SPORT LIGHTING

Top performance in sport shown in its best light

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Large Area Lighting around the globe

LOGISTICS

WOLFURT AUSTRIA
Container Terminal

54,000 m²
F–System LARGE, F32
103 floodlights

2019

AIRPORTS

GREENLAND
Thule Airbase

2014

PORTS

VENICE
Molo Di Ponente

75,000 m²
T–System
First Large Area Lighting
Project
2010

AIRPORTS

DUBAI
International Airport

12.5 km2 / 12,500,000 m²
R–System gen1
1,000 floodlights
2019

SPORT

BRISBANE
Bill Brown Reserve

Netball court and car
parking area.
R–System gen1
2020

From airport lighting to sports facilities

ewo already exploited the potential offered by LED technology for large areas as far back as 2010 at Venice cargo terminal and since its project at Innsbruck Airport, has conquered airport installations of various sizes one by one throughout the world.

A development that never stops.

Since 2020, the third generation of high performance floodlights R–System gen3 is on the starting line with different power variants.

When it comes lighting sports facilities, maximum performance and power are paramount.

Due to its scope of configuration options, our high power floodlights are optimised for sports fields, sports halls and stadiums – irrespective of size.

High-power floodlights for sport lighting

R–System gen3

A–Series and E–Series

Outstanding lifetime:
L80B10 > 100,000 h

R–System gen3 MAX

A–Series and E–Series

Maximum performance:
up to 265,000 lm

R–System R1

A–Series

Lower performance categories: small tennis areas

R–System
Superior flexibility thanks to modular design

Each project has its own specific requirements. That's why we have developed a modular product system, which we can modify and fine-tune down to the smallest details, allowing us to produce sophisticated and technologically advanced solutions in different settings as well as a sustainable spare parts supply system.

1	PRINTED CIRCUIT BOARDS	individually interchangeable	wide-ranging configuration options
2	LENS OPTICS	UV stabilised PMMA and PC	different light distributions
3	COOLING SYSTEM	reliable temperature management	optimal thermal performance
4	GLASS COVER	high light transmittance	protection of optical components
5	MOUNTING BRACKET	infinitely variable 360° swivelling	floor, wall and ceiling mounting
6	DRIVER BOX	separate mounting	for optimal thermal separation

AIRPORTS | PORTS | TRAFFIC | LOGISTICS | SPORTS

R–System gen3
Recipe for success: simplexity

Cost efficiency with maximum performance and a focus on what matters. At ewo we have a word for this: simplexity. Because simplexity in design and application optimises performance by R–System gen3 in any large area, with up to 480 LEDs.

AREAS OF APPLICATION	airports, ports, logistics centres, sports facilities and roads
MAX LUMEN PACKAGE	up to 193,000 lm
CURRENT FEED	up to 1,850 mA depending on ambient temperature
AMBIENT TEMPERATURE RANGE	–40 to +45 °C
OUTSTANDING LIFETIME	L80B10 > 100,000 h
DARK SKY	full-cut-off optic at 0°, optional visor up to 7° (E–Series)
ELECTRONIC OPERATING DEVICE	on request with DALI2 or Line Switch
SMART LIGHTING	control modules for different communication standards available upon request
LENSES	made with UV-stabilised polycarbonate (E–Series) or PMMA (A–Series)
COVER	single-pane safety glass (ESG)
LUMINAIRE HOUSING	in die-cast aluminium
BRACKET	made of hot-dip galvanised steel, on request with swivelling bracket for floor, wall and ceiling mounting
FINISH	polyester powder coating, white aluminium (RAL 9006 / DB 701)

Left R2 (144 LEDs) / right R4 (288 LEDs)

R–System gen3
A–Series model variants

R2
(one driver box)

R4
(two driver boxes)

R2
(one external driver, with optional driver box)

R4
(two external drivers, with optional driver box)

R–System gen3
A–Series model variants

R2

24 kg (incl. bracket 3.2 kg)
+ 2.0 kg driver (optional, internal or external)

① = 0.33*
② = 0.11* / 0.12*** / 0.15****

R4 (two driver boxes)

40,5 kg (incl. bracket 3.2 kg)
+ 4.5 kg driver (internal)

① = 0.45*
② = 0.13* / 0.16*** / 0.31****

R4 (one driver box)

37 kg (incl. bracket 3.2 kg)
+ 4.5 kg driver (external)

