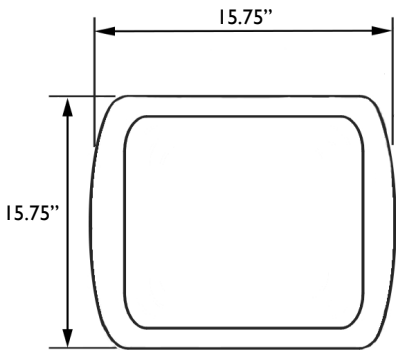


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PRODUCT



Product Information

The Highbay.M is a durable, high-powered outdoor LED lighting solution. This LED lighting fixture features a aluminum housing with a tempered glass lens.

Applications: Gas Stations, Parking Lots, Tunnels, Bridges and a variety of other outdoor lighting applications.

Performance Summary

Lumens Range: 22,155 lm - 44,310 lm
 Lumens Per Watt (Typical): 141
 Light Engine: L70 Rated Lifetime of 100,000+ hours.
 CRI: Minimum 70 CRI. Custom CRI available upon request.
 CCT (Typical): 3000K, 4000K, 5700K
 Manufactured in the U.S. with parts from U.S. and imported.

Fixture Information

Housing: Grey / Aluminum
 Lens: Tempered Glass
 Mounting: Bracket
 Diffusion: None / Luminit Film

Specifications*

Length: 15.75"
 Width: 15.75"
 Height: 10"
 Weight: 29.00 lbs

*Specifications are subject to change without notification.

Electrical System Characteristics / Data

Standard AC input: 120-277 VAC
 EMI filter: 47CFR, part 2, part 15
 Power factor: > 0.9
 Total harmonic distortion: < 20%
 Surge protection: IEC/EN 61000-4-5 EMC test standard

Electrical characteristics and performance data verified by Nationally Recognized Testing Labs (NRTL). For full reports and results, visit www.noribachi.com/reports.

Ordering Information Sample Catalog Number: HEX-210-B-WW-MT-HBM						
LIGHT ENGINE	DRIVE CURRENT	COLOR TEMPERATURE	VOLTAGE	FIXTURE CODE	OPTIONAL UPGRADES	OPTIONAL BEAM SPREAD
HEX-105 LIN-140 HEX-168 HEX-210	B B B B	CW – COOL WHITE (5700K TYPICAL) NW – NEUTRAL WHITE (4000K TYPICAL) WW – WARM WHITE (3000K TYPICAL)	MT	HBM – HIGHBAY.M	LS15 – L515P 120V TWIST LOCK PLUG L615 – L615P 240V TWIST LOCK PLUG L715 – L715P 277V TWIST LOCK PLUG L720 – L20P 277V TWIST LOCK PLUG L820 – L820P 480V TWIST LOCK PLUG L830 – L830P 480V TWIST LOCK PLUG CORD6 – 6' 16/3 600V STW CORD WET – WET RATING DHS – DAYLIGHT HARVEST SENSOR OOS – OUTDOOR OCCUPANCY SENSOR OS – OCCUPANCY SENSOR H3/4 – MALLEABLE HOOK WITH 3/4" NPS THREADS HV1 – 480V UP TO 150W HV2 – 480V GREATER THAN 150W EM – EMERGENCY BATTERY BACKUP, 5W, 600 LUMENS, 90 MINUTES* EMC – EMERGENCY BATTERY BACKUP, COLD 23W, 2000, 90 MINUTES* FR – FROSTED LENS WG – WIRE GUARD COL [RAL] – CUSTOM FIXTURE COLOR COAT – MARINE GRADE FIXTURE COATING EPOXY – EPOXY COATING SGR1 – 100 -277V SURGE PROTECTOR SGR2 – 480V SURGE PROTECTOR 010V – 1-10V DIMMING FUNCTIONALITY STEP – STEP DIMMING FUNCTIONALITY BLD – BI-LEVEL DIMMING FUNCTIONALITY *MUST PROVIDE EXACT VOLTAGE REQUIREMENT	80D – OPTIONAL 80° BEAM SPREAD T3 – OPTIONAL TYPE 3 DISTRIBUTION T4 – OPTIONAL TYPE 4 DISTRIBUTION TRS or TLS – OPTIONAL RIGHT OR LEFT SLANTED DISTRIBUTION

Warranty: Five-Year Limited Warranty. Optional 10-Year Manufacturer's Warranty Available. Full Warranty Terms Available At www.noribachi.com/products/warranty

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ELECTRICAL

Construction

Heavy-duty die-cast aluminum housing, powdercoat finish over a chromate on version coating. Optional Wire Guard (WG) and Frosted Lens (FR) available. Optional Wet (WET) rating also available.

