

KH45Q

L70
25°C

290,000 Hours

EasyLED Large Bentley Kitty Hawk Area, Wall, and Flood Light



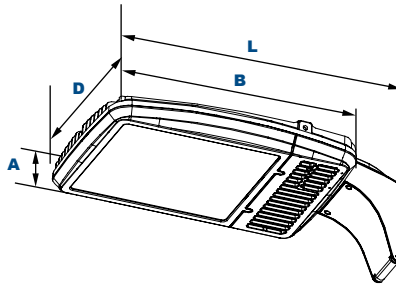
Shown with "KH" Kitty Hawk Arm Option on a Pole.



Shown with "WM" Wall Mount Bracket Option.



Shown with "SF" Slipfitter Mounting Option.



Dimensions

Width (D)	15 1/4" (400mm)	
Length (B)	22" (559mm)	Length with Mount (L)
Height (A)	4" (102mm)	

Kitty Hawk Arm (KA): 27 1/2" (699mm)
 Slipfitter (SF): 29 1/4" (743mm)
 Mounting Arm Adaptor (MA): 26 1/8" (664mm)
 Yoke (Y): 26 1/4" (667mm)
 Bracket (BR): 25 3/4" (654mm)

The LEPG KH45Q luminaire is available in two wattages with a wide choice of mounting configurations and optical distributions designed to replace HID lighting systems from 250w to 1000w MH or HPS. Typical applications include general area, parking, flood, security, and accent lighting for retail centers, industrial parks, schools and universities, public transit and airports, office buildings and medical facilities. Mounting heights of 16 to 35 feet can be used based on light level and uniformity requirements.

Specifications and Features:

Housing:

Die Cast Aluminum Housing and Front Frame, Integral Heat Sinking and Driver Compartment. Photocell Adaptable. Nickel-Plated Stainless Steel Hardware.

Listing & Ratings:

CSA: Listed for Wet Locations, ANSI/UL 1598, 8750; IP66 Sealed LED Compartment.

Finish:

Textured Architectural Bronze Powdercoat Finish Over a Chromate Conversion Coating. Custom Colors Available Upon Request.

Lens:

Tempered Clear Flat or SoftLED Flat Glass, or Tempered Clear Flat Prismatic Glass Lens.

Mounting Options:

Mounts with Kitty Hawk Arm, Adjustable Slipfitter, 2 3/4" Diameter Mounting Arm Adapter, Yoke, Two-Piece Bracket or Wall Mount Bracket. (Factory Installed)

EasyLED LED:

Aluminum Boards

Driver:

Electronic Driver, 120-277V, 50/60Hz or 347-480V, 50/60Hz; Less Than 20% THD and PF>0.90. Standard Internal Surge Protection 6kV. 0-10V Dimming Standard for a Dimming Range of 100% to 10%; Dimming Source Current is 150 Microamps.

Controls:

Fixtures Ordered with Factory-Installed Photocell or Motion Sensor Controls are Internally Wired for Switching and/or 1-10V Dimming Within the Housing. Remote Direct Wired Interface of 1-10V Dimming is Not Implied and May Not Be Available, Please Consult Factory. Fixtures are Tested with LEPG Controls and May Not Function Properly With Controls Supplied By Others. Fixtures are NOT Designed for Use with Line Voltage Dimmers.

Warranty:

5-Year Warranty for -40°C to +50°C Environment.

See Page 6 for Projected Lumen Maintenance Table.

Order Information Example:

KH45QF1X256U5KCZKASP

KH45Q

Model	Optics/Beam	Wattage	Driver	CCT	Lens	Color	Mounting	Options
KH45Q =Large Bentley Kitty Hawk Area, Wall, and Flood Light	A =Type I/NEMA 7H x 5V B =Type II/NEMA 7H x 6V C =Type III/NEMA 7H x 7V D =Type IV/NEMA 7H x 6V F =Type V/NEMA 7H x 7V I =Narrow Beam/NEMA 4H x 4V* *Use with 5K Model Only. See Page 4 & 6 for Distribution Information.	1X167 =167w 1X256 =256w	U =120-277V H =347-480V	3K =3000K* 4K =4000K 5K =5000K *Only for C & F Optics.	C =Standard Clear Flat Glass Lens S =SoftLED Flat Glass Lens P =Clear Flat Prismatic Glass Lens* *Use with Type V Optic Only.	Z =Bronze C =Custom (Consult Factory)	KA =Kitty Hawk Arm SF =Slipfitter MA =Mounting Arm Adapter Y =Yoke BR =Two-Piece Swivel Bracket WM =Wall Mount Bracket NM =No Mount	SF =Single Fuse (120-277V Only) DF =Double Fuse (120-277V Only) SP =Surge Protection M1 =Motion Sensor, IR for mounting heights of 20ft to 35ft M2 =Motion Sensor, IR for mounting heights of 18ft or less R3 =3-Pin Twist Lock Photocell Receptacle R5 =5-Pin Twist Lock Photocell Receptacle R7 =7-Pin ANSI C136.41—2013 Twist Lock Photocell Receptacle S23 =Internal Microwave Sensor with dimming for mounting heights of 35' or less (120-277V Only) S43 =Microwave On/Off Motion Sensor for Mounting Heights of 8' to 19', (120-277V Only)

Project Information:

Project Name: _____ Fixture Type: _____

Complete Catalog #: _____ Date: _____

Comments: _____

Certification & Listings:



DesignLights Consortium™ Qualified Luminaires:
 KH45QA1X[167 256][U H]5KC*** KH45QD1X[167 256][U H]5KC***
 KH45QB1X[167 256][U H]5KC*** KH45QF1X[167 256][U H]5KC***
 KH45QC1X[167 256][U H]5KC***



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Mounting Options:

**KH45Q with Kitty Hawk Arm (KA)**

Kitty Hawk Die-Cast Mounting Arm, Bronze Powdercoat Finish, Includes Hardware. Mounts Directly to Square Poles.

**KH45Q with Pole Mounting Arm Adaptor (MA)**

Die-Cast Adaptor for 2½" Horizontal Mounting Arms, Bronze Powdercoat Finish, Includes Hardware.

**KH45Q with Yoke (Y)**

Stamped Heavy-Duty Steel Yoke, Bronze Powdercoat Finish, Includes Hardware.

**KH45Q with "SF" External Mount Slipfitter (SF)**

External Mount Die-Cast Adjustable Slipfitter for 2½" Tenons, Bronze Powdercoat Finish, Includes Hardware.

**KH45Q with Two-Piece Swivel Bracket (BR)**


Two-Piece Stamped Steel Adjustable Bracket, Bronze Powdercoat Finish, Includes Hardware.



**KH45Q with Wall Mount (WM)**



Wall Bracket, Heavy-Duty Stamped Steel, Bronze Powdercoat Finish, Includes Hardware.


EPA (Effective Projected Area)

Shown with Large Kitty Hawk Arm mounting.

Configuration	EPA (Sq. Ft.)	Weight (Lbs.)
 1	1.00	33 Lbs

Configuration	EPA (Sq. Ft.)	Weight (Lbs.)
 2@180° Mount	2.00	66 Lbs
 2@90° Mount	1.36	66 Lbs

Configuration	EPA (Sq. Ft.)	Weight (Lbs.)
 3@90° Mount	2.20	99 Lbs
 3@120° Mount	2.00	99 Lbs

Configuration	EPA (Sq. Ft.)	Weight (Lbs.)
 4@90° Mount	2.20	132 Lbs

Accessories & Replacement Parts:



Mounting Accessories (Order Separately, Field Installed)	
KH40RPZ	Die-Cast Adaptor for 4" to 6" Round Poles, Bronze Powdercoat Finish. Use with KH45A Kitty Hawk Mounting Arm only.
KH40WMZ	Die-Cast Wall Mount Adaptor, Bronze Powdercoat Finish. Use with KH45A Kitty Hawk Mounting Arm only.
PTSB1SZ	Single Pole Tenon Spoke Bracket, 2½" Horizontal Mounting Arm, Bronze Powdercoat Finish, Includes Hardware.
PTSB290SZ	Twin Pole Tenon Spoke Bracket, 2½" Horizontal 90° Mounting Arms, Bronze Powdercoat Finish, Includes Hardware.
PTSB2180SZ	Twin Pole Tenon Spoke Bracket, 2½" Horizontal 180° Mounting Arms, Bronze Powdercoat Finish, Includes Hardware.
PTSB390SZ*	Triple Pole Tenon Spoke Bracket, 2½" Horizontal 90° Mounting Arms, Bronze Powdercoat Finish, Includes Hardware.
PTSB3120SZ*	Triple Pole Tenon Spoke Bracket, 2½" Horizontal 120° Mounting Arms, Bronze Powdercoat Finish, Includes Hardware.
PTSB490SZ*	Quad Pole Tenon Spoke Bracket, 2½" Horizontal 90° Mounting Arms, Bronze Powdercoat Finish, Includes Hardware.

