

Z series spotlights specifications



expanding your vision underwater

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Lampsea Z series: High Performance Submersible LED Spotlights

Unique Specifications	Description
<i>Body & material</i>	Inclined 45° austenitic stainless steel body AISI316L casting. Certified by EBETAM. Chemical treatment according to ASTM 967/ QQ-P-35. Aim: Multidirectional beam and high protection from pitting corrosion.
<i>Photocell</i>	Multi-die High Power single LED emitter (excluding Z19 model) Purpose: Ensure converging long throw beam penetration.
<i>Wavelengths</i>	A) Spotlights at visible wavelength spectrum 430-670nm B) Spotlights at non visible IR wavelength of 850nm or 950nm for night tactical or warfare operations. Aim: Ensure both options of visible and non visible radiation.
<i>Collimator: type/performance</i>	Multiperspectival Total Internal Reflection (TIR Collimator) at ø26mm/14 or 17mm thick, high transmittance 95% and high directivity, made from 500° C fireproof Borosilicate 3.3 glass, protected by ring extension. Aim: Small light source, intense beam directivity and high performance.
<i>LED engine</i>	LED engine is charged with pure nitrogen gas N ₂ 99.96%, preventing thus creation of internal trapped air vapors, especially in cases of impact transitions between low to high temperatures. Aim: Crystal clear and flawless operation obtaining zero flux loss caused by internal vapors avoiding further damage to discrete devices within the spotlight as well.
<i>Amphibious operation</i>	Models Z10XL, Z14XL, Z15XL, Z17XL designed for amphibious salt water use. The same applies to models Z19XL/LC, Z24XL/LC and Z55XL/LC which are phantom liquid cooled models. Aim: Thermal management of high power single LED emitters to fore or transom lighting vessel applications.
<i>Water tightness</i>	The impermeability of the spotlight is ensured by an innovative method of simultaneous four edge contacts sealing. IP66/68/10atm certified for depths up to 100 meters typically. Aim: Zero inflow even under extreme boat cruising conditions.
<i>Self cleaned</i>	On long vessel's stay in the sea, seagrowth is removed by activating the spotlights. Aim: Prevention of underwater cleaning operations or even more towing the boat out of the water for this reason.
<i>Overheat protection</i>	The spotlights are protected from overheating by means of an appropriate high-quality temperature sensor with gold plated contacts, embedded in the heat exchanger. The sensor is positioned so as to ensure limited mechanical force even under extreme percussive forces when cruising in rough seas. Aim: Smooth operation of photocell LED and maximum longevity.
<i>Wiring harness</i>	H05RN-F / IEC60245-57 2x1.0mm tin-plated marine cable equipped with appropriate waterproof polarized connectors preventing accidental incorrect connections to power supply unit. Aim: Ensure cable tightness and low resistance per meter.
<i>Power supply unit</i>	Switch mode DC/DC, converter at 12V-24VDC. 220VAC/40VDC offered as optional. Aim: Precise load current stability for maximum LED protection.
<i>Power consumption</i>	From 10-50W or 1.000-5.500 lumens respectively blended with efficiency of up to 200lm/Watt per luminaire. Aim: Minimum power consumption and maximum performance.
<i>Weight</i>	Total unit weight 460gr to 520gr depending on the model. Weight / Luminance output ratio = 0.09gr / lm (the least known Globally). Aim: Prevention of unnecessary surplus weight on all vessels.

<i>Dimensions</i>	Extremely compact and smart design 83x49x60 mm (L / W / H) which eliminates bullet attack from malicious attempts. Aim: Anti-tracking and damage prevention in any case.
<i>Included accessories</i>	DC/DC power supply, connection box, screws, and wires, wireless or wired dimming remote control standard Aim: All parts of the system from LampSea to ensure longevity.
<i>Remote controlling</i>	Spotlights remote operated through appropriate remote dimming unit ensuring smooth operation: Power On /Off, Delay OFF, one-key 25%, 50%, 75% and 100% option, intensity control and fluctuation power between 10-100%. Wired dimmable option to captain's console (rear High Power spotlights). Aim: Majority of controls to ensure ergonomic and safe operation of the system within or out of the vessel.
<i>Warranty period</i>	2 year warranty from day of purchase under recommended operation. Especially for photocells manufacturer's LED datasheets predict at least 40K hours provided proper installation and normal use. Aim: In each case Lampsea stands behind its products offering customer oriented after sales support.
<i>Maintainability</i>	Spotlights can be upgraded and repaired in all cases excluding Z45/47/55 models. Aims: A) Exclusively by Lampsea laboratories possible next generation LED upgrades without consequently losing entire product's initial value. B) Ability to repair damage resulting from accidents (conditionally).
<i>Certifications</i>	Compliance with standards ASTM B117, EN60529: 1991 / A1: 2000 / EN60598 -1: 2008 / A11: 2009.

Under continuous product improvement, Lampsea reserves the legal right to change the specific characteristics of its products to ensure in each case the high reliability without prior notification.

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