DUAL|LITE®

Dynamo DYN Series
NEMA 4X/C1D2/C2D1 INDUSTRIAL LED EMERGENCY LIGHT

DYNAMO

FEATURES

- Class 1, Division 2, Class 2, Division 1 Certified
- High Lumen, High Mounting Height
- 90 minute full lumen output
- Single-phase
- Wet or NEMA 4X application
- Food Processing Option
- Long-Life Lithium Iron Phosphate Battery
- Cold Temperature Application with Heater
- Matching Remote Heads

Patent Pending

UL924 | NFPA 70 | NFPA 101 | SPECTRON® Self-Testing/Self-Diagnostic Electronics System | UL LISTED

SPECIFICATIONS

APPLICATION

- Highly versatile superior lumen output, industrial application emergency lighting unit, designed to provide a minimum of 90 minutes illumination when primary power is lost.
- Includes micro-controller based 3-stage charger and Lithium Iron Phosphate (LiFePO4) battery.
- Specifically designed for demanding environments, high reliability operation in industrial settings such as wet location or hose-down, food processing, food storage, production facilities, chemical plant and wastewater treatment.
- Hazardous location emergency lighting units with optional C1D2 listed for use in NEC Class I, Division 2, Groups A, B, C and D and Class 1, Zone 2, Groups IIA, IIB, IIB+H2, IIC.
- Hazardous Location Emergency Lighting Units with optional C2D1 listed for use in NEC Class II, Division 1, Groups E, F and G, and Zone 20, 21 and Class 3.

CONSTRUCTION

- Flame-rated, UV stable thermoplastic housing which is fully gasketed and corrosion resistant with a gray finish.
- The DYN series housing, covers, remote housing and shield are made of polycarbonate.
- Lamp-heads are made of die-cast aluminum for thermal dissipation.
- LED lenses are made of polycarbonate.
- The Food Processing (FP) and Class 2, Division 1 (C2D1) optioned DYN includes a clear polycarbonate shield which fully covers the lamp-heads.

INSTALLATION

- Includes a universal mounting plate which facilitates mounting to a truss or I-beam, pole, column, or wall.
- Special bracket included to ensure positive pole gripping when using bands.
- In wet or NEMA 4X applications, use UL listed water tight conduit fittings that meet the requirements of the UL 514B Standard for Conduit Tubing and Cable Fittings when using knockouts on the side or top of unit.
- All fittings supplied by others. C1D2 and C2D1 listed models include 2 each hazardous location rated conduit hubs with ground provision.
- The DYN Series accepts 120 through 277VAC input at 50 or 60Hz. *Not designed for self-diagnostic operation at 220-240VAC input.*
- Universal mounting plate made of painted stamped steel.

ILLUMINATION

- Provides bright and uniform illumination and is specifically designed for higher mounting heights above 9'.
- Coverage provided by 2 sealed aluminum lamp-heads using 3 high power LEDs each.
- LEDs are located in a specially designed, heat dissipating, fully adjustable lamp-head which can be locked into position.
- Designed for full lumen output across the entire 90 minutes of operation to ensure maximum visibility of the egress path over the full 90 minute discharge period.

COMPLIANCES

- Listed to UL924 Standard, NFPA 101, NFPA 70
- Wet Location, NEMA 4, 4X rated
- UL Sanitation Certified with FP Option
- IP66 rated for 4X models only
- C1D2 and C2D1 optioned products; Listed to Standard 924 and Standard 844 (Hazardous Location)
- NEC Class 1 Division 2 Groups A, B, C, D
- NEC Class 2, Division 1 Groups E, F and G
- NEC Class 3
- CEC T20 Compliant

WARRANTY

- LED Lifetime Warranty
- DYN Standard Model- 3 Year Full
- DYN Spectron Model- 5 Year Full

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DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