*Non-stock item. Consult factory for lead time.

Accessories (Order Separately, Field Installed)	
P18131	Twist Lock Non-Shorting (Open) Cap Disconnects Service to Fixture for Temporary or Permanent Disabling (Fixture Always Off). IP65, 480V Maximum.
P18132	Twist Lock Shorting Cap Provides Fixed Service to Fixture (Fixture Always On). IP65, Rated Load 7200w Tungsten.
P18140	110-120VAC Instant Twist Lock Photocell
P18150	120VAC Time Delay Twist Lock Photocell
P18152	277VAC Time Delay Twist Lock Photocell
P18156	120-277VAC Universal Twist Lock Photocell
P18157	480VAC Time Delay Twist Lock Photocell. For 480V use only.
ACCHSG1Z	Die Cast Accessory Housing for Installing Sensors or Other Lighting Controls, Bronze Powdercoat Finish
KH45GSZ	Aluminum Glare/House Side Shield, Bronze Powdercoat Finish, Includes Hardware.
KH45WG	Wire Guard, Stainless Steel Construction, Includes Hardware.
ACCHSG3	Bronze Polycarbonate Housing for Installing Sensors, Includes Sensor Bracket and Gasket.

Replacement Parts (Order Separately, Field Installed)	
KH45GL	Tempered Clear Flat Glass Lens.
KH45GLSS	SoftLED Flat Glass Lens
KH45GLP	Tempered Prismatic Flat Glass Lens.
KH45AZ	Kitty Hawk Mounting Arm, Mounts Directly to Square Poles, Bronze Powdercoat Finish
FL73SFXZ	External Mount Slipfitter, Die Cast, Bronze Powdercoat Finish
ALMAAZ	Pole Mounting Arm Adaptor, Fits 2½" Arm, Includes Hardware, Bronze Powdercoat Finish
KH45YZ	Yoke, Stamped Heavy-Duty Steel, Bronze Powdercoat Finish
FL73BRZ	Two-Piece Swivel Bracket, Stamped Steel, Bronze Powdercoat Finish
WBR2Z	Wall Bracket, Heavy-Duty Stamped Steel, Includes Hardware.
P17117	Internal Microwave Sensor with Dimming, 120-277VAC, 50/60Hz. See P17117 Specification Page for Details.
P17123	Internally Mounted Microwave On/Off Motion Sensor for Mounting Heights of 8' to 19', 120-277VAC, 50/60Hz

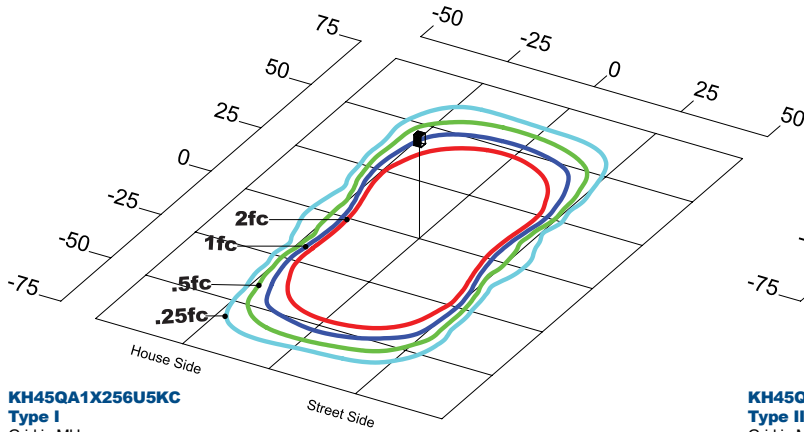
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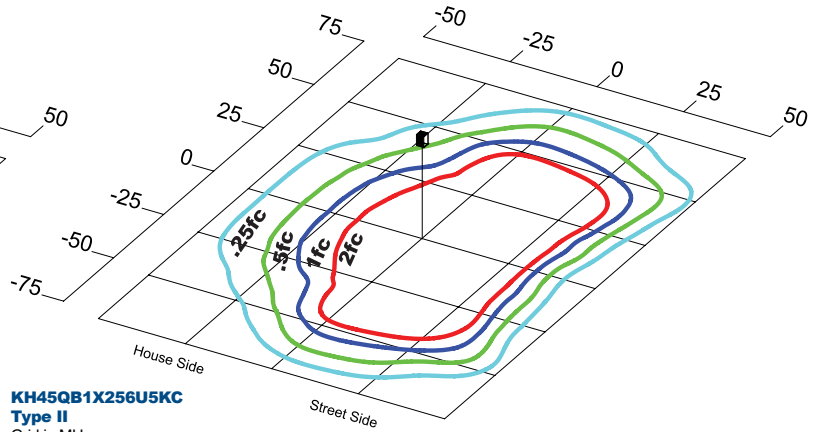
Photometric Data



KH45QA1X256U5KC

Type I

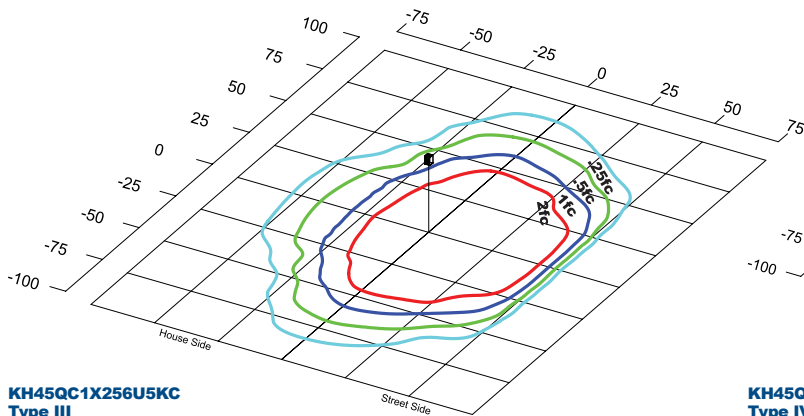
Grid in MH
MH=25 Feet



KH45QB1X256U5KC

Type II

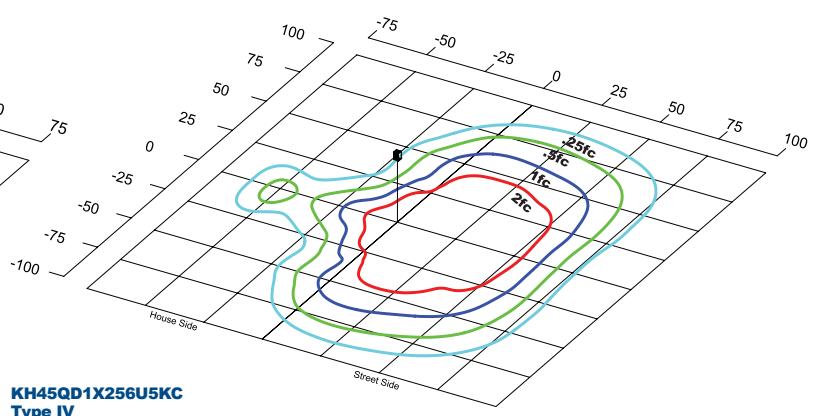
Grid in MH
MH=25 Feet



KH45QC1X256U5KC

Type III

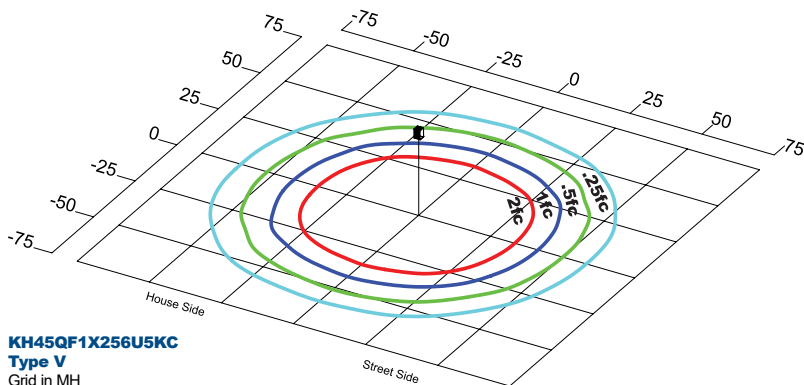
Grid in MH
MH=25 Feet



KH45QD1X256U5KC

Type IV

Grid in MH
MH=25 Feet



KH45QF1X256U5KC

Type V

Grid in MH
MH=25 Feet

Specifications subject to change without notice. Rev. 112119

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EasyLED Large Bentley Kitty Hawk Area, Wall, and Flood Light