① = 0.45*
② = 0.12* / 0.15*** / 0.28****

① Obere Windangriffsfläche [m²] ② Seitliche Windangriffsfläche [m²] * Tilt 0° ** Tilt 5° *** Tilt 30°

ACCESSORIES

360° Swivel-mounted bracket

Driver box

R–System gen3
E–Series model variants

R2
(one driver box)

R4
(two driver boxes)

R2
(one external driver, with optional driver box)

R4
(two external drivers, with optional driver box)

R–System gen3
E–Series model variants

R2

24 kg (incl. bracket 3.2 kg)
+ 2.0 kg driver (optional, internal or external)
+ 1.5 kg full-cut-off visor

① = 0,33*
② = 0,11* / 0,12*** / 0, 15****

R4 (two driver boxes)

40.5 kg (incl. bracket 3.2 kg)
+ 4.5 kg driver (internal)
+ 2.0 kg full-cut-off visor

① = 0,45*
② = 0,13* / 0,16 *** / 0,31****

R4 (one driver box)

37 kg (incl. bracket 3.2 kg)
+ 4.5 kg driver (external)
+ 2.0 kg full-cut-off visor

① = 0,45*
② = 0,12* / 0,15*** / 0,28****

① Projected windage area [m²] ② Lateral windage area [m²] * Tilt 0° ** Tilt 5° *** Tilt 30°

ACCESSORIES

360° Swivel-mounted bracket

Driver box

Full-cut-off visor (E–Series)

R–System gen3

MODEL	LIGHT DISTRIBUTION	LUMINOUS FLUX [lm]	MAX. POWER [W]	CURRENT FEED [mA]	LEDs
R2	A–Series	117,000	905	1,200	240
R4	A–Series	205,000	1,496	1,000	480
R2	E–Series	89,500	807	1,850	144
R4	E–Series	179,000	1,614	1,850	288

LIGHT DISTRIBUTIONS

EP09-L (Tilt 5°)
Asymmetric Extra Forward – Left

EP09-R (Tilt 5°)
Asymmetric Extra Forward – Right

EP09-L/R (Tilt 5°)
Asymmetric Extra Forward – Left/Right

AIRPORTS
PORTS
TRAFFIC
LOGISTICS
SPORTS

AH02
Symmetric Wide Flood

AG01
Symmetric Narrow 11°

AG02
Symmetric Medium 26°

SPORTS

AG03
Symmetric Flood 50°

AG04
Symmetric Elliptical 11°–40°

COLOUR TEMPERATURES

3,000 K

4,000 K

5,700 K

Standard CRI ≥ 70, CRI ≥ 80 on request

*For E–Series only

IP66 RoHS IK08

You will find the complete selection of light distributions on ewo.com

R–System gen3 MAX

Optimised for sports facilities and stadiums, our new R–System gen3 MAX is available in two versions with different LED quantities and outputs to meet any requirements. R–System gen3 MAX can deliver 265,000 lm for maximum performance and output, for entire stadiums, compatible with DMX-DALI converters for light shows.

CHARACTERISTICS	ADVANTAGES
HIGH LUMEN PACKAGE UP TO 265,000 LM	Fewer light points required
LIFETIME OF UP TO 60,000 h L80B10	Maintenance greatly reduced
8 DIFFERENT LIGHT DISTRIBUTIONS	Precise and accurate solutions without wasting light
NEWLY DEVELOPED OPTICS	Prevents upward lighting
AMBIENT TEMPERATURE RANGE -40° TO +45°C	Applicable in any region
SINGLE-PANE SAFETY GLASS COVER	Light transparency is maintained and glass does not discolour
SMART LIGHTING AND DMX CONVERTER	Enhancement of the sports experience with light shows

ADVANTAGES OF LED TECHNOLOGY COMPARED TO HALOGEN
Energy savings of up to 85 %
Maintenance costs up to 30 × lower
Service life increased by approx. 3,000 %

R–System gen3 MAX R4/ A–Series / Alfortville Sports venues / 2020

R–System gen3 MAX
Four product variants, endless possibilities

A–Series

R2–MAX
(two external drivers with optional driver boxes)

R4–MAX
(three external drivers with optional driver boxes)

E–Series

R2–MAX
(one driver box)

R2–MAX
(one external driver with optional driver box)

R4–MAX
(two external drivers with optional driver boxes)

R–System gen3 MAX
One to two panels for maximum flexibility

R2–MAX A–Series

24 kg (incl. bracket 3.2 kg)
+ 4.5 kg driver (external)