ORDERING GUIDE

Example: DYN12I-4X-HTR-FP

YOUR ORDER	**DYN**					

DYN					
Model	**Capacity**	**Self-Diagnostics**	**Application**	**Lamp**	**Accessories**
DYN	**6** 6 Watts[2] **12** 12 Watts[3]	**Blank** Wet Location **I** Spectron® Self Diagnostics	**Blank** Wet Location **4X** NEMA 4X/IP66 Rated **FP** Food Processing Rated[4] **HTR** Heater for Cold Temp[5] **C1D2** Class 1 Div 2[6] **C2D1** Class 2 Div 1[7]	**Blank** 3 Watt LED Lamps **06L** 6 Watt LED lamps[1]	**DYNRS-4X** NEMA 4X Rated Single Head Remote **DYNRD-4X** NEMA 4X Rated Double Head Remote **DYNRS-4X-FP** Food Processing rated Single Head Remote (Includes Polycarbonate Shield) **DYNRD-4X-FP** Food Processing rated Double Head Remote (Includes Polycarbonate Shield) **WGA2** Wire Guard (Does not include Food Processing option) 15"H x 14"L x 7"D **DYNRD-C1D2** Class 1, Div. 2 Remote, 3W heads, 1 conduit hub included **DYNRD-C2D1** Class 2, Div. 1 Remote, 3W heads with shield, 1 conduit hub included

Accessories		
WGA2	Wire Guard - DYN 6/12 (does not include food processing option) 15" H X 14" L X 7" D	

Notes:

1. Only available on DYN with 12 watt capacity
2. DYN6 only available in the following configurations-DYN6, DYN6I, DYN6-4X, DYN6I-4X, DYN6I-4X-HTR, DYN6I-4X-FP, DYN6I-4X-HTR-FP
3. DYN12 only available in the following configurations-DYN12, DYN12I, DYN12-4X, DYN12-4X-FP, DYN12I-4X, DYN12I-4X-HTR, DYN12I-4X-FP, DYN12I-4X-HTR-FP, DYN12-06L, DYN12I-06L, DYN12-4X-06L, DYN12-4X-FP-06L, DYN12I-4X-06L, DYN12I-4X-HTR-06L, DYN12I-4X-FP-06L, DYN12I-4X-HTR-FP-06L
4. FP option must be ordered with 4X option. Example: DYN6I-4X-FP
5. HTR option only available with Spectron®
6. C1D2 Option only available with DYN6I-C1D2, DYN12I-C1D2, and DYN12I-C1D2-06L
7. C2D1 Option only available with DYN6I-C2D1, DYN12I-C2D1, and DYN12I-C2D1-06L which includes shield

Dynamo DYN Series

NEMA 4X/C1D2/C2D1 INDUSTRIAL LED EMERGENCY LIGHT

ELECTRONICS

Upon failure of the normal utility power, a LED driver is automatically activated to power the emergency LED lamp-heads. At resumption of normal utility power, the LED driver is turned off. The battery is recharged through a micro-controller based 3-stage charger. The battery is a maintenance-free Lithium Iron Phosphate (LiFePO4) type. The DYN series accepts dual-voltage input of 120 through 277VAC at 50 or 60 Hz. A low voltage battery disconnect (LVD) feature protects the battery from severe damage during prolonged power failures. Manual testing is available at any time using the push-to-test button. The optional heater features a heating wrap and thermostat to maintain optimal battery temperature during charge or discharge. The DYN remote can be located up to 100' from the source unit using 12 gage wire.

Number of Lamps: 2 lamp-heads with 3 high-power LEDs per head

Lamp Color: Cool White, 5000K

Total Lamp Output: Standard Model, 331 lumens per lamp-head
Optional 6W Lamps, 514 lumens per lamp-head

Rated LED Lifecycle: Greater than 100,000 hrs

STANDARD FEATURES INCLUDE:

- Wet location operation with lock-down head positioning (no shield)
- Sealed external push-to-test switch and AC-on indicator
- Battery re-charge within 24 hours
- AC Lock-out circuit
- Low voltage battery disconnect
- Conduit entry knock-out located at the top center and upper half of each side
- Micro-controller based 3-stage charger
- Flashing service alert code for "Battery Disconnect" or "Charger Fault" in compliance with UL 924

OPTIONAL FEATURE INCLUDE:

- 4X -NEMA4, 4X option fully sealed and gasketed for indoor/outdoor use, splash and hose-down environments and corrosion resistance
- FP- Food processing option is UL Sanitation certified for use in food preparation and storage, and in food service establishments
- HTR- Includes a heating wrap and thermostat to maintain optimal battery temperature in cold environments to -22°F(-30°C)

OPTIONAL SPECTRON INCLUDES:

- Self-diagnostics monitors LED status, LED driver circuit, battery capacity and charger function and displays any fault detection by means of a flashing code
- Self-Test feature automatically runs a 1 minute test once a month and an alternating 30-60 minute test once every 6 months. Multi-color LED indicator provides visible fault detection and charging status
- User initiated 1, or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions (below 80% of nominal AC input voltage)

INPUT POWER CONSUMPTION

	Input Voltage	Amps.	Max. Watts
DYN6	120	0.03	3.40
	277	0.04	3.49
DYN6 with heater	120	0.18	20.94
	277	0.08	21.13
DYN12	120	0.05	5.98
	277	0.04	6.52
DYN12 with heater	120	0.21	25.30
	277	0.09	25.60

Maintenance Mode Power Consumption 120VAC- 0.33W
Maintenance Mode Power Consumption 277VAC- 0.36W

OPERATING TEMPERATURE:

- Wet/NEMA 4X Location Listed: 50° to 122°F(10° to 50°C)
- Heater Option Models: -22° to 122°F(-30° to 50°C)

TEMPERATURE CODES AND MAXIMUM TEMPERATURE RATINGS

Operating Temperature in °C			
Ambient °C	CLASS 1 DIV. 2 A, B, C, D	CLASS 2 DIV. 1 E, F, G	Supply Wire Temp. °C Min.
40	T6	T6	75
50	T5	T6	75

Photometrics available for download on the Dual-Lite website.

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DIMENSIONS

9.78"

4.34"

5.15"

9.78"

11.25"

11.61"

3.54"

6.04"

4.25"

1.24"

5.15"

10.54"

4.94"

3.72"

10.54"

4.94"

3.72"

6.11"

9.75"

11.04"

6.3"

9.75"

11.04"

Current

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without notice. All values are design or typical values when measured under laboratory conditions.

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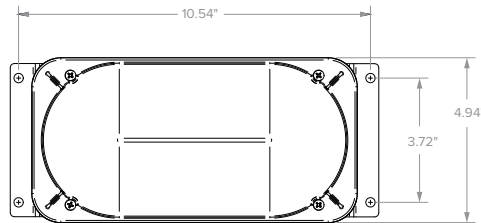Rev 09/26/22

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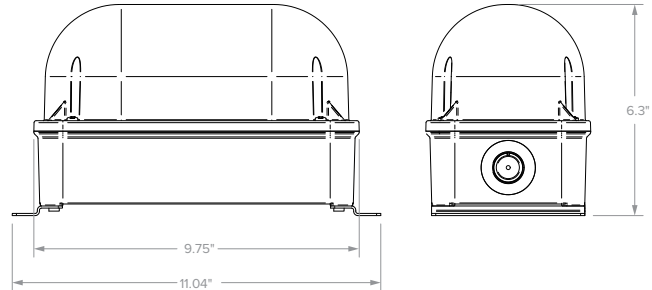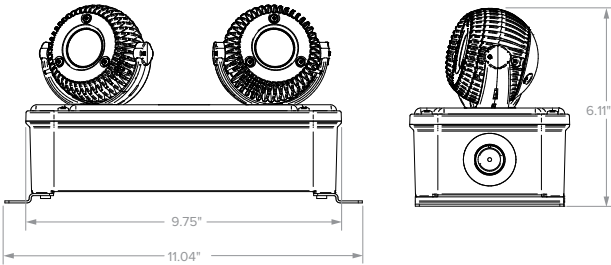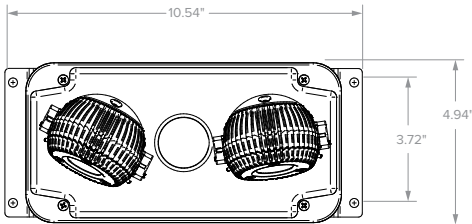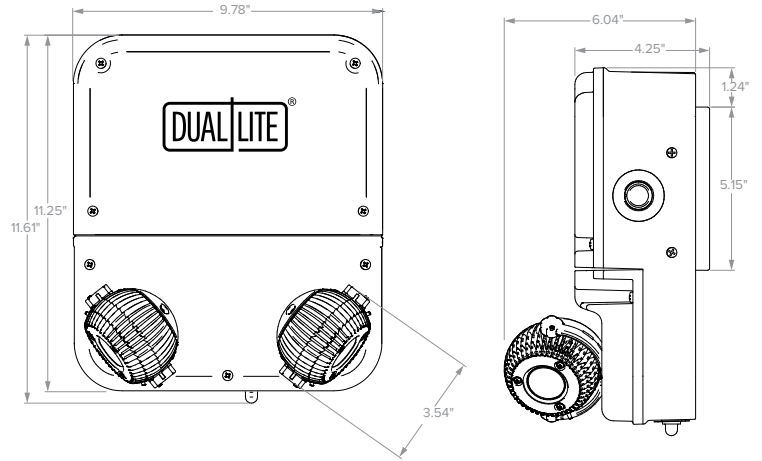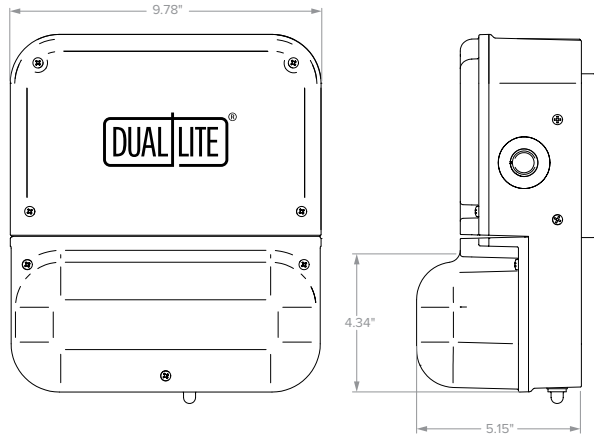
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DATE:	LOCATION:
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ADDITIONAL FEATURES