Photometric Performance

					5000 CCT 80 CRI					4000 CCT 80 CRI					3000 CCT 80 CRI				
LED Board Watts	Drive Current (mA)	Input Watts	Optics		Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
EasyLED 167w	525	179	A	Type I	22,487	126	4	0	3	21,644	121	4	0	3	-	-	-	-	-
			B	Type II	21,452	120	3	0	3	20,648	115	3	0	3	-	-	-	-	-
			C	Type III	23,566	132	3	0	3	22,682	127	3	0	3	21,798	122	3	0	3
			D	Type IV	23,888	134	3	0	4	22,992	129	3	0	4	-	-	-	-	-
			F	Type V	22,479	126	4	0	2	21,636	121	4	0	2	20,793	116	4	0	1
EasyLED 256w	525	275	A	Type I	34,471	125	5	0	3	33,178	121	5	0	3	-	-	-	-	-
			B	Type II	32,884	120	3	0	3	31,651	115	3	0	3	-	-	-	-	-
			C	Type III	36,125	132	4	0	4	34,770	127	4	0	4	33,416	122	4	0	4
			D	Type IV	29,808	109	3	0	4	28,690	104	3	0	4	-	-	-	-	-
			F	Type V	34,459	125	5	0	2	33,167	121	5	0	2	31,875	116	5	0	2

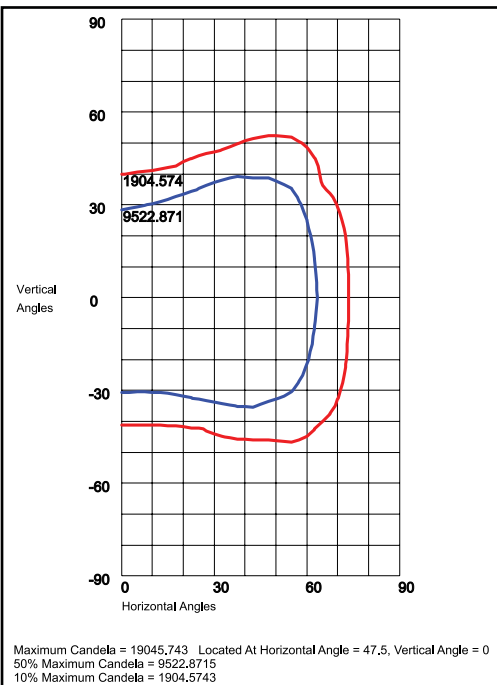
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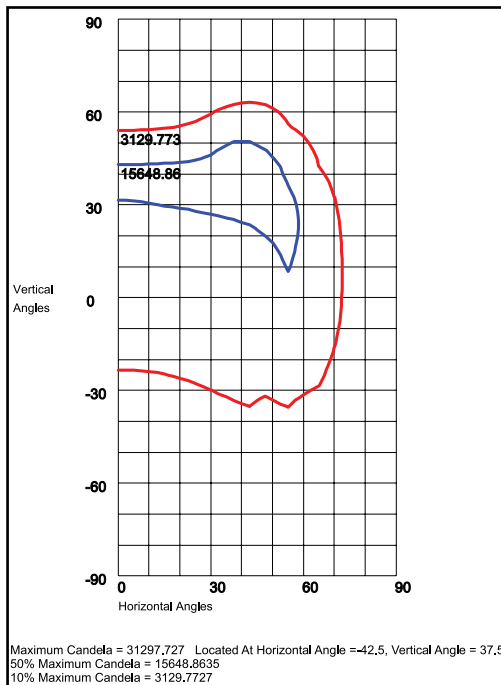
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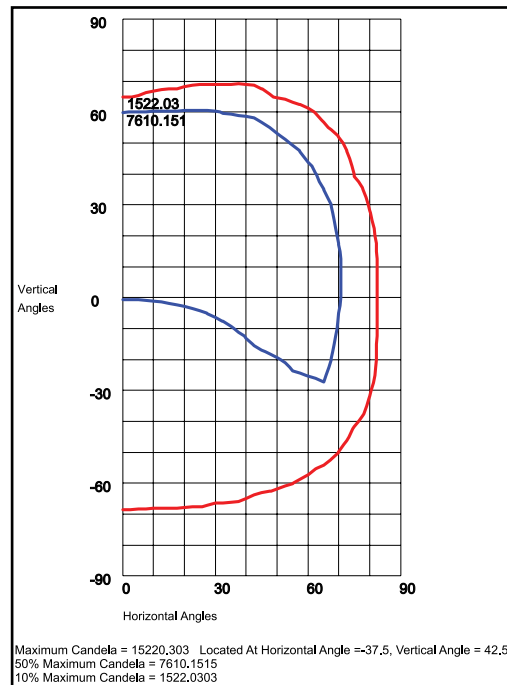
Photometric Data



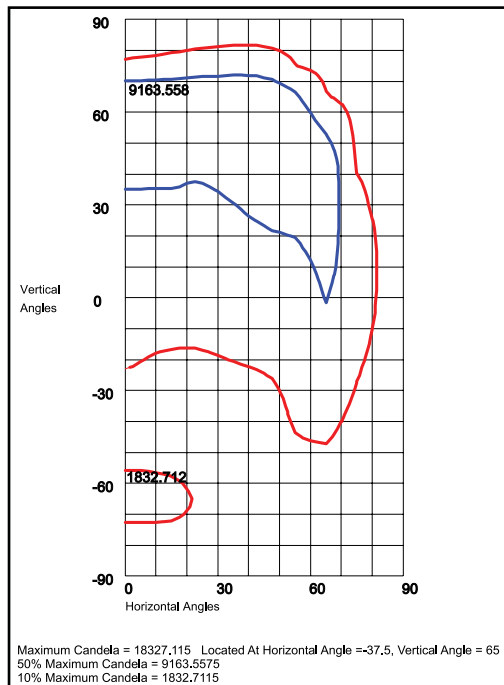
KH45QA1X256U5KC
130"H x 70"V, NEMA 7H x 5V



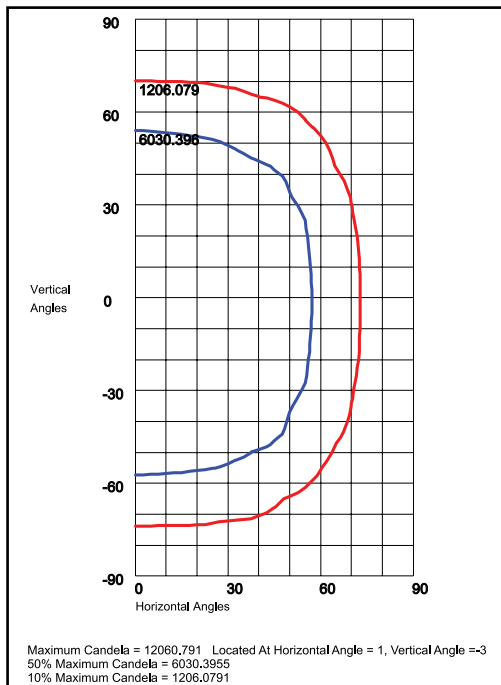
KH45QB1X256U5KC
110"H x 30"V, NEMA 7H x 6V