Optics

High brightness, high efficiency LEDs. Color temperature options include Cool White (5700K typical), Neutral White (4000K typical) Warm White (3000K typical) with minimum 70 CRI. Custom RGBW colors available. 120° beam angle standard. Optional 80° beam angle available.

Controls

Optional controls include 480V for up to 150W light engines (HV1) and 480V for 150W-299W light engines (HV2). 100-722V (SGR1) and 480V (SGR2) Surge Protectors. 0-10V (010V), Step (STEP) and Bi-Level (BLD) Dimming functionality. Occupancy (OS), Outdoor Occupancy (OOS) and Daylight Harvest Sensors (DHS). Emergency Battery Backup (EM) and Emergency Battery Backup, Cold (EMC).

Mounting

Bracket mounting available for this fixture. Optional Malleable Hook with 3/4" NPS Threads.

Driver

Available in B drive current (525 mA). Highly reliable. Suitable for dry, damp and wet locations. Compliant to worldwide safety regulations for lighting.

Testing Compliance

UL 1598 Issued: 2008/09/17 Ed:3 Rev:2012/10/17 UL Standard for Safety Luminaires CSA C22.2#250.0 Issued: 2008/09/17 Ed:3 Luminaires; General Instruction No.1 2010/01/11, General Instruction No. 2 2012/10/17.

Electrical System

Surge protection meets 10KV/5KA per ANSI/IEEE62.41. Driver meets maximum harmonic distortion (THD) of 20% and is ROHS compliant. Power Factor = > 0.9.

Ambient Temperature

-40°C to +65°C (-40°F to + 149°F).

Electrical Load

LIGHT ENGINE	DRIVE	DRIVE CURRENT (AMPS@120V)	DRIVE CURRENT (AMPS@277V)	DRIVE CURRENT (AMPS@480V)	SYSTEM POWER* (WATTS)
HEX-105	B	1.32	0.57	0.33	158.38
LIN-140	B	1.76	0.76	0.44	211.78
HEX-168	B	2.12	0.92	0.53	254.72
HEX-210	B	2.66	1.15	0.67	319.50

*Ideal Wattage

Operating Characteristics (Typical @5700K CCT)

LIGHT ENGINE	DRIVE	LUMENS (TS)	INPUT POWER (WATTS)	LUMENS PER WATT	REPLACES
HEX-105	B	22,154	158.38	139.88	400-650W
LIN-140	B	35,447	211.78	139.16	750-1000W
HEX-168	B	39,878	254.72	138.92	725-1200W
HEX-210	B	44,308	319.50	138.68	1000-1450W

Manufacturing

Manufactured in beautiful Harbor City, CA. ARRA Compliant. NAFTA Compliant. Test and burn-in of 100% of all luminaires before shipment. No less than 8-years experience in manufacturing LED-based products.

Note

Specifications subject to change without notice. Actual performance may differ as a result of end-user environment application. Actual wattage may differ by +/- 8%.

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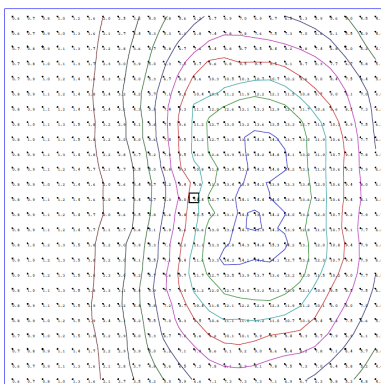
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PERFORMANCE / DISTRIBUTION

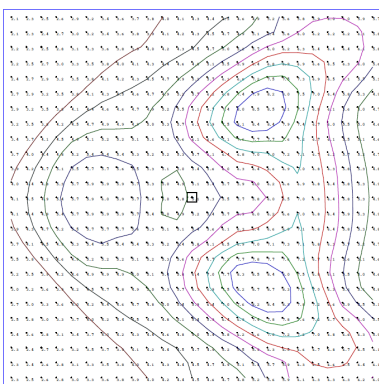
Power And Lumens By Light Engine							
DISTRIBUTION							
LIGHT ENGINE	DRIVE	CCT	T1 (LUMENS)	T2 (LUMENS)	T3 (LUMENS)	T4 (LUMENS)	T5 (LUMENS)
HEX-105	B	5700	N/A	N/A	21,047	19,939	22,154
LIN-140	B	5700	N/A	N/A	33,674	31,902	35,447
HEX-168	B	5700	N/A	N/A	37,884	35,890	39,878
HEX-210	B	5700	N/A	N/A	42,093	39,878	44,308

