



Lighting a baseball field

A fast sport like baseball or softball requires high levels of illumination to enable the action and flight of the ball to be followed. Most of the fast action takes place in the regulation-sized infield, which will require a significantly greater illuminance and overall uniformity than the larger outfield (the area of which may vary). Floodlighting must minimize shadowing and achieve good modelling of players, while providing control of glare to players, officials and spectators.

Due to the regulation infield layout of pitcher, hitter and three base-plate fielders, baseball is probably unique in having nine fixed lines of sight within which pole locations should be avoided if glare from floodlighting is to be adequately controlled. Poles are not permitted within a 90° zone directly behind the home plate to ensure good viewing conditions for outfielders. These pole placement regulations generally dictate the use of either six or eight-pole floodlighting systems, with floodlights aimed to illuminate three distinct zones (infield diamond far infield/near outfield and deep outfield). The provision of at least bi-directional lighting into each zone is necessary if adequate modelling of players is to be achieved.

Source: Society of Light and Lighting UK

Non-televised baseball/softball lighting recommendations

EN12193 Requirements

		Class		
		I	II	III
Infield	Horizontal Illuminance (Lux)	750	500	200
	Uniformity (Min/Ave)	0.7	0.7	0.5
Outfield	Horizontal Illuminance (Lux)	500	300	100
	Uniformity (Min/Ave)	0.5	0.5	0.3
Glare Rating		50	50	55

Recommendations for televised events

Major events

	Horizontal illuminance	Uniformity Min/Ave	Uniformity Min/Max	Vertical Illuminance	Uniformity Min/Ave	Uniformity Min/Max	Colour Rendering	Glare Rating
HDTV	1500-3000	0.8	0.7	2200	0.7	0.6	>90	<50
Slow-motion Camera	1500-3000	0.8	0.6	1800	0.7	0.5	>80	<50
Fixed Camera	1500-3000	0.8	0.6	1400	0.7	0.5	>80	<50
Mobile Camera	1500-3000	0.8	0.6	1200	0.5	0.3	>80	<50

Average horizontal and vertical illuminance ratios: It is recommended that the ratio for horizontal illuminance (Field of Play) is between 0.75 and 1.5 of the vertical illuminance for cameras. Where there is HDTV all horizontal values for other cameras are as for HDTV

National events

	Horizontal illuminance	Uniformity Min/Ave	Uniformity Min/Max	Vertical Illuminance	Uniformity Min/Ave	Uniformity Min/Max	Colour Rendering	Glare Rating
Camera	1000-2000	0.7	0.5	1000	0.6	0.4	>80	<50

Measurements should be taken 1.5 m above the playing surface.

Luxtronik offers Baseball LED lighting that emits bright, uniform illumination, so matches can be played any time of the day or night, whether at the little league, high school, college or professional level.

Recommended Products



APOLLO (FL)
60-800w



JUPITER (FLS)
400-1500w



HERCULES (PLS)
400-1500w

For more information or project and lighting design support, please contact our team sales@luxtronik-tech.com