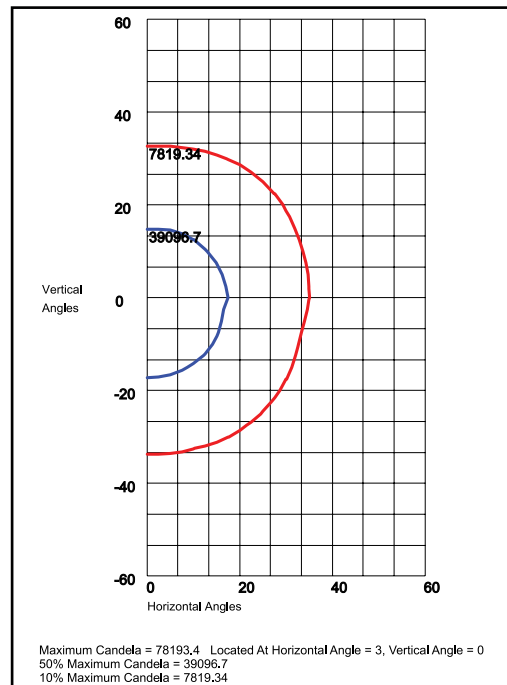
KH45QC1X256U5KC
120"H x 70"V, NEMA 7H x 7V



KH45QD1X256U5KC
110"H x 50"V, NEMA 7H x 6V



KH45QF1X256U5KC
115"H x 110"V, NEMA 7H x 7V



KH45QI1X256U5KC
30"H x 30"V, NEMA 4H x 4V

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Photometric Performance

LED Board Watts	Drive Current (mA)	Input Watts	Optics	5000 CCT 80 CRI		4000 CCT 80 CRI		3000 CCT 80 CRI	
				Lumens	LPW	Lumens	LPW	Lumens	LPW
EasyLED 167w	525	179	A 130°H x 70°V, NEMA 7H x 5V	22,472	126	21,629	121	-	-
			B 110°H x 30°V, NEMA 7H x 6V	21,481	120	20,675	116	-	-
			C 120°H x 70°V, NEMA 7H x 7V	23,397	131	22,520	126	21,642	121
			D 110°H x 30°V, NEMA 6H x 5V	23,625	132	22,739	127	-	-
			F 115°H x 110°V, NEMA 7H x 7V	22,537	126	21,692	121	20,846	117
			I 30°H x 30°V, NEMA 4H x 4V	24,160	135	23,252	130	-	-
EasyLED 256w	525	275	A 130°H x 70°V, NEMA 7H x 5V	34,448	125	33,156	121	-	-
			B 110°H x 30°V, NEMA 7H x 6V	32,928	120	31,694	115	-	-
			C 120°H x 70°V, NEMA 7H x 7V	35,866	131	34,521	126	33,176	121
			D 110°H x 50°V, NEMA 7H x 6V	29,483	107	28,377	103	-	-
			F 115°H x 110°V, NEMA 7H x 7V	34,547	126	33,252	121	31,956	116
			I 30°H x 30°V, NEMA 4H x 4V	37,035	135	35,647	130	-	-

Projected Lumen Maintenance

Data shown for 5000 CCT			Compare to MH			
TM-21-11	Input Watts	Initial	25,000 Hrs	50,000 Hrs	100,000 Hrs	Calculated LED Life
L70 Lumen Maintenance @ 25°C / 77°F	All wattages up to and including 275w	1.00	0.97	0.95	0.90	290,000
L70 Lumen Maintenance @ 50°C / 122°F		1.00	0.94	0.88	0.76	84,000
L80 Lumen Maintenance @ 40°C / 104°F		1.00	0.95	0.91	0.81	108,000

NOTES:

- Projected per IESNA TM-21-11. Data references the extrapolated performance projections for the 525mA base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.
- Compare to MH box indicates suggested Light Loss Factor (LLF) to be used when comparing to Metal Halide (MH) systems.

Our Product

[▶ AC/AC Adapter indoor use](#)[▶ AC/AC Adapter outdoor use](#)[▶ AC/DC Adapter indoor use](#)[▶ AC/DC Adapter outdoor use](#)[▶ LED Driver -new](#)[▶ Battery Chargers](#)[▶ GARDEN LIGHT power Units](#)[▶ Photocell & Timer Sensor](#)[▶ Controllers for garden light use](#)[▶ Photocell Switch-new](#)[▶ Built-in transformers](#)[▶ Switching Adapters](#)[▶ BALLAST](#)[Our Product > Surge Protection Device-new](#)

SPD277-10K



SPD277-10K.1

100-277 Vac

ELECTRONICAL SPECIFICATION :

- Input Voltage : 120 ~ 277Vac, 50 ~ 60Hz
- Clamping Voltage : 320V
- Maximum Energy 10/1000 μ s : 220Joules
- Maximum Peak Current 8/20 μ s : I_n = 3KA, I_{max} = 10KA
- Protects against surges according to IEEE C62.41.2 C High
- Protects against surges according to ANSI C136.2
- UL1449 Recognized Component in the United States and Canada
- 3-leaded device : L-G, L-N, and N-G in accordance with IEEE / ANSI C62.41.2 guidelines

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Features

- Ultra High Efficiency (Up to 94%)
- Constant Current Output
- 0-10V Dimmable and Dim-to-Off
- Standby Power ≤ 1.5 W
- Input surge protection: 4kV line-line, 6kV line-earth
- All-Around Protection: OVP, SCP, OTP
- Waterproof (IP67) and UL Dry / Damp / Wet Location
- SELV Output
- TYPE HL, for use in a Class I, Division 2 hazardous (Classified) location



Description

The *EUC-320SxxxDT(ST)* series is a 320W, constant-current LED driver that operates from 90-305 Vac input with excellent power factor. Created for high bay, high mast, arena and roadway lights, it provides a dim-off mode with low standby power. The high efficiency of these drivers and compact metal case enables them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

Models

Output Current	Input Voltage Range(1)	Output Voltage Range	Max. Output Power	Typical Efficiency (2)	Power Factor		Model Number
					120Vac	220Vac	
1050 mA	90 ~ 305 Vac 127~300 Vdc	152~304Vdc	320 W	94.0%	0.99	0.96	EUC-320S105DT(ST)
1400 mA	90 ~ 305 Vac 127~300 Vdc	114~228Vdc	320 W	94.0%	0.99	0.96	EUC-320S140DT(ST)
2100 mA	90 ~ 305 Vac 127~300 Vdc	76~152 Vdc	320 W	94.0%	0.99	0.96	EUC-320S210DT(ST)
2800 mA	90 ~ 305 Vac 127~300 Vdc	57~114 Vdc	320 W	93.0%	0.99	0.96	EUC-320S280DT(ST)
4900 mA	90 ~ 305 Vac 127~300 Vdc	33 ~65 Vdc	320 W	93.0%	0.99	0.96	EUC-320S490DT(ST) ⁽³⁾
6200 mA	90 ~ 305 Vac 127~300 Vdc	26 ~52 Vdc	320 W	93.0%	0.99	0.96	EUC-320S620DT(ST) ⁽³⁾

Notes: (1) UL, FCC certified input voltage range: 100-277Vac /127-300Vdc; other certified input voltage range except UL & FCC: 100-240Vac /127-250Vdc

(2) Measured at full load and 220 Vac input.