**Type Distribution
 HEX-210**

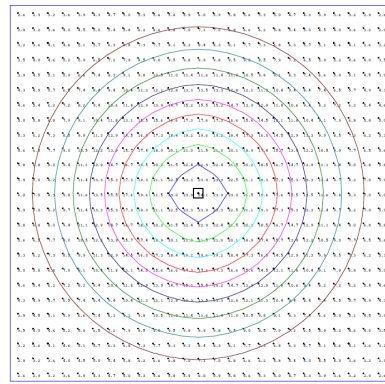
T-3



T-4



T-5



- IES Type Distributions are generated in an open space.
- Light Distribution images are mounted at 10 feet.

Distribution

- 120° Standard Beam Spread.
- 80° Optional Beam Spread Available.
- Other Light Engine Type Distribution available upon request.

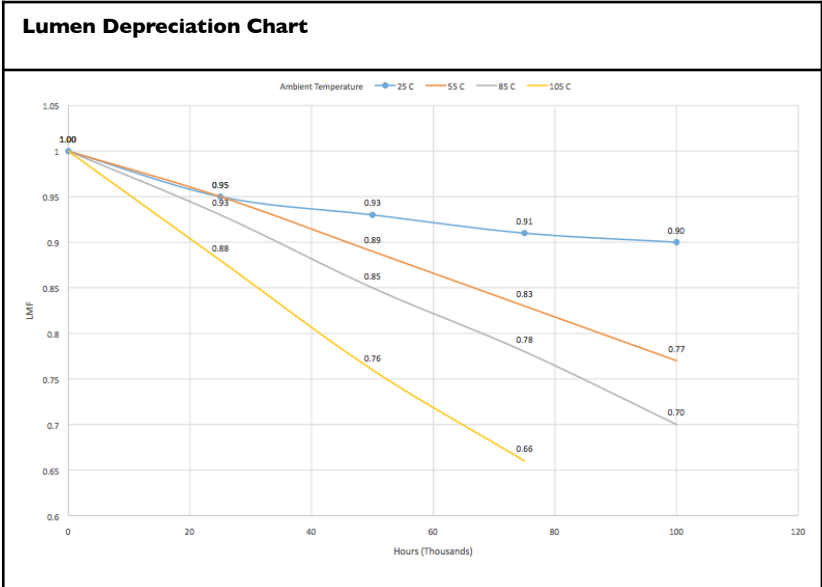
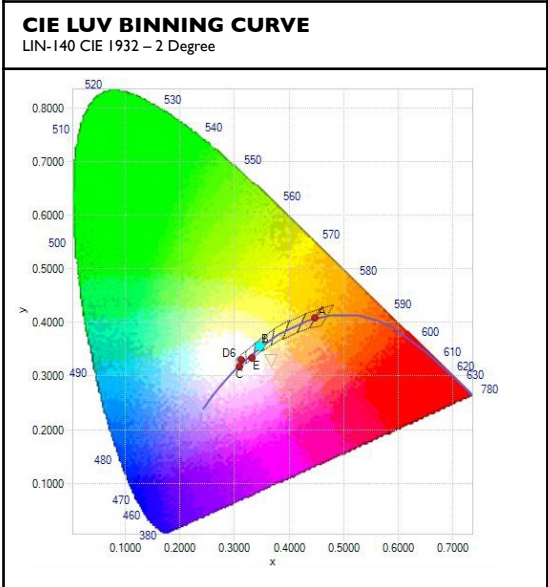
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Lumen Maintenance Factors (B Drive)

AMBIENT	INITIAL LMF	25K HR PROJECTED LMF	50K HR PROJECTED LMF	75K HR PROJECTED LMF	100K HR PROJECTED LMF
25°C	1.00	0.95	0.93	0.91	0.90
55°C	1.00	0.95	0.89	0.83	0.77
85°C	1.00	0.93	0.85	0.78	0.70
105°C	1.00	0.88	0.76	0.66	n/a

Each temperature has an independent initial value. In accordance with IESNA TM021011, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip. In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip

Luminaire EPA Chart

	Single	0.5
	ND-180°	1.0
	ND-90°	0.8
	NT-90°	1.7
	NT-120°	1.7
	NQ-90°	1.9

Note: Mounting changes fixture EPA. Please contact Noribachi for additional information.

Lumen Multiplier

AMBIENT TEMPERATURE	LUMEN MULTIPLIER
10°C	1.032
15°C	1.021
25°C	1.000
40°C	0.968
50°C	0.946

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OPTIONAL UPGRADES

For additional optional upgrades, please contact your Noribachi Account Manager.