① = 0.33* / 0.33*** / 0.11****
② = 0.11* / 0.15*** / 0.34****

R4–MAX A–Series

37.5 kg (incl. bracket 3.7 kg)
+ 6.5 kg driver (external)

① = 0.45* / 0.45** / 0.12****
② = 0.12* / 0.28*** / 0.47****

R2–MAX E–Series

24 kg (incl. bracket 3.2 kg)
+ 2.0 kg driver (internal or external)
+ 1.5 kg full-cut-off visor

① = 0.33*
② = 0.11* / 0.12*** / 0.15****

R4–MAX E–Series

37 kg (incl. bracket 3.2 kg)
+ 4.5 kg driver (external)
+ 2.0 kg full-cut-off visor

① = 0.45*
② = 0.12* / 0.15 *** / 0.28****

① Projected windage area [m²] ② Lateral windage area [m²]
*Tilt 0° **Tilt 5° ***Tilt 30° ****Tilt 90°

ACCESSORIES

360° Swivel-mounted bracket

Driver box

Full-cut-off visor (E–Series)

R–System gen3 MAX
Mastering the shape of light

With our optics, designers have all the tools at their fingertips, to create any desired light scenario.

MODEL	LIGHT DISTRIBUTION	MAX.LUMINOUS FLUX [lm]	MAX. POWER [W]	MAX.CURRENT FEED [mA]	LEDs	DRIVER
R2	A–Series	132,500	1,179	2,000	192	2 external
R4	A–Series	265,000	2,357	2,000	384	3 external
R2	E–Series	96,500	965	2,200	144	1 external or internal
R4	E–Series	193,500	1,930	2,200	288	2 external

LIGHT DISTRIBUTIONS

AG01
Symmetric Narrow 17°

AG02
Symmetric Medium 32°

AG03
Symmetric Flood 55°

AG04
Symmetric Elliptical 17°– 46°

EP09-L
Asymmetric Extra Forward – Left

EP09-R
Asymmetric Extra Forward – Right

EP09-L/R
Asymmetric Extra Forward – Left/Right

COLOUR TEMPERATURE

3,000 K

4,000 K

5,700 K

3.000 K: Standard CRI ≥ 70*
4.000 K: Standard CRI ≥ 70, CRI ≥ 80**
5.700 K: Standard CRI ≥ 70, CRI ≥ 80** and ≥ 90**

*E–Series only
**A–Series only

220-277 VAC 50 / 60 Hz
IP66 RoHS IK08

R–System gen3 MAX
Performance at the highest level

Mechanical Details

- Luminaire housing of die-cast aluminium
- Polyester powder-coated surface, metallic grey (RAL 9006 / DB 701)
- Mounting bracket made of hot-dip galvanised steel - on request with infinitely variable 360° swivel-mounted bracket for floor, wall and ceiling mounting
- Cover made from single-pane safety glass (ESG)
- GORE® valve to prevent condensation
- Protection class IP66 / IK08 impact resistance
- Hermetically sealed cable entry - no exposed cable

Electrical Details

- Input voltage 220-277 Vac or 198-250 Vdc (50-60 Hz)
- Power Factor > 98% / Pout > 240 W Power Factor > 95%
- Electronic control gear with DALI2 or Line Switch available
- Insulation class I
- Flicker free at full power
- Overvoltage protection integrated 10 kV
- Features for constant luminous output control (CLO) available

Certificates

CE Q5 RCM c UL us SNI Pending

SPORT

R–System R1

The tried-and-tested R–System R1 is still available and optimised for applications such as traffic areas as well as small sports areas (tennis courts etc.).

MODEL	LIGHT DISTRIBUTION	LUMINOUS FLUX [lm]	POWER [W]	MAX. CURRENT FEED [mA]	LEDs
R1	A–Series	33,961	273	700	128

AP04-L/R (Tilt 20°)
Asymmetric Extra Forward – Left/Right

AP05 (Tilt 8°)
Asymmetric Extra Forward

AP07
Asymmetric Extra Forward

7.5 kg
+ 3 kg Driver

① = 0.13
② = 0.05* / 0.08**

② Lateral windage area [m²]
① Projected windage area [m²]
* Tilt 0° ** Tilt 30°

COLOURS 4,000 K 5,700 K

Standard CRI ≥ 70, CRI ≥ 80 on request

You will find the complete selection of light distributions on ewo.com

IP66 RoHS IK08

OPTIMISED PERFORMANCE	33,961 lm, 110-130 lm/W
LIFETIME	L90B10 > 100,000 h
ELECTRONIC OPERATING DEVICE	DALI interface and CLO on request
MATERIALS	lens optics made from PMMA luminaire body from die-cast aluminium luminaire cover of reinforced safety glass (ESG)