(3) SELV output

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 Vac	-	305 Vac	127~300 Vdc
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.75 MIU	UL8750; 277Vac/ 60Hz, grounding effectively
	-	-	0.70 mA	IEC60598-1; 240Vac/ 60Hz, grounding effectively

Input Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Input AC Current	-	-	4.0 A	Measured at full load and 100Vac input.
	-	-	2.0 A	Measured at full load and 220Vac input.
Inrush Current(I^2t)	-	-	3.5 A ² s	At 220Vac input 25°C cold start, duration= 4mS, 10%Ipk-10%Ipk. See Inrush Current Waveform for the details.
PF	0.90	-	-	At 100-277Vac, 75%load-100%load (240-320W)
THD	-	-	20%	

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%Io	-	5%Io	At full load condition
Total Output Current Ripple (pk-pk)	-	5%Io	10%Io	At full load condition. 20 MHz BW
Output Current Ripple at < 200 Hz (pk-pk)	-	2%Io	-	At full load condition. Only this component of ripple is associated with visible flicker.
Startup Overshoot Current	-	-	10%Io	At full load condition.
No load Output Voltage Io = 1050 mA Io = 1400 mA Io = 2100 mA Io = 2800 mA Io = 4900 mA Io = 6200 mA	- - - - - -	- - - - - -	334 V 255 V 169 V 128 V 74 V 58 V	
Line Regulation	-	-	±0.5%	Measured at full load
Load Regulation	-	-	±1.5%	
Turn-on Delay Time	-	0.5 s	1.0 s	Measured at 120V and 220Vac input.
Temperature Coefficient of Io	-	0.03%/°C	-	Case temperature = 0°C ~Tc max
12V Auxiliary Output Voltage	10.8 V	12 V	13.2 V	
12V Auxiliary Output Source Current	0 mA	-	200 mA	Return terminal is "Dim-"

Note: All specifications are typical at 25 °C unless stated otherwise.

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency at 120 Vac input: Io = 1050 mA Io = 1400 mA Io = 2100 mA Io = 2800 mA Io = 4900 mA Io = 6200 mA	90.0% 90.0% 89.5% 89.0% 88.5% 88.5%	92.0% 92.0% 91.5% 91.0% 90.5% 90.5%	- - - - - -	Measured at full load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.)

General Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Efficiency at 220 Vac input: $I_O = 1050 \text{ mA}$ $I_O = 1400 \text{ mA}$ $I_O = 2100 \text{ mA}$ $I_O = 2800 \text{ mA}$ $I_O = 4900 \text{ mA}$ $I_O = 6200 \text{ mA}$	92.0% 92.0% 92.0% 91.0% 91.0%	94.0% 94.0% 94.0% 93.0% 93.0%	- - - - -	Measured at full load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.)
Efficiency at 277 Vac input: $I_O = 1050 \text{ mA}$ $I_O = 1400 \text{ mA}$ $I_O = 2100 \text{ mA}$ $I_O = 2800 \text{ mA}$ $I_O = 4900 \text{ mA}$ $I_O = 6200 \text{ mA}$	92.0% 92.0% 92.0% 92.0% 91.5% 91.5%	94.0% 94.0% 94.0% 94.0% 93.5% 93.5%	- - - - - -	Measured at full load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.)
Standby power	-	-	1.5 W	Measured at 230Vac/50Hz; Dimming off
MTBF	-	202,000 Hours	-	Measured at 220Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F)
Lifetime	-	103,000 Hours	-	Measured at 220Vac input, 80%Load and 60°C case temperature; See lifetime vs. Tc curve for the details
Operating Case Temperature for Safety Tc_s	-40°C	-	+88°C	
Operating Case Temperature for Warranty Tc_w	-40°C	-	+70°C	
Storage Temperature	-40°C	-	+85°C	Humidity: 5%RH to 100%RH
Dimensions Inches (L × W × H) Millimeters (L × W × H)	8.82 × 3.86 × 1.75 224 × 98 × 44.5			With mounting ear 9.88 × 3.86 × 1.75 251 × 98 × 44.5
Net Weight	-	1600 g	-	

Note: All specifications are typical at 25 °C unless stated otherwise.

Dimming Specifications

Parameter	Min.	Typ.	Max.	Notes
Absolute Maximum Voltage on the Vdim (+) Pin	-20 V	-	20 V	
Source Current on Vdim (+)Pin	100 μA	140 μA	180 μA	
Dimming Output Range	10% I_O	-	100% I_O	
Recommended Dimming Input Range	0 V	-	10 V	
Dim off Voltage	0.2 V	0.4 V	0.6 V	
Dim on Voltage	0.4 V	0.6 V	0.8 V	
Hysteresis	-	0.2 V	-	

Note: All specifications are typical at 25 °C unless stated otherwise.

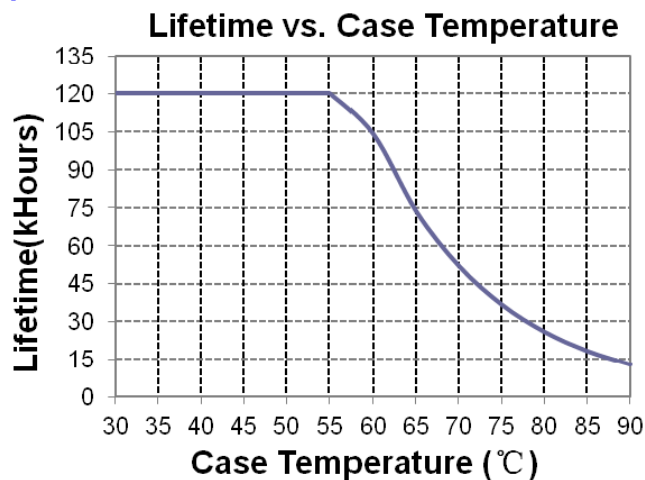
Safety & EMC Compliance

Safety Category	Standard
UL/CUL	UL8750, CAN/CSA-C22.2 No. 250.13
CE	EN 61347-1, EN61347-2-13
EMI Standards	Notes
EN 55015 ⁽¹⁾	Conducted emission Test & Radiated emission Test
EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker
FCC Part 15 ⁽¹⁾	ANSI C63.4 Class B
	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: [1] this device may not cause harmful interference, and [2] this device must accept any interference received, including interference that may cause undesired Operation.
EMS Standards	Notes
EN 61000-4-2	Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4	Electrical Fast Transient / Burst-EFT
EN 61000-4-5	Surge Immunity Test: AC Power Line: line to line 4 kV, line to earth 6 kV ⁽²⁾
EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
EN 61000-4-8	Power Frequency Magnetic Field Test
EN 61000-4-11	Voltage Dips
EN 61547	Electromagnetic Immunity Requirements Applies To Lighting Equipment

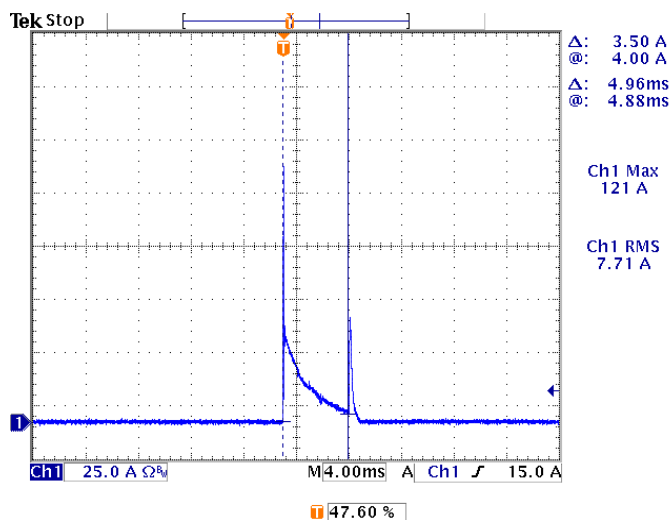
Note: (1) This LED driver meets the EMI specifications above, but EMI performance of a luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

(2) To perform electric strength (hi-pot) testing, the "GDT ground disconnect" (nut and metal lock sheet) on the driver end-cap should be removed temporarily to prevent the internal gas discharge tube from conducting (as allowed by IEC 60598-1 Clause 10.2). After testing is completed, these items must be reinstalled to restore line-to-earth surge protection and secure the end cap.

