

Dynamic LED sports floodlighting

Suitable for all sports



AAA-LUX®

LED Luminaires represent the third generation in AAA-LUX sports floodlighting, and offer a raft of advantages for both players and clubs.

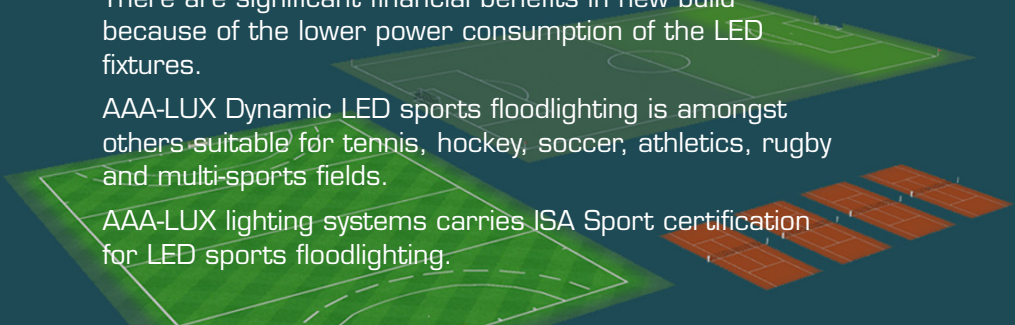
Easy to use, comfortable light, lightweight, flexible and above all much more energy efficient.

The existing luminaires can easily be replaced by AAA-LUX LED fixtures; there are no adjustments required to the existing infrastructure, with no new wiring or new masts.

There are significant financial benefits in new build because of the lower power consumption of the LED fixtures.

AAA-LUX Dynamic LED sports floodlighting is amongst others suitable for tennis, hockey, soccer, athletics, rugby and multi-sports fields.

AAA-LUX lighting systems carries ISA Sport certification for LED sports floodlighting.



Product Specifications AAA-LUX - third generation Sports Floodlighting

The system consists of LED luminaires and a lighting control management system.

The system works within the existing infrastructure at sports facilities. LED fixtures have been on the energy list and environmental list of AgentschapNL since 2011. This means that fiscal regulations are applicable.

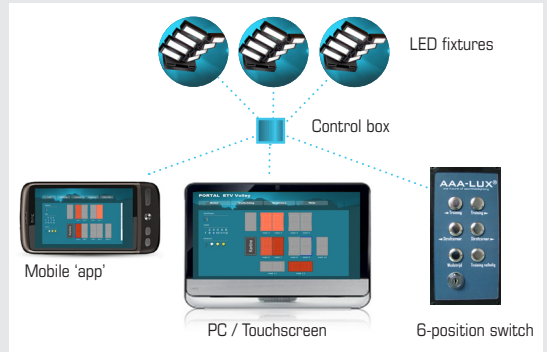
AAA-LUX systems have now been installed in a number of sports facilities and are approved for matchplay and competition as defined by the respective sports federations.

AAA-LUX LED fixtures

The table below shows nominal values for the LED luminaire, unless otherwise indicated:

Power supply	400 Vac
Maximum current	<5 A
Power factor	> 0.98 (at maximum power)
Power consumption	see table, depends on the application
Cx value	0.26 m ² (with a Cw of 1 and a maximum surface of 0.26 m ²)
Colour Rendering Index (Ra)	> 75
Colour temperature	5200 K
Maximum width	650 mm
Maximum depth	700 mm
Maximum height	450 mm
Net weight	<25 kg
IP rating	IP65

The LED luminaire carries the CE mark.



AAA-LUX lighting control management system

The lighting control management system has two important functions:

- Management of the lighting system for managers and installers
- User-friendly operation for athletes and participants

The athlete/participant can easily operate the system using a switching box by the side of the sports field, a touch screen in the clubhouse or via a special smartphone app.

Managers and installers have access to the lighting control management system via a PC application, from which they can obtain vital information about the system and the fixtures, allowing for preventive maintenance. The lighting control management system can also be used by the administrator to make modifications to the user interface, or to modify settings to save more energy.