Brisbane, Australia / Bill Brown Reserve / Netball courts / R–System gen1, R3 / 2020

Accessories to guide light precisely

To direct light even more precisely, we offer two accessories for the E–Series: a full-cut-off-visor and a Backlight Shield. While the FCO visor minimises uplight, the Backlight Shield shapes the light in such a way that the rear illuminance is reduced by about two thirds. The goal: light exactly where it is needed.

BACKLIGHT SHIELD

Smart Lighting

When lighting is intelligent, it can respond to a variety of elements in the environment. To enhance end-user enjoyment, maximum flexibility is required. Intelligent lighting management is always a step towards any goal, be it safety, sustainability or a unique lighting experience.

Intelligent lighting options with wireless and touchscreen control or with touchscreen control that responds to a DALI signal
DMX converter for light shows
Nema socket
Zhaga Book 18 socket
Line Switch

Alfortville, France / R–System gen3 MAX / Standardised according to the French National Football Association / 150 lux, Uo > 0,7, Emin/Emax > 0,4

SPORT

Lighting Examples

Soccer - 4 poles

DIN EN 12193

Field size 105 × 68 m
Pole height 18 m LPH (4x)

R–System gen3 MAX

Angle/inclination 0°
Maintenance Factor 0,9
CRI ≥ 70
Colour temperature:
4,000 K / 5,700 K

75 LUX	200 LUX	500 LUX
Class III R4-MAX EP09	Class II R4-MAX EP09	Class I R4-MAX EP09

CALCULATED LUX LEVEL	75.3 lx	214 lx	501 lx
NUMBER OF PRODUCTS	4	12	28
PERFORMANCE	7.14 kW	21.42 kW	49.98 kW
GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.5 U_0 (0.5 U_0)	0.62 U_0 (0.6 U_0)	0.75 U_0 (0.7 U_0)

Lighting Examples

Soccer 6 poles

DIN EN 12193

Field size 105 × 65 m
Pole height 18 m LPH (6x)

R–System gen3
R–System gen3 MAX

Tilt 0°
Maintenance Factor 0,9
CRI ≥ 70
Colour temperature:
4,000 K / 5,700 K

	75 LUX	200 LUX	500 LUX
	Class III R4 EP09	Class II R4-MAX EP09	Class I R4-MAX EP09

CALCULATED LUX LEVEL	79,6 lx	233 lx	501 lx
NUMBER OF PRODUCTS	6	14	30
PERFORMANCE	7,79 kW	24.99 kW	53.55 kW
GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.61 U_o (0.5 U_o)	0.7 U_o (0.6 U_o)	0.78 U_o (0.7 U_o)

Lighting Examples

Rugby

DIN EN 12193

Field size 121 × 63 m
Pole height 25 m LPH (6x)

R–System gen3 MAX

Tilt 0°
Maintenance Factor 0,9
CRI ≥ 70
Colour temperature:
4,000 K / 5,700 K

	75 LUX	200 LUX	500 LUX
	Class III R4-MAX EP09	Class II R4-MAX EP09	Class I R2-MAX EP09 R4-MAX EP09

CALCULATED LUX LEVEL	76 lx	211 lx	501 lx
NUMBER OF PRODUCTS	6	16	40 × R4 + 4 × R2
PERFORMANCE	11.57 kW	30.87 kW	81.05 kW
GLARE (STANDARD VALUE)	< 50 (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.6 U_o (0.6 U_o)	0.7 U_o (0.6 U_o)	0.75 U_o (0.7 U_o)

Lighting Examples

Tennis

DIN EN 12193

Field size 36 × 18 m
Pole height 8 m LPH (4x)

R–System gen3

Tilt 0°
Maintenance Factor 0,9
CRI ≥ 70
Colour temperature:
4,000 K / 5,700 K

200 LUX
Class III
R2 EP09

300 LUX
Class II
R2 EP09

500 LUX
Class I
R2 EP09
R4 EP09

CALCULATED LUX LEVEL	202 lx	309 lx	517 lx
NUMBER OF PRODUCTS	4	4	4x R4 + 4 x R2 total
PERFORMANCE	3,13 kW	4,13 kW	7,26 kW
GLARE (STANDARD VALUE)	< 35 GR (50 GR)	< 35 GR (50 GR)	< 35 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.7 U_0 (0.6 U_0)	0.71 U_0 (0.7 U_0)	0.71 U_0 (0.7 U_0)