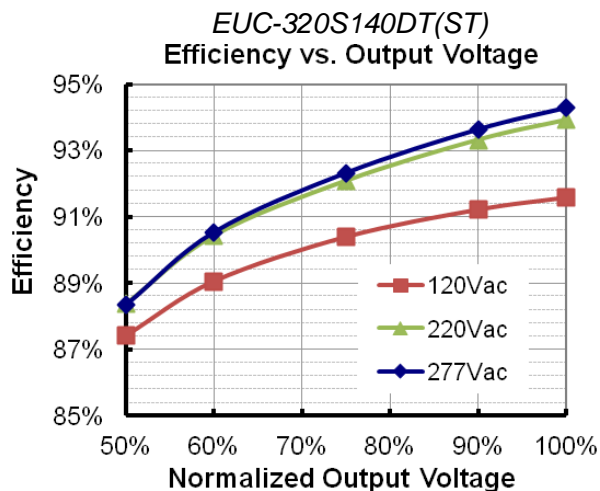
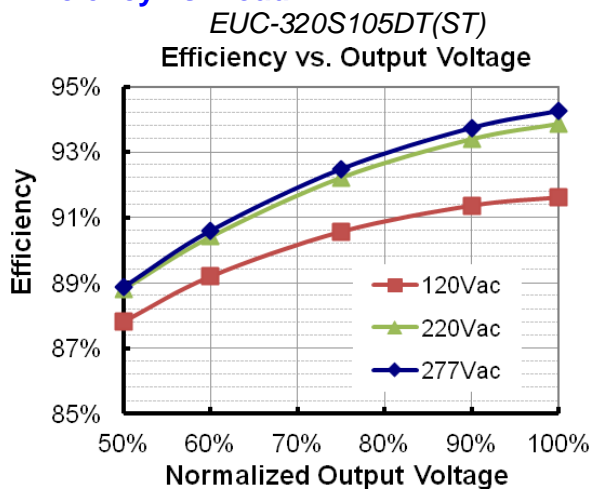
Lifetime vs. Case Temperature

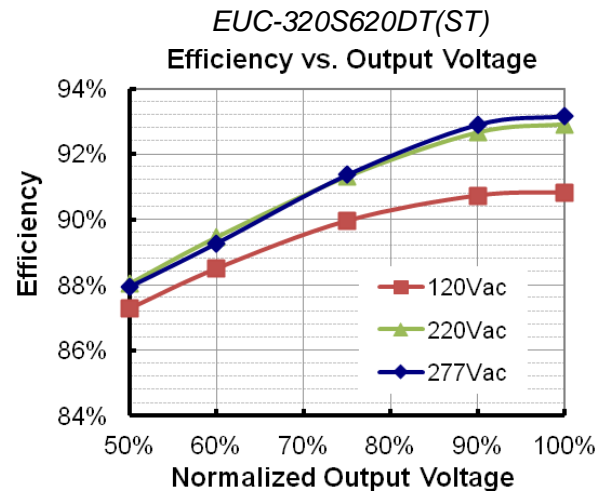
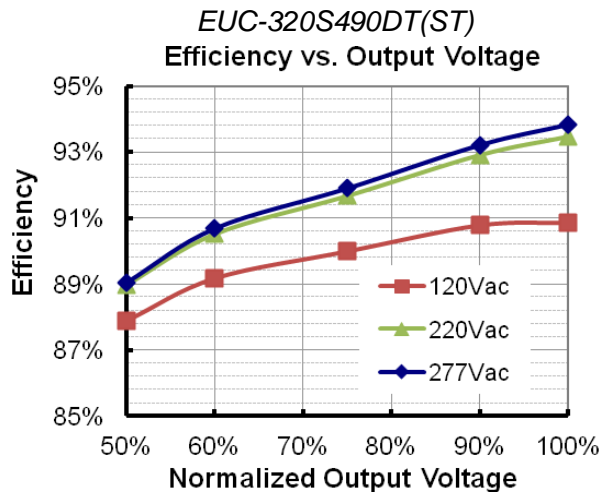
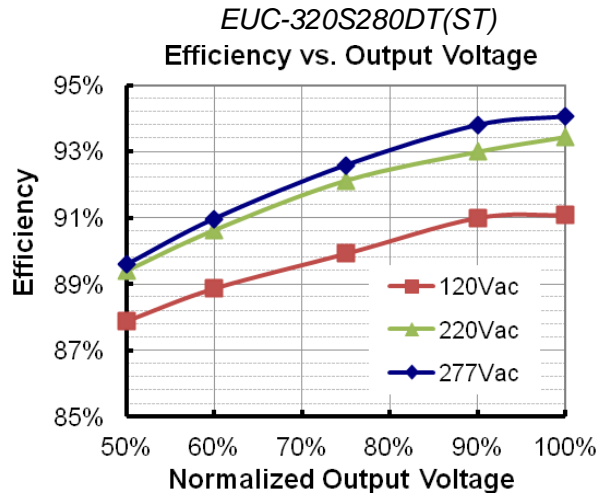
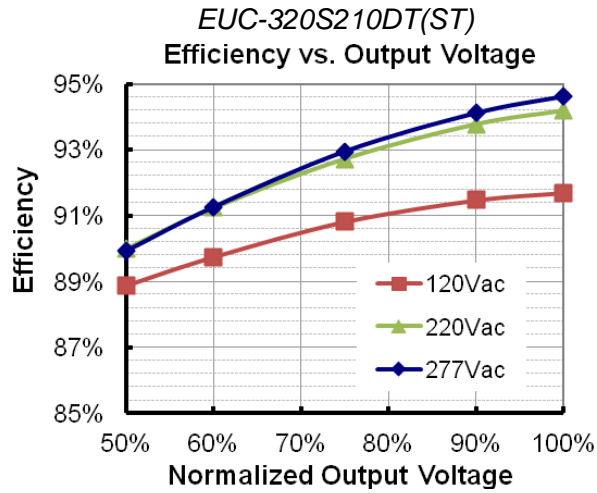


