



LYS Wind Tower, Nacelle and Hub Lighting Fixtures

econolumen

GENERAL:

LYS fluorescent lighting fixtures are designed and manufactured to withstand the extreme environments and applications present in today's wind turbine towers, nacelles, and hubs. These very durable fixtures are available in two sizes and include pre-installed T8 type lamps. Each fixture is equipped with a universal, low loss, instant start ballast that allows for normal operation down to -30°C (-22°F).

High quality materials and construction are essential ingredients in any high quality product, and our quest to provide the market with such a product has been fulfilled with "econolumen" light fixtures, the fixture that the global market really wants and needs.



*4 ft. Light
& 2 ft. Light shown*

No more concerns about cold climate operation, emergency function, liquid ingress, shock, vibration, or corrosion, as these feature packed fixtures will perform globally to the highest levels and at the best value available.....period!

CASING:

Structurally molded of high impact, highly flame resistant Polycarbonate, the fixture casing by design is stylish, yet exceptionally durable in use and during tower, nacelle, or hub construction, as well as during transportation and handling where unintended damages can occur. Other casings constructed of a less resilient material such as GRP are frequently damaged. Having multiple wire/cable entry locations and numerous mounting details, including our "no holes" design, these fixture casings provide for simple and flexible installations, and with its hot bonded silicon lens seal groove an IP65 ingress rating is achieved.

LENSES:

These very durable and impact resistant Polycarbonate lenses are loaded with features that provide outstanding light disbursement with an application specific prismatic design, and simplified fixture servicing with the lens secured to the casing using retained, (won't fall off), double hinged clips. Replacing lamps was never so fast and simple in a wind turbine until now, and no more dropping of loose lenses and their clips that can fall down tower as typical with other designs.

EMERGENCY LIGHTING:

LYS lighting fixtures may be optionally equipped with our high performance emergency battery backup system. Under a full charge and in good operating condition, the light fixture so equipped will provide up to 90 full minutes of minimal illumination consistent with (EN50308), providing illumination during tower evacuation. Regular factory recommended system performance tests should be performed monthly on each and every emergency backup light fixture to verify proper system functionality.

COLD CLIMATE:

When cold climate operation is a requirement, our optional thermostatically controlled, 40 watt heating system can be added to assure that the light fixture will perform properly in these conditions. The thermostat is preset to initiate at 5°C (41°F) and remain on up to 20°C (68°F). Cold climate operation for our light fixture is defined as ambient temperatures below -30°C (-22°F) for non-emergency backup fixtures, and -0°C (32°F) for those with emergency backup systems installed. Survive in place temperature ranges from -40°C (-40°F) up to +55°C (131°F).



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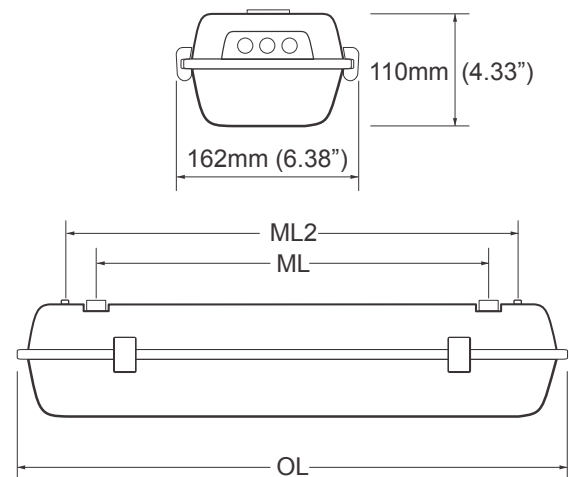
Specifications

Input Power Rating	120V to 277V, 50Hz/60Hz
Input Power Range (min-max)	100V to 300V
Ambient Std. Operation	-30°C (-22°F) to 55°C (131°F)
Ambient E-Ballast Operation	0°C (32°F) to 55°C (131°F)
Op Temp w/ Heating Pack	-40°C (-40°F)
Integrated NiCd Battery Pack	1.8Ah, 4.8V (1.2V x 4PCS)
Battery Pack Charge Time	24hrs
Battery Pack Charging Cycles	500
E-Ballast/Internal Battery Pk	5 Years Avg Life Cycle
Estimated Operation Life	50,000hrs
Estimated Switching Cycles	20,000 times
Emergency Ballast Duration*	90 minutes
Rapid Start Lamps	T8/741/ECO/4100K

* Actual emergency ballast operational time is subject to battery charge and condition at the time of operation and may be less.

** Five Year Limited Warranty Electrical/Mechanical, (excl. lamps)**

*** LYS light fixtures are available as special order items in CE compliant configurations ***



Part Number	Part Number	Description	ML		ML2		OL		Lamp Type	Weight	
UL	CE		(mm)	(in)	(mm)	(in)	(mm)	(in)		(lbs.)	(kg)
LYS-4	LYS-4-CE	4ft Standard	890	35.04	1020	40.16	1274	50.16	2x32W/36WT8	7.30	3.31
LYS-4-H	LYS-4-H-CE	4ft with heater system								7.53	3.42
LYS-4-E	LYS-4-E-CE	4ft with e-ballast								8.70	3.95
LYS-4-E-H	LYS-4-E-H-CE	4ft with e-ballast & heater system								8.83	4.01
LYS-2	LYS-2-CE	2ft Standard	480	18.90	570	22.44	670	26.38	2x17W/18WT8	4.29	1.95
LYS-2-H	LYS-2-H-CE	2ft with heater system								4.52	2.05
LYS-2-E	LYS-2-E-CE	2ft with e-ballast								5.71	2.59
LYS-2-E-H	LYS-2-E-H-CE	2ft with e-ballast & heater system								5.91	2.68