

MONARCH

THE DUTCH POWERHOUSE



TECHNICAL DATASHEET

Product features

Housing material	Aluminium
Finishing	Anodized / Antifouling powder coating RAL 9010 (dirt repellent)
LED protection cover	High transmission glass (transmission >98%)
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.
Impact resistance housing	IK10
Impact resistance glass	IK07
Lifespan	L90 B05 - 50,000 hours
Warranty	5 years

Narrow Beam

Light spectra

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

Optical properties*

Photon Flux (μMol/s)**	Consumed Power (W)	Efficacy (μMol/J)
3260	1010	3.2
3200	1010	3.2
3180	1010	3.1
3150	1010	3.1
2650	1010	2.7
3090	1010	3.1
3060	1010	3.0
3050	1010	3.0

Spectral specifications*

blue 400-500	mid 500-600	red 600-700	far-red >700
0	0	100	0
5.4	0	94.6	0
6.7	0	93.3	0
9.4	0	90.6	0
6.8	23.6	68.1	1.5
5.5	5.1	89.1	0.3
6.8	5.2	87.6	0.4
9.5	5.1	85	0.4

Other spectrum variations on request.

Wide Beam

Light spectra

Red
Low Blue
Medium Blue
High Blue
Broad Spectrum
Low Blue + White
Medium Blue + White
High Blue + White
Medium Blue Custom Made

Optical properties*

Photon Flux (μMol/s)**	Consumed Power (W)	Efficacy (μMol/J)
3460	1010	3.4
3400	1010	3.4
3380	1010	3.3
3340	1010	3.3
2820	1010	2.8
3240	1010	3.2
3210	1010	3.2
3170	1010	3.1
3000	912	3.3

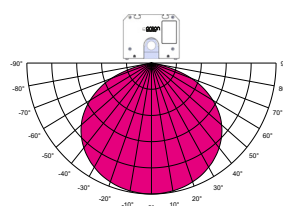
Spectral specifications*

blue 400-500	mid 500-600	red 600-700	far-red >700
0	0	100	0
5.2	0	94.8	0
6.5	0	93.5	0
9.1	0	90.9	0
10	17.6	71.5	0.9
5.2	4.6	89.9	0.3
6.8	5.2	87.6	0.4
9.5	5.2	84.9	0.4
6.5	0	93.5	0

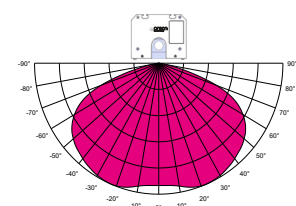
Other spectrum variations on request.

Light distribution

Narrow Beam



Wide Beam



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	Wieland
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
Cooling liquid flow rate	> 25 l/min
Imparted heat into cooling system	± 410 W per fixture (Btu/h ± 1399) ± 490 W per fixture (Btu/h ± 1672) Broad Spectrum ± 300 W per fixture (Btu/h ± 1024) MB - WB (CM 912W)
Water connection	Pipe thread ISO 228-G 3/4" (2x)

Mounting

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

The four T-nuts are included in the delivery.

Weight and dimensions

Nett weight	20.5 lb 9,3 kg
Gross weight (approx.)	24.3 lb 11 kg (including mounting brackets, connectors, pipes)
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	49 pcs.
Gross weight per pallet	1148.7 lb 521 kg
Pallet dimensions (EUR)	31.5" x 47.24" x 56.69" 800 x 1200 x 1440 mm
HS-code	9405 4099 90

Air freight

Quantity per pallet	63 pcs.
Gross weight per pallet	1461.7 lb 663 kg
Pallet dimensions (EUR)	31.5" x 47.24" x 71.26" 800 x 1200 x 1810 mm
HS-code	9405 4099 90

Sea/Road freight

Quantity per pallet	63 pcs.
Gross weight per pallet	1461.7 lb 663 kg
Pallet dimensions (EUR)	31.5" x 47.24" x 71.26" 800 x 1200 x 1810 mm
HS-code	9405 4099 90

Compliance

PSE	CE
cMETus listed (ANSI/UL+CSA)	- LVD 2014/35/EU
- UL 1598	- EMC 2014/30/EU
- CSA C22.2 No. 250.0-08	- RoHS 2011/65/EU



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