Inrush Current Waveform

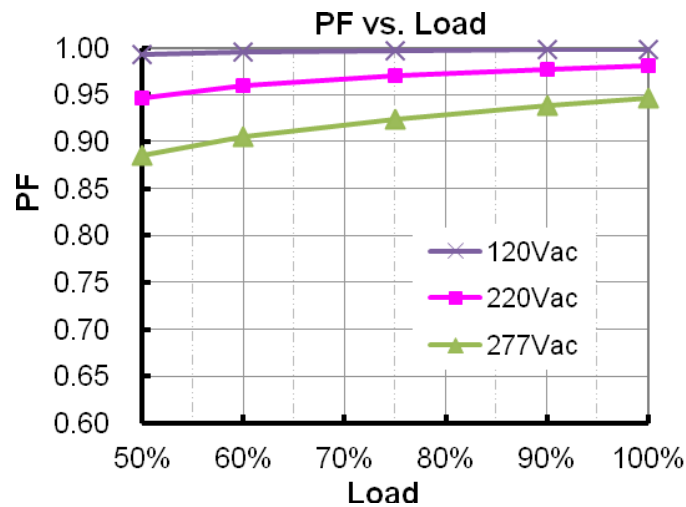


Efficiency vs. Load

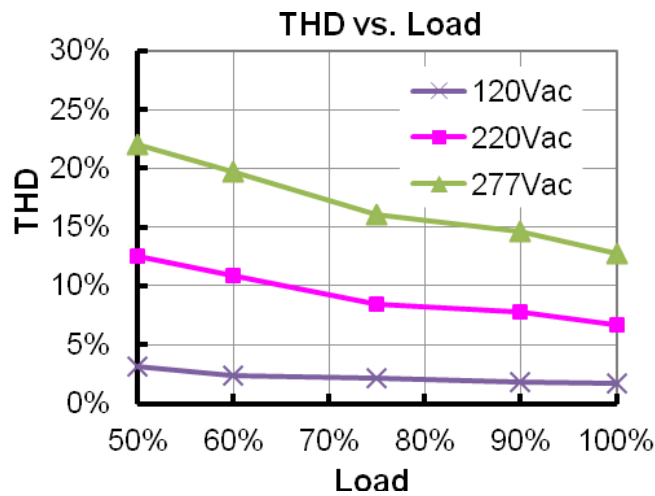




Power Factor



Total Harmonic Distortion



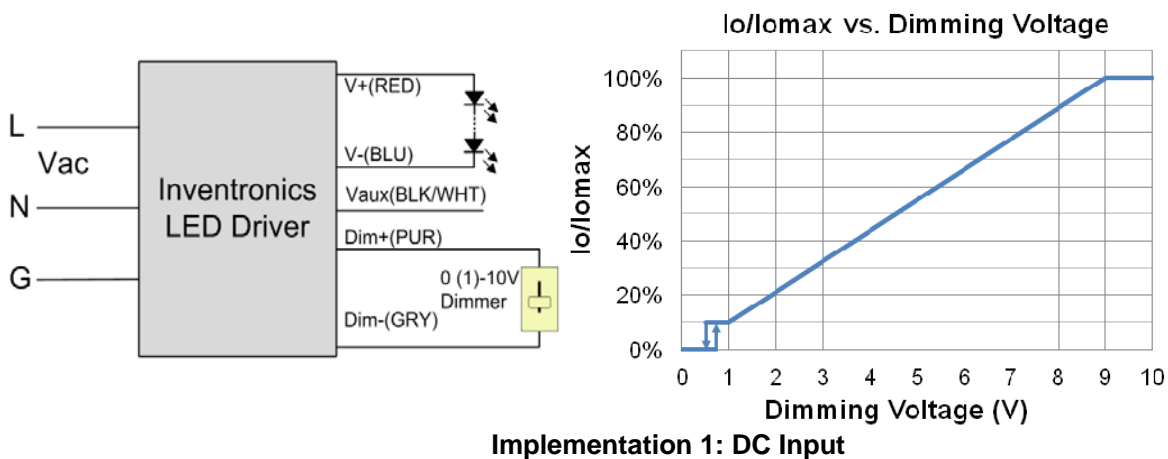
Protection Functions

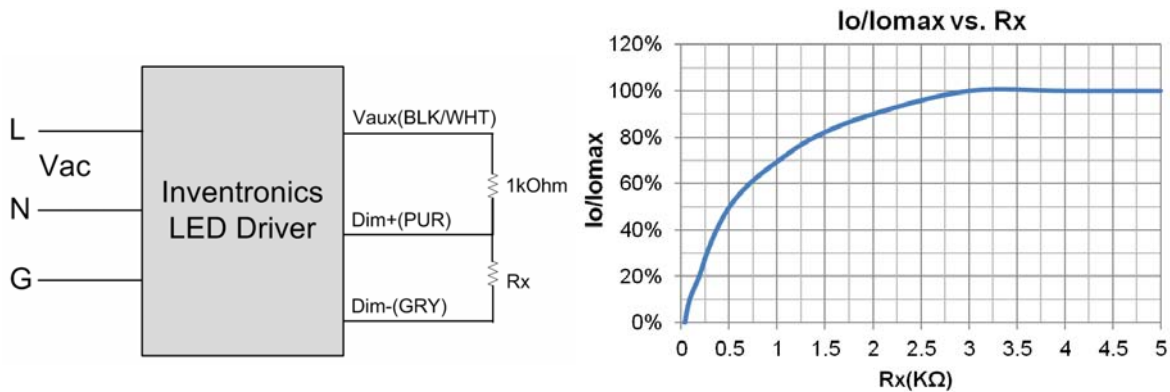
Parameter	Notes
Over Temperature Protection	Decreases output current, returning to normal after over temperature is removed.
Short Circuit Protection	Auto Recovery. No damage will occur when any output is short circuited. The output shall return to normal when the fault condition is removed.
Over Voltage Protection	Limits output voltage at no load and in case the normal voltage limit fails.

Dimming

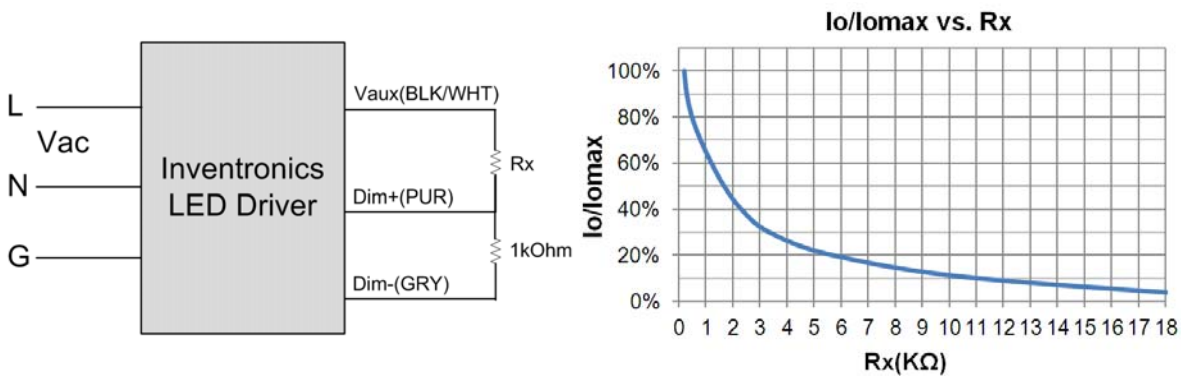
● 0-10V Dimming

Recommended implementations of the dimming control are provided below.





Implementation 2: External Resistor



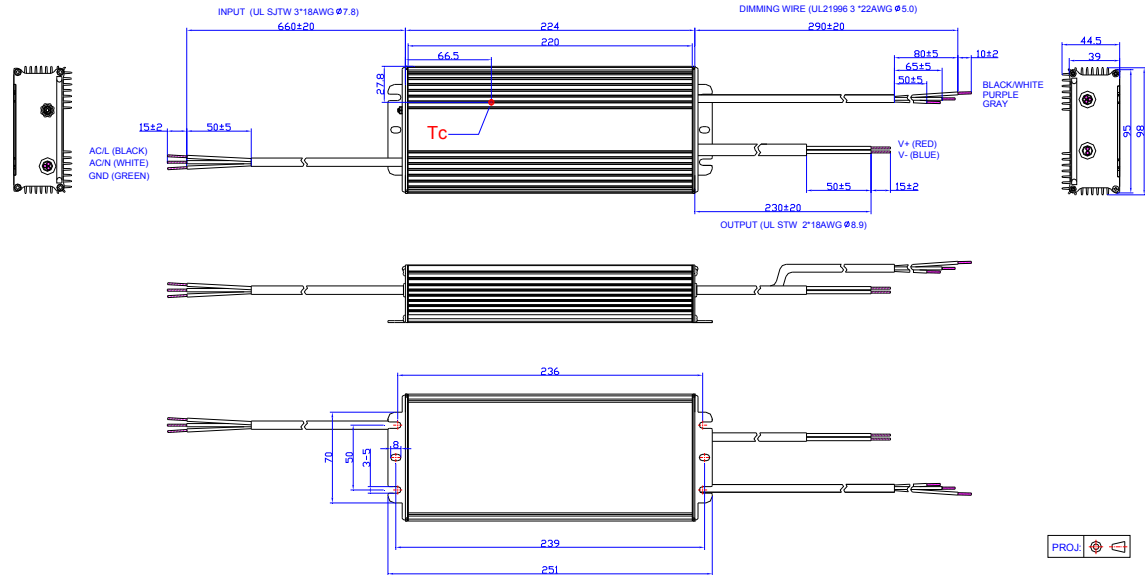
Implementation 3: External Resistor

Notes:

1. The dimmer can also be replaced by an active 0-10V voltage source signal or passive components like resistors and zener.
2. Do NOT connect Dim- to the output V- or V+, otherwise the driver will not work properly.
3. If 0-10V dimming is not used, Dim + can be either open or connected to Vaux.