EMERGENCY BATTERY BACKUP

ORDER CODE: EM
 Appearance And Specifications:
 •Rain Tight For Outdoor Use
 •5V, 600 Lumens, 90 Minutes
 •Must provide exact voltage requirements in order code



EMERGENCY BATTERY BACKUP COLD

ORDER CODE: EMC
 Appearance And Specifications:
 •23V, 2000 Lumens, 90 Minutes
 •Must provide exact voltage requirements on order code



DIMMING

ORDER CODE: 010V
ORDER CODE: STEP
ORDER CODE: BLD
 Appearance And Specifications:
 •010V = 1 – 10V Dimming Functionality
 •STEP = Step Dimming Functionality
 •BLD = Bi-Level Dimming Functionality
 *Compatibility not guaranteed for any particular dimmable light in any particular installation.



SURGE PROTECTOR

ORDER CODE: SGR1
ORDER CODE: SGR2
 Appearance And Specifications:
 •100V - 120V Surge Protector
 •480V Surge Protector



OCCUPANCY SENSOR

ORDER CODE: OS
 Appearance And Specifications:
 •Compact design
 •Polycarbonate, flame retardant
 •UV and impact resistant



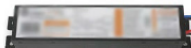
DAYLIGHT HARVEST SENSOR

ORDER CODE: DHS
 Appearance And Specifications:
 •Enables daylight regulations and dimming when no presence is detected
 •Delay time between 1 and 30 minutes



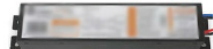
480V FOR UP TO 150W LIGHT ENGINES

ORDER CODE: HVI



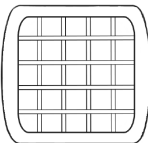
480V FOR GREATER THAN 150W LIGHT ENGINES

ORDER CODE: HV2



WIRE GUARD

ORDER CODE: WG
 Appearance And Specifications:
 •Steel Wire



FROSTED LENS

ORDER CODE: FR
 Appearance And Specifications:
 •Frosted treatment applied to lens



OUTDOOR OCCUPANCY SENSOR

ORDER CODE: OOS
 Appearance And Specifications:
 •IP Rating 65
 •360° lens
 •60' diameter coverage from 40' height



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OPTIONAL UPGRADES

6' 16/3 STW CORD
ORDER CODE: CORD6
 Appearance And Specifications:
 •Cords must be purchased with plugs
 •Black jacket
 •Water resistant
 •*Image for reference only



L515P 125V TWIST LOCK PLUG
ORDER CODE: L515
 Appearance And Specifications:
 •125V
 •NEMA L5-15P
 •Nickel plated brass/blades contacts
 •UL/CSA



L615P 250V TWIST LOCK PLUG
ORDER CODE: L615
 Appearance And Specifications:
 •250V
 •NEMA L6-15P
 •Nickel plated brass/blades contact
 •UL/CSA



L715P 277V TWIST LOCK PLUG
ORDER CODE: L715
 Appearance And Specifications:
 •277V
 •NEMA L7-15P
 •Nickel plated brass/blades contacts
 •UL/CSA



L720P 277V TWIST LOCK PLUG
ORDER CODE: L720
 Appearance And Specifications:
 •277V
 •NEMA L7-20P
 •Nickel plated brass/blades contacts
 •UL/CSA



L820P 480V TWIST LOCK PLUG
ORDER CODE: L820
 Appearance And Specifications:
 •480V
 •NEMA L8-20P
 •Nickel plated brass/blades contacts
 •UL/CSA



L830P 480V TWIST LOCK PLUG
ORDER CODE: L830
 Appearance And Specifications:
 •480V
 •NEMA L8-30P
 •Nickel plated brass/blades contacts
 •UL/CSA



MALLEABLE HOOK WITH 3/4" NPS THREADS
ORDER CODE: H3/4
 Appearance And Specifications:
 •Steel
 •3/4" threads



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OPTIONAL UPGRADES

CUSTOM FIXTURE COLOR
ORDER CODE: COL-[RAL]
 Appearance And Specifications:
 •Choose a custom color for your fixture.
 •RAL color code must be provided.



MARINE GRADE FIXTURE COATING
ORDER CODE: COAT
 Appearance And Specifications:
 •Add a Marine Grade coating to your fixture.
 •Coating appearance is green.



EPOXY COATING
ORDER CODE: EPOXY
 Appearance And Specifications:
 •Add epoxy coating to your fixture.



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