

EMPRESS

THE DUTCH POWERHOUSE



TECHNICAL DATASHEET

Light output

HIGH EFFICIENT

Art#	Spectrum	Optical properties*1				Spectral specifications in % *1				Imparted heat	
		Photon Flux (μmol/s)*2	Consumed power (W)	Efficacy (μmol/J)	Efficacy dimmed to 50%*3 (μmol/J)	blue 400-500	mid 500-600	red 600-700	far-red >700	W	BTU/hr
G.AALM.02	Low Blue	2750	710	3.9	4.1	5.2	0.1	94.5	0.2	198	676
G.AALN.02	Low Blue White	2640	710	3.7	4.0	4.7	5.4	89.7	0.3	214	727
G.AALO.02	Low Blue White + Far-red	2485	710	3.5	3.7	4.8	10.3	75.3	9.6	244	833
G.AALP.02	Medium Blue	2700	710	3.8	4.0	9.1	0.1	90.6	0.2	199	679
G.AALQ.02	Medium Blue White	2570	710	3.6	3.9	9.7	5.5	84.5	0.3	216	737
G.AALR.02	Broad Spectrum	2355	710	3.3	3.5	8.6	17.4	73.6	0.4	249	850

ECONOMIC

Art#	Spectrum	Optical properties*1				Spectral specifications in % *1				Imparted heat	
		Photon Flux (μmol/s)*2	Consumed power (W)	Efficacy (μmol/J)	Efficacy dimmed to 50%*3 (μmol/J)	blue 400-500	mid 500-600	red 600-700	far-red >700	W	BTU/hr
G.AALG.02	Low Blue	2635	710	3.7	4.0	5.1	0.1	94.6	0.2	220	751
G.AALH.02	Low Blue White	2530	710	3.6	3.9	4.6	5.3	89.8	0.3	235	798
G.AALI.02	Low Blue White + Far-red	2370	710	3.3	3.7	4.8	10.2	75.6	9.5	265	904
G.AALJ.02	Medium Blue	2580	710	3.6	4.0	9.0	0.1	90.7	0.2	221	754
G.AALK.02	Medium Blue White	2460	710	3.5	3.8	9.6	5.4	84.7	0.3	238	812
G.AALL.02	Broad Spectrum	2260	710	3.2	3.5	8.5	17.2	73.9	0.4	269	918

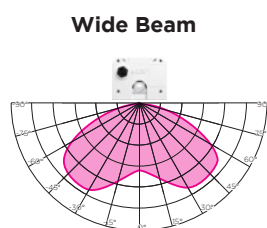
Other compositions of spectra are available on request.

*1 Electrical and optical properties have a tolerance of ± 5%.

*2 Output is defined as the total Photon Flux between 400-800nm.
Typical values for stable operation at 77°F | 25°C cooling water temperature.

*3 All values mentioned in the tabel are based on 100% power, except for this column; efficacy dimmed to 50%.

Light distribution



Product features

Housing material and finishing	Aluminium (IK10). Anodized / antifouling powder coating RAL 9010 (dirt repellent)
LED protection cover	High transmission glass (transmission >98%) (IK07)
Beam angle	Wide Beam: 140°
Ingress Protection LED compartment	IP67 (dust- and watertight). Fixtures can be cleaned by using pressurized water, the complete electrical circuit is sealed waterproof.
Lifespan and warranty	L90 B05 - 50,000 hours, 5 year full warranty

Technical data

Power factor	> 0.96 @ 400 VAC
Total Harmonic Distortion (THD)	< 8%
Voltage range	277 - 480 VAC
Current range	2.6 - 1.5 A
Frequency range	50/60 Hz
Inrush energy	1,55 A ² s
Inrush current peak	20 A @ 480 VAC
Leakage current	< 0.7 mA @ 480 VAC
Isolation class	Class I
Connector	Integrated: 3 pole connector Male (Wieland RST20i3 black)
Operation conditions	32 to 113°F 0 to 45°C / 95% RH
Storage conditions	32 to 140°F 0 to 60°C / 85% RH

Cooling liquid and circuit

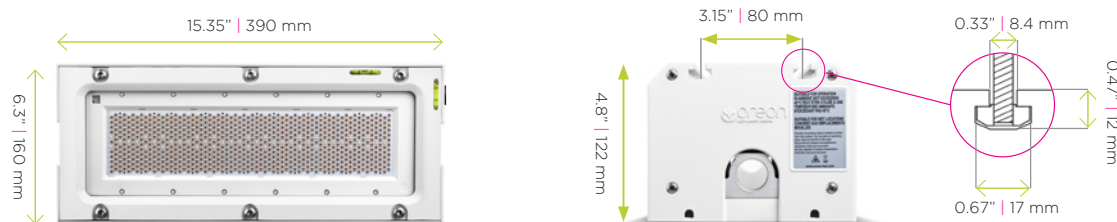
Cooling liquid	Water (pH 4-8)
Cooling liquid temperature	From dew point to 113°F 45°C
Water connection	Pipe thread ISO 228-G 3/4" (2x)
Required flow velocity	Flow velocity must be at least 0.3 m/s and should not exceed 1.5 m/sec. (inner Ø 24.1 mm)
Flow velocity formula	$v = Q \cdot n / 19,000$ (velocity in m/s, channel inner diameter 24.1 mm) v: minimally required flow velocity of water in the cooling channel of the lamp (m/s) Q: heat imparted per fixture (Watt), n: number of fixtures in series on a cooling pipe

Mounting

Top side has two dedicated T-shaped grooves. Suspension of fixture by 4x M6 bolt & T-nut or custom made bracket.

Weight and dimensions

Nett weight	19.0 lb 8.6 kg
Product dimensions (L x W x H)	15.35" x 6.3" x 4.8" 390 mm x 160 mm x 122 mm
Carton dimensions (L x W x H)	21.65" x 8.66" x 6.89" 550 mm x 220 mm x 175 mm



Logistic specifications

	Air freight	Sea/Road freight
Quantity per pallet	49 pcs.	90 pcs.
Gross weight per pallet	1069.2 lb 485 kg	1940 lb 880 kg
Pallet dimension	31.5" x 47.24" x 56.69" 800 x 1200 x 1440 mm	39.37" x 47.24" x 71.26" 1000 x 1200 x 1810 mm
HS-code	9405 4099 90	9405 4239 90

Compliance

Subject to printing and typing errors.

Conforms to/Certified to ANSI/CAN/UL 8800



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