Lighting Examples

Australian Football

Field size 165 × 135 m
Pole height 28 m

R–System gen3 MAX

Tilt 0°
Maintenance Factor 0,9
CRI ≥ 70
Colour temperature:
4,000 K / 5,700 K

50 LUX
R4-MAX EP09

100 LUX
R2-MAX EP09
R4-MAX EP09

200 LUX
R4-MAX EP09

CALCULATED LUX LEVEL	55 lx	100 lx	200 lx
NUMBER OF PRODUCTS	8	4 x R2 + 12 x R4	28
PERFORMANCE	15.4 kW	27.03 kW	54.03 kW
GLARE (STANDARD VALUE)	< 50 GR	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.33 U_0 (0.3 U_0)	0.7 U_0 (0.6 U_0)	0.7 U_0 (0.7 U_0)

Lighting Examples

Indoor Ice Hockey

DIN EN 12193

Field size 60 × 30 m
Mounting height 12 m

R–System gen3
R–System gen3 MAX

Tilt 0°
Maintenance Factor 0,9
CRI ≥ 70
Colour temperature:
4,000 K / 5,700 K

	300 LUX	500 LUX	750 LUX
	Class III R2-MAX EP09	Class II R2-MAX EP09	Class I R4 EP09 R2 EP09

CALCULATED LUX LEVEL	305 lx	500 lx	759 lx
NUMBER OF PRODUCTS	10	16	12 × R4 + 4 × R2
PERFORMANCE	9.65 kW	15.4 kW	20.96 kW
GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.7 U_o (0.7 U_o)	0.7 U_o (0.7 U_o)	0.74 U_o (0.7 U_o)

Lighting Examples

Multipurpose Pitch

DIN EN 12193

Field size 40 × 20 m
Pole height 10 m LPH (4x)

R–System gen3 MAX
R–System R1

Tilt 0°
Maintenance Factor 0,9
CRI ≥ 70
Colour temperature:
4,000 K / 5,700 K

	75 LUX	200 LUX	500 LUX
	Class III R1	Class II R2-MAX EP09	Class I R2-MAX EP09

CALCULATED LUX LEVEL	76 lx	200 lx	501 lx
NUMBER OF PRODUCTS	4	4	8
PERFORMANCE	932 W	3.13 kW	7.7 kW
GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.7 U_o (0.5 U_o)	0.7 U_o (0.6 U_o)	0.7 U_o (0.5 U_o)

SPORT

Sports facilities around the globe

“The biggest challenge here was to illuminate several netball netball fields at the same time, with limited space, in accordance with standards. With ewo’s solution, we achieved excellent results through uniform light distribution in combination with an FCO-compliant effect - it’s a comfortable, natural environment deep into the night.”

Principle Lighting Engineer, Bill Brown Reserve

Brisbane, Australia / Bill Brown Reserve / Netball courts / 2020

Alfortville, France / Rugby and football pitches / R–System gen3 MAX / 2020

“The aim of the development of the R–System gen3 MAX was to offer a spotlight with an exceptionally high lumen output – at maximum performance.”

Hannes Wohlgemuth, CEO

“Whether for millions of spectators at high-class sporting events or for a friendly training session at the sports facility next door, our floodlights can be used for all sizes and any sport.”

Stefan Ursch, Technical Sales Support

Vintl, Italy / Engineering 3M Srl / 2015

For more than 20 years ewo has been making places shine: picturesque footpaths and urban meeting places, streets, cultural buildings and squares, airports and other transport and industrial environments. For us, the cutting edge requires use of the latest technology to create tailor-made solutions.

At our location in South Tyrol we develop and manufacture high-quality products for the distribution, control and limitation of light in public spaces.

A modular LED unit is the basis of ewo's peerless customer-centric, sustainable and energy-saving lighting projects, which operate on any and every scale.

We bring passionate curiosity for individual requirements, such as individualised lighting effects, special demands on form, colour and material of the luminaires, sensitive or extreme environments, special technical specifications. The examination of cultural and artistic questions, the experimental exchange with architecture, art and design have for us a special significance.

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ewo Sport Lighting
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