmonic Distortion ..... < 15%
- Inrush Current Peak ..... < 10 Amp
- FCC Compliance ..... Part 15, Subp. C
- ETL Listed / UL Standard 1598 ..... Yes
- EPA Rating ..... 0.71 ft.<sup>2</sup>
- Housing IP Rating ..... IP65
- Driver IP Rating ..... IP67
- Optics IP Rating ..... IP68
- Warranty ..... 10 Year

### MOUNTING CONFIGURATION

Arm Mount Single (SA6)



Wall Mount (WM6)



Wall Mount (WM0)



Slip Fitter Mount (SF)

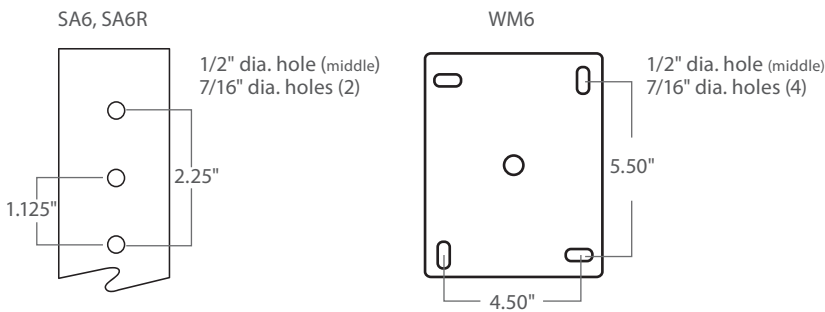


Yoke Mount (YK)

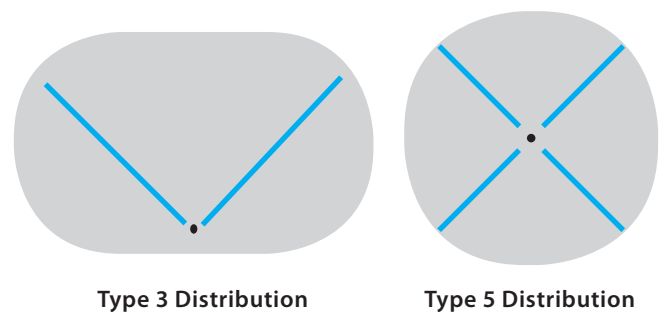


2-1/2" I.D. Accepts up to 2-3/8" Tenon or Pipe

### DRILLING PATTERNS



### PHOTOMETRICS (See Complete IES File)



Neptun Light, Inc.  
13950 Business Center Drive  
Lake Forest, IL 60045  
Fax: 847.735.8004

Neptun Light, Inc. reserves the right to change materials or modify the design of its product without notification as part of the company's continuing product improvement program.  
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Spec. Rev. 1-2018



## LED Twin Tube 2G11

### LINEAR FLUORESCENT RETROFIT LAMP

For: Fluorescent replacement

### FEATURES AND BENEFITS

- Efficacy of 130LPW
- Type-B (Direct-Wire)- Removal of ballast required for normal operation
- Single-ended power; INPUT end is electrically connected, other end has no electrical connection
- Flicker-free LED lighting



### PRODUCT SPECIFICATIONS

Length	16" and 21" versions
Body	Oval extruded aluminum/ polycarbonate lens
Lens	Frosted
Connection	2G11 end cap
Input Voltage	100-277VAC, 50/60hz
Driver	Single end power; integrated LED driver
Available colors	Warm white 3500K Neutral white 4000K Cool white 5000K
CRI	>80
Dimming	Non-dimmable
Lifetime	L70 ≥ 60,000 hours
Warranty	5-year warranty
Environmental Requirements	<b>Operating temp:</b> -20° to 50°C <b>Storage temp:</b> -30° to 60°C <b>Working humidity:</b> 30% to 85% <b>Storage humidity:</b> 10% to 90% <b>Non-corrosive environments</b>
Power Factor	>0.9
Beam Angle	120°

## PRODUCT SPECIFICATION

PART NUMBER	SIZE NOMINAL	POWER	LUMINOUS FLUX	UL PART NUMBER
LEDTT-835-1609	16"	8.5W	1105lm	Same as part number
LEDTT-840-1609	16"	8.5W	1105lm	Same as part number
LEDTT-850-1609	16"	8.5W	1105lm	Same as part number
LEDTT-835-2114	21"	14W	1820lm	Same as part number
LEDTT-840-2114	21"	14W	1820lm	Same as part number
LEDTT-850-2114	21"	14W	1820lm	Same as part number

## LINE DIAGRAM

