

MONARCH

THE DUTCH POWERHOUSE



TECHNICAL DATASHEET

Light output

Narrow Beam 2.0

Light spectra

Red
Low Blue
Medium Blue
Broad Spectrum
Low Blue + White
Medium Blue + White

Optical properties*

PhotonFlux (μmol/s)**	Consumed Power (W)	Efficacy (μmol/J)
3800	1010	3.8
3700	1010	3.7
3586	1010	3.6
2741	1010	2.7
3466	1010	3.4
3372	1010	3.3

Other spectrum variations on request.

Spectral specifications*

blue 400-500	mid 500-600	red 600-700	far-red >700
0	0.2	99.6	0.2
5	0.2	94.7	0.1
10	0.2	89.6	0.2
6.6	23.6	68	1.8
5.4	5.1	89.1	0.4
10.5	5.2	83.9	0.4

Imparted heat

W	BTU/hr
270	921
280	955
285	972
435	1484
315	1075
320	1092

Narrow Beam

Light spectra

Red
Low Blue
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Low Blue + White
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Optical properties*

PhotonFlux (μmol/s)**	Consumed Power (W)	Efficacy (μmol/J)
3570	1010	3.5
3471	1010	3.4
3383	1010	3.4
2622	1010	2.6
3278	1010	3.3
3192	1010	3.2

Other spectrum variations on request.

Spectral specifications*

blue 400-500	mid 500-600	red 600-700	far-red >700
0	0.2	99.6	0.2
5	0.2	94.6	0.2
10.1	0.2	89.5	0.2
6.9	23.7	67.8	1.6
5.4	5.2	89	0.4
10.6	5.2	83.8	0.4

Imparted heat

W	BTU/hr
310	1058
320	1092
325	1109
460	1570
350	1194
355	1211

Wide Beam

Light spectra

Red
Low Blue
Medium Blue
Broad Spectrum
Low Blue + White
Medium Blue + White

Optical properties*

PhotonFlux (μmol/s)**	Consumed Power (W)	Efficacy (μmol/J)
3596	1010	3.6
3506	1010	3.5
3422	1010	3.4
2600	1010	2.6
3319	1010	3.3
3304	1010	3.3

Other spectrum variations on request.

Spectral specifications*

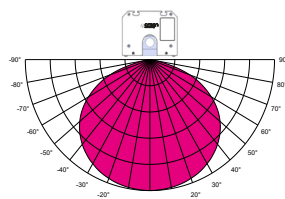
blue 400-500	mid 500-600	red 600-700	far-red >700
0	0.2	99.6	0.2
5.1	0.2	94.5	0.2
10.3	0.2	89.4	0.1
6.9	23.9	67.6	1.6
5.5	5.2	88.9	0.4
10.8	5.3	83.6	0.3

Imparted heat

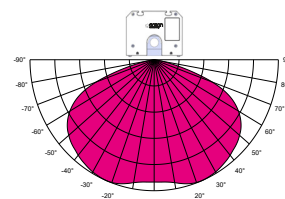
W	BTU/hr
310	1058
315	1075
315	1075
465	1587
345	1177
355	1211

Light distribution

Narrow Beam



Wide Beam



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	Narrow Beam: 120° 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)	< 11%
Voltage range	230 - 480 VAC
Current range	4.5 - 2.2 A
Frequency range	50/60 Hz
Inrush current	max. 11A (t < 2.5ms) @ 480 VAC
Leakage current	< 0.75 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

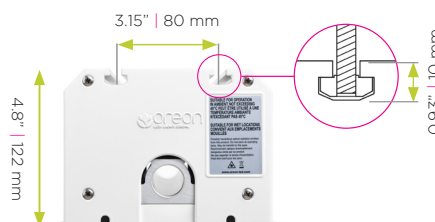
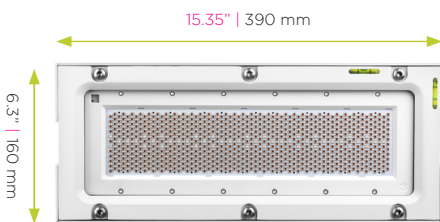
Cooling liquid	Water (pH 4-8)
Cooling liquid temperature	From dew point to 113°F 45°C
Water connection	Pipe thread ISO 228-G 3/4" (2x)
Required flow velocity	Flow velocity must be at least 0.12 m/s and should not exceed 1.5m/s.
Flow velocity formula	$v = Q \cdot n / 19000$ (velocity in m/s, channel inner diameter 24.1mm) 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

Fixture mounting interface 4x M6 T-nut (maximum depth for the bolt is 3/8 inch | 10 mm). Four T-nuts are included in the delivery.

Weight and dimensions

Nett weight	20.5 lb 9,3 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

Quantity per pallet
Gross weight per pallet
Pallet dimensions (EUR)

HS-code

Air freight

49 pcs.
1148.7 lb 521 kg
31.5" x 47.24" x 56.69"
800 x 1200 x 1440 mm
9405 4099 90

Sea/Road freight

63 pcs.
1461.7 lb 663 kg
31.5" x 47.24" x 71.26"
800 x 1200 x 1810 mm
9405 4099 90

Compliance

CE
cMETus listed (ANSI/UL+CSA)
PSE

LVD 2014/35/EU | EMC 2014/30/EU | RoHS 2011/65/EU
UL 1598 | CSA C22.2 No. 250.0-08



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