APPLICATION INFORMATION

Ceiling Mount

SPACING (SEE CHART)

MOUNTING HEIGHT (SEE CHART)
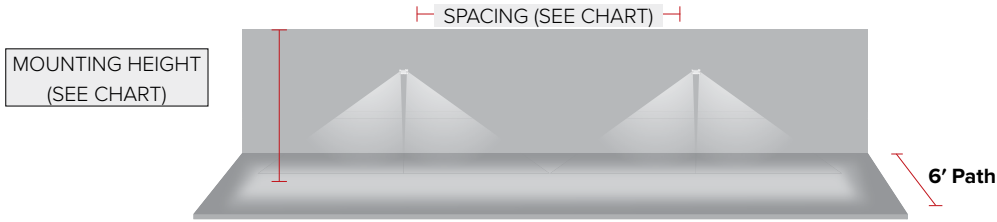
6' Path

* Multiple unit spacing based on 6' path

Industrial Parameters CH=30′, R=10/10/10, Ceiling mounted (Multiple Unit Spacing), 6' Path															
DYN12-06L (6 watt lamp option)								**DYN6 (3 watt lamps)**							
Mounting Height	20'	18'	16'	14'	12'	10'	7.5'	Mounting Height	20'	18'	16'	14'	12'	10'	7.5'
Max Spacing @ 1 FC Avg	62'	65'	68'	71'	74'	77'	81'	Max Spacing @ 1 FC Avg	43'	45'	48'	51'	53'	56'	59'
Max Spacing @ 1 FC Min	35'	34'	34'	33'	32'	31'	29'	Max Spacing @ 1 FC Min	28'	28'	27'	27'	26'	24'	22'

Meets Life Safety Code minimum illuminance of 0.1 fc and average illuminance of 1.0 fc.
Photometry files available on the Dual-Lite web site.

ADDITIONAL PRODUCT INFORMATION

	Battery	Capacity	Lamp(W)	Lumens per Lamp	Remote Lamp Watts	Run-Time	Extended Runtime	Remote Capable	Remote Part Number
DYN6	LiFePO4	6 watts	3 watts	331	0	90 min	No	No	N/A
DYN6I	LiFePO4	6 watts	3 watts	331	0	90 min	No	No	N/A
DYN12	LiFePO4	12 watts	3 watts	331	6	90 min	Yes	Yes	DYNR
DYN12I	LiFePO4	12 watts	3 watts	331	6	90 min	Yes	Yes	DYNR
DYN12-06L	LiFePO4	12 watts	6 watts	514	0	90 min	No	No	N/A
DYN12I-06L	LiFePO4	12 watts	6 watts	514	0	90 min	No	No	N/A

Current ⊙

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