LED sports lighting reflects user needs

For many years now Metal Halide lamps have set the standard for sports floodlighting. However, warm-up and cool-down periods are not conducive to user-friendliness or flexibility. LED technology now offers a really flexible and robust alternative to metal halide, with comfortable light.

AAA-LUX offers sports lighting systems that combine LED armatures with sophisticated control units. These systems can seamlessly meet the needs of both athletes and administrators thus enhancing the sporting pleasure all round. Because every sport has its own needs, requirements and standards for floodlighting, there are special LED armatures and control units to match.

Flexible in use

When in use, LED luminaires offer immense flexibility:

- No start up time
- No high start up current
- Only illuminate section of sports field required
- Can be dimmed to any lighting level required
- Can be switched off when the sports area is momentarily not in use

Because of this 'dynamic' usage, 80% energy savings are possible.

User-friendly operation -

Light control management system

In a dynamic lighting system, AAA-LUX offers a user-friendly interface for both athletes as well as administrators/managers. The wireless system allows remote control of the lighting and control system either manually or automatically. The simplest control is a 6-position switch. LED luminaires can also be operated by touch screen,

mobile phone or PC. This wireless remote dynamic system allows adjustments to be made at any time. User data from the control system and fixtures can also be stored for use by the installer or administrator of the sports facilities.

Easily upgrade to AAA-LUX dynamic sports lighting

LED armatures can be fitted onto existing masts, also making use of existing wiring. The existing light switching boxes can easily be used, or alternatively the LED luminaires can be integrated into a dynamic lighting control system. Dynamic LED sports lighting is very suitable for use in new build, and offers additional financial benefits during installation: for example, you need less cables and they can also be thinner.

LED reduces energy and maintenance costs

LED lighting offers considerable savings on energy costs.

Maintenance costs are also much lower with LED lighting. The LEDs have a very long life and the armatures are designed to last a minimum of 25 years.

LED fixtures reduce light spill

Because the LED fixtures can be carefully focused on the field of play, light spill is virtually eliminated. This means that planning permission for floodlit sports facilities in residential areas or wooded areas for example is likely to be less problematic. Floodlighting can then also be used later into the evening.

Energy savings

The potential energy savings for each sport do vary due to differences in playing surface and required illuminance levels. Due to the flexibility of the LED fixtures, it is possible to dim the LED lights to whatever luminance level is appropriate for the activity. Levels may be different for training compared to matches for example. This means that there are differences in energy savings for each sport.

The table gives an overview of the minimum energy savings achieved with standard illuminance levels for each sport. By using the lighting control management system, 80% savings can be achieved over conventional sports floodlighting. The level of savings achieved is highly dependent on the pattern of use.

Overview of standard lightplans Third generation – Sportpark3

		Pole height	Number of poles	Number of fixtures	Static energy savings *
Tennis					
Tennis 1	Class II	12	4	4	62%
Tennis 2	Class II	15	4	4	29%
Tennis 2 corner	Class II	15	4	4	24%
Tennis 3	Class II	15	4	8	55%
Tennis 3 corner	Class II	15	4	8	52%
Tennis 4	Class II	15	6	8	25%
Tennis 2	Class I	15	4	8	50%
Soccer	*=100x64 m ; **=105x69 m				
Soccer *	Class III – 75 lux	15	6	6	47%
Soccer *	Class III – 120 lux	15	6	8	24%
Soccer *	Class III – 120 lux	15	8	8	33%
Soccer *	Class III – 150 lux	15	6	10	30%
Soccer **	Class II – 200 lux	15	8	16	37%
Hockey					
Hockey	Class II - NSVV	15	8	12	44%
Hockey	Class II - NSVV	18	8	12	43%
Hockey	Class II – knhb	15	8	12	40%
Hockey	Class II – knhb	18	8	12	40%
Hockey	Class II - Kbhb	18	8	16	40%
Hockey	Class I - knhb	18	8	24	31%
Athletics					
Athletics	Running only	18	8	8	71%
Athletics	Class III	18	8	18	54%
Athletics	Class II	18	8	28	30%
Team Handball					
Team Handball	Class II	15	4	4	66%

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*With dimming of the fixtures energy savings up to 80% are possible