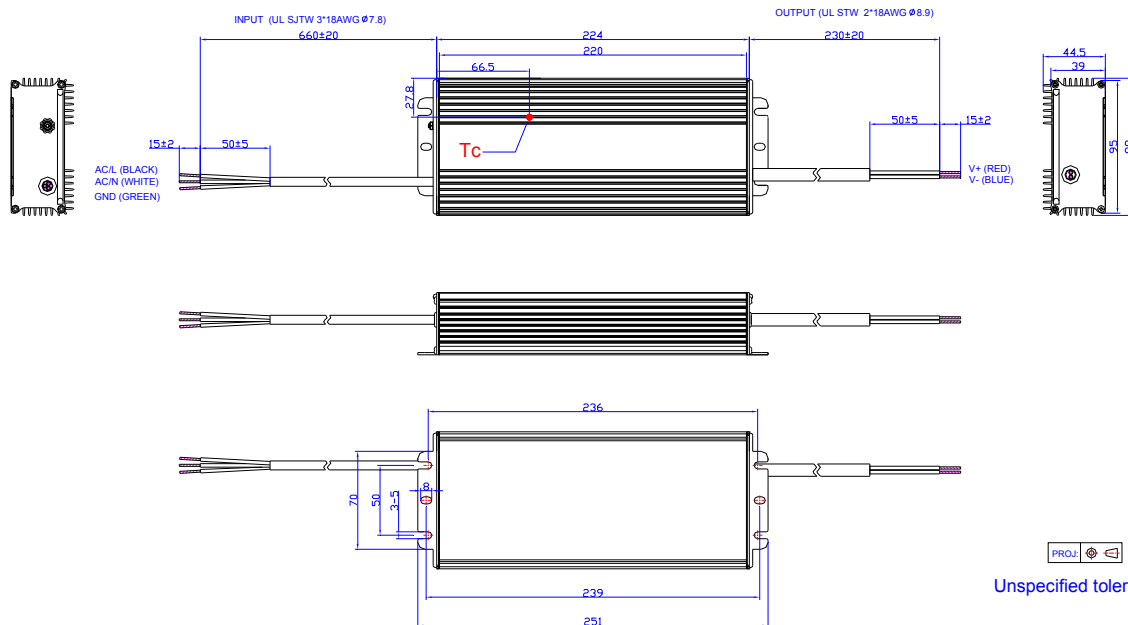
Mechanical Outline

EUC-320S105DT



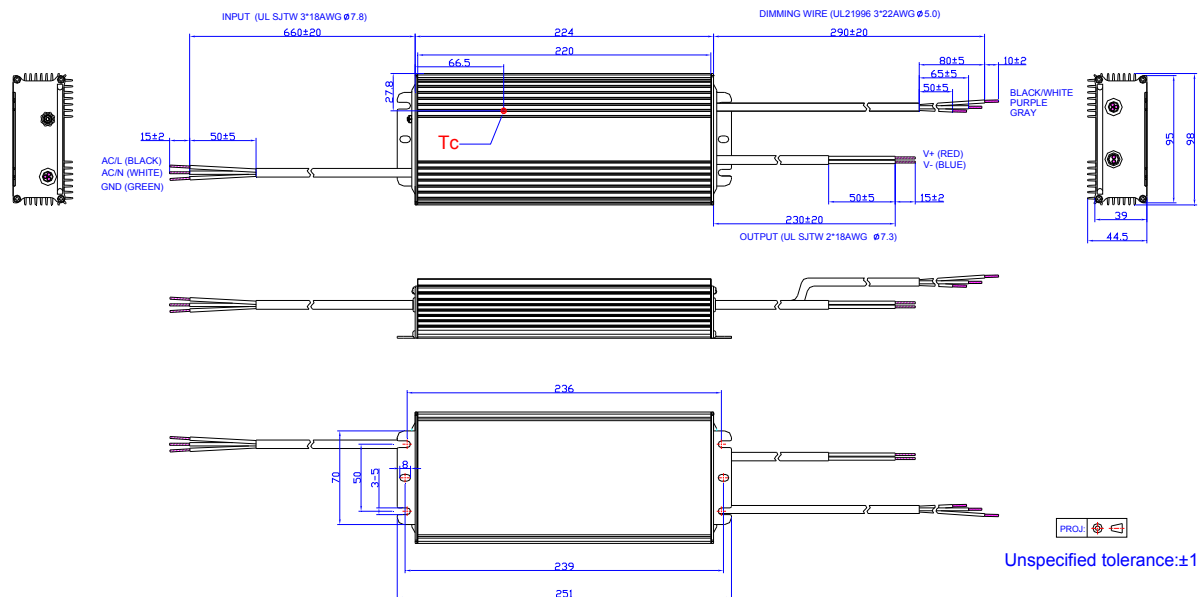
Unspecified tolerance:±1

EUC-320S105ST

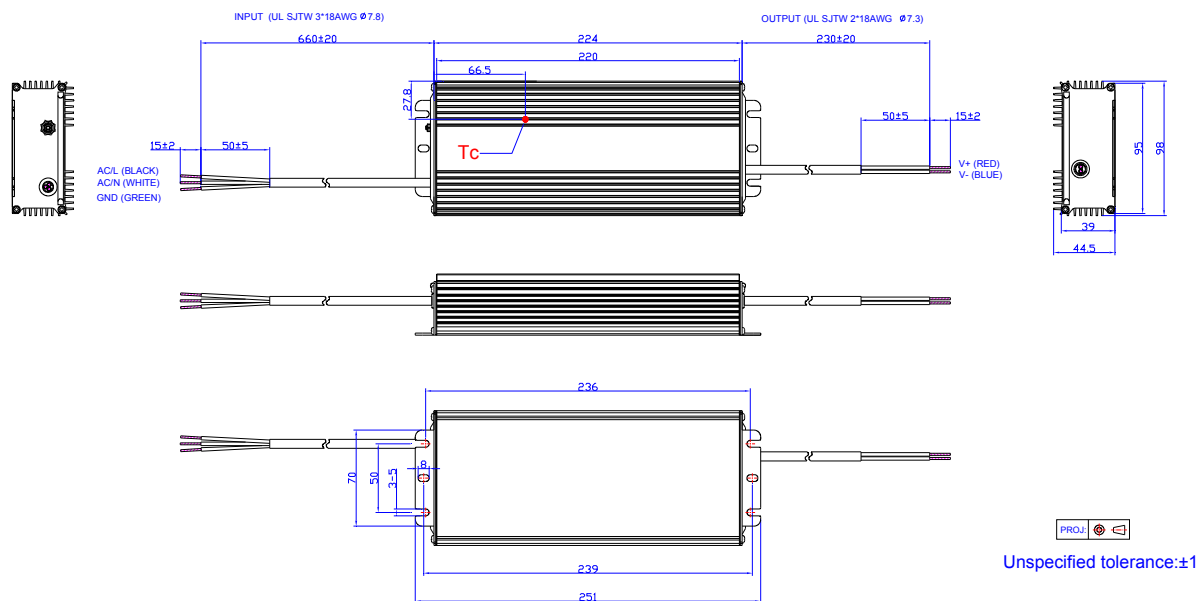


Unspecified tolerance:±1

EUC-320SxxxDT(except EUC-320S105DT)



EUC-320SxxxST(except EUC-320S105ST)



RoHS Compliance

Our products comply with the European Directive 2011/65/EC, calling for the elimination of lead and other hazardous substances from electronic products.

Revision History

Change Date	Rev.	Description of Change		
		Item	From	To
2014-08-06	A	Datasheets Release	/	/
2015-03-09	B	Features	Input Surge Protection: 4kV line-line, 6kV line-earth	Added
		Output Current Ripple(pk-pk)	Output Current Ripple(pk-pk)	Total Output Current Ripple (pk-pk)
		Output Current Ripple at < 200 Hz (pk-pk)	/	Added
		Case Temperature	Case Temperature	Operating Case Temperature for Safety Tc_s
		Case Temperature	90°C	88°C
		Operating Case Temperature for Warranty Tc_v	/	Added
		General Specifications	Storage Temperature	Added
		Environmental Specifications	/	Deleted
		Safety & EMC Compliance	EN 55015 EN 61000-3-2 EN 61000-3-3	Deleted
		Derating	/	Deleted
2015-11-30	C	CE	/	Added
		External Grounding Screw Solution	/	/
		Safety & EMC Compliance	/	Updated
		Mechanical Outline	/	Updated
2017-06-19	D	Temperature Coefficient of I _o set	/	Updated
		General Specifications	With mounting ear	Added
		Safety & EMC Compliance	/	Updated
		Mechanical Outline	/	Updated



Certificate of Compliance

Certificate: 70207825

Master Contract: 233794 (233794)

Project: 70207825

Date Issued: 2017-02-16

Issued to: Quality Sourcing Services Inc
280 Scarlet Blvd
Oldsmar, Florida 34677-0021
USA
Attention: Dan Wetherington

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Issued by: *David Lemaux*
David Lemaux

PRODUCTS

CLASS - C340202 - LUMINAIRES - LED-Surface Mounted

CLASS - C340282 - LUMINAIRES - LED-Surface Mounted - Certified to US Stds

Model(s) KH45 KH25 Series LED Luminaires, suitable for wet locations,
rated 120-480V, 50/60Hz, 290W max.

APPLICABLE REQUIREMENTS

CSA C22.2 No. 250.0-18 – Luminaires

UL 1598, 4th Ed. – Luminaires