01 Specs 01Titel	LED-Module II 960/DMX/02	24.04.17 KF VS.01	Project No.
Item / No.	Description/ Quantity/ Unit	Unit price	Total price

01.1
Position

Description:

DMX-RDM* controlled LED RGB spotlight module consisting of 3 LED-spots, 1 LED-driver and mounting bracket, suited for multi & single dimensional actuators.

Suitable for dry and wet assembly.

Environmental conditions for dry application:

None

Environmental conditions for wet application (waterquality):

Installation and operation in fresh-, pool- and seawater.**

Technical data:

Whole Module:

Dimensions (ØxH):	320 x 40 [mm]
Weight (incl. LED-driver):	6.5 kg
Max. nozzle major diamater:	41 mm
Luminous flux total:	960 lm
Nominal voltage:	24 V DC
Power consumption:	48 W
Nominal current:	2.1 A

LED-driver:

Material controller housing:	PBT	
Dimensions (Lx W x H):	153 x 130 x 89 [mm]	
Nominal voltage:	24 V DC	
Max. power consumption:	180 W	
Max. nominal current:	7.5 A	
Protection class:	IP 68	
Weight:	2.9 kg	
DMX-RDM compatible:	Yes	
Number of output sockets:	4	
Pin allocation of output sockets:	Pin 1:	GND
	Pin 2:	Data In (UART)
	Pin 3:	n.c.
	Pin 4:	Data Out (UART)
	Pin 5:	+ 24 V
Number of DMX channels:	20 / 5 per Output	
Configuration/Parameterization in build-in	Yes	
Overheating protection:	Yes	
Reverse polarity protection:	Yes	

LED-Spots (each):

Dimensions lamp housing (Ø x H):	125 x 44 [mm]
Material:	Stainless steel 1.4404 (AISI 316) / Glas lens
Total weight:	1,2 kg
Protection class:	IP 68
Luminous flux total:	573 lm
Luminous flux red:	172 lm
Luminous flux green:	307 lm
Luminous flux blue:	94 lm
Beam angle:	16°
Power consumption:	16 W
Rated voltage:	24 V DC
Rated current:	0,7 A

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Energy efficiency category:		A	
Weighted energy consumption:		17,6 kWh / 1000 h	
Thermal protection:		Yes	
DMX-RDM-controllable:		Yes	
DMX configuration in built-in status possible:		Yes	
Able to perform strobe effects:		Yes	
strobe effect frequence range:		0 - 25 Hz	
Mounting bracket:			
Material:		Stainless steel 1.4404 (AISI 316L)	
Position lock:		Yes	
Elongated hole for fixation:		Yes	
Dimensions of the hole:		60 x 6,5 [mm]	
Cable and connection boxes:			
All signals with galvanic separation in connection boxes			
Housing material:		PET-GF	
LED-Driver:			
DMX-cabling:			
1 m DMX cable and DMX connection box			
Cable (AES/EBU CableBinary 234)		4 x 0.34 mm²	
DMX plug (XLR):		1 x In 1 x Out	
Integrated water barrier:		yes	
Pin allocation:	Pin 1:	shield	
	Pin 2:	minus	
	Pin 3:	plus	
	Pin 4:	n.c.	
	Pin 5:	n.c.	
Power-cabling:			
1.0 m 24 V power cable and 24 V connection box			
Cable (H07RN-F):		2 x 1.5 mm²	
24 V Power Plug		2 x special version	
Integrated water barrier:		Yes	
LED Spots:			
Plug/Socket/cables:			
Length hybrid cable (incl. plug):		1m	
Cable:		4 x 0,34mm² (screened)	
Patented, waterproof plug:		Yes	
Integrated water barrier:		Yes	
Pin allocation:	Pin 1:	GND	
	Pin 2:	Data In (UART)	
	Pin 3:	n.c.	
	Pin 4:	Data Out (UART)	
	Pin 5:	+ 24 V	

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*DMX RDM [Remote Device Managment] is a bidirectional bus for querying and programing of DMX-devices. A RDM control unit is capable of identifying connected devices and to -partial automatically- configure them. DMX RDM devices can be operated simultaneously with simple DMX devices at the same time.

**

water-quality-matrix

	Freshwater	Poolwater	Seawater
PH.Value	**7,2 -7,6**	**7,2 -7,6**	**8**
Hardness	**8 -15 ° DH; 142 -267 ppm CaCo3**	**8 -15 ° DH; 142 -267 ppm CaCo3**	**20 -30 ° DH; 356 - 534 ppm CaCo3**
Free Chlorine	**< 0,3 mg/l; < 0,036 moz/gal**	**0,3 -0,6 mg/l; 0,036 - 0,072 moz/gal**	**< 0,3 mg/l; < 0,036 moz/gal**
Chlorine concentration	**< 250 mg/l; < 30,28 moz/gal**	**< 200 mg/l; < 24,2 moz/gal**	**<=22000 mg/l; <=2664 moz/gal**
Salinity	**n. d.**	**n. d.**	**<= 4%; <= 40.000 ppm**
Total Dry Residue	**< 50 mg/l; < 6,06 moz/gal**	**< 50 mg/l; < 6,06 moz/gal**	**< 250mg/l; < 30,28 moz/gal**
Temperature	**4 -35° C; 39 - 95 ° F**	**4 -30° C; 39 - 86 ° F**	**4 - 20 ° C; 39 - 68 ° F**

Supply and delivery according to manufacturer specifications.

Product / proof of delivery:
LED-Module II 960/DMX/02
Art. 51069

OASE GmbH
Tecklenburger Str. 161
48477 Hörstel / Germany
Phone: +49 5454 800

(or equivalent)
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Entered by the bidder