

PADEL

Originally from Mexico, the Padel was introduced into Europe by the prince of Madrid Alfonso of Hohenlohe-Langenburg. From early seventies, where it remained an elite game, up to the eighties, when it really began to spread, thanks to the introduction in Argentina of the "crystal palace" (typical crystal walls to replace the masonry ones), until, in 1997 in Barcelona, the rules of the game and the technical specifications of the fields were standardized. The game officially called Padel represented, promoted and organised formally by the FIP (Federacion Internacional de Padel).

PERFORMANCE IN LIGHTING has been the official supplier of the Italian Tennis Federation's FIT, including CENTRI ESTIVI (Summer Camps) since 2018 and PADEL since 2019.







PADEL in the world

IOC - The International Olympic Committee, also known as CIO (from the initials of the original French name: Comité International Olympique), is a Swiss non-governmental organization created by Pierre de Coubertin in 1894 to revive the Olympic Games of ancient Greece through a four-year sporting event where athletes from all countries could compete against each other. It's the highest world sports organism comprises three main constituents: the IOC itself is the supreme authority of the Movement; the International Federations (IFs) and the National Olympic Committees (NOCs). The first two are international non-governmental organisations administering one or several sports at world level and encompassing organisations regulating such sports on a national level. Their mission is to develop, promote and protect the Olympic Movement in their respective countries.



GAISF - Global Association of International Sports Federations includes all sixty-nine CIO recognized federations (twenty-eight from ASOIF, seven from AIOWF and thirty-four from ARISF).



IPF - The International Padel Federation is the world governing body for the sport Padel, founded in 1991 in Madrid by the Argentinian, the Spanish and the Uruguayan Federation legal representatives. It is a non-profit making organisation whose goal is to promote all forms of Padel around the world.



PADEL in Europe

CEN - The European Committee for Standardization (Comite European de Normalisation in French), better known by the acronym CEN, is a regulatory body that aims to harmonise and produce technical standards (EN) in Europe in collaboration with national and supranational regulatory agencies such as ISO.

The CEN seeks to facilitate the exchange of goods and services between member countries, harmonising the respective national standards and cooperating with European political, economic and scientific organisations interested in standardisation.

The European standards produced by CEN are usually harmonized and adapted by the individual countries that receive them, such as the UNI in Italy.

EUROPEAN LIGHTING STANDARDS

Consistent with the goals stated at the start of this monograph, the lighting examples that follow are all compliant with the EN 12193:2018 standard. The examples are provided solely for the evaluation of horizontal lighting elements and are divided into INDOOR and OUTDOOR solutions in order to highlight the differences between the two types of tennis lighting systems.

In force by CEN members national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

The Lighting Class describes the lighting parameters for the best possible illumination of a playing area. The following table establishes the level of competition and technical parameters.

EN 12193:2018 (indoor - outdoor)

Competition level	Lighting class		
	I	II	III
Local Competition and Training			✓
Regional Competition		✓	
International and National Competition	✓		




EN 12193:2018 (indoor)



Reference Area	Class	Lighting Horizontal PA		Lighting Horizontal TA		Gr	Colour Rendering
		Eave	Uniformity Emin/Eave	Eave	Uniformity Emin/Eave		CRI
PA 20x10 m	III	300 lux	0,50	-	-	40	60
	OLD R.	400 lux	(0,70)	-	-	(40)	(60)
	II	500 lux	0,70	-	-	40	60
	I	750 lux	0,70	-	-	35	80

EN 12193:2018 (outdoor)

Reference Area	Class	Lighting Horizontal PA		Lighting Horizontal TA		Gr	Colour Rendering
		Eave	Uniformity Emin/Eave	Eave	Uniformity Emin/Eave		CRI
PA 20x10 m	III	200 lux	0,60	-	-	55	60
	II	300 lux	0,70	-	-	50	60
	I	500 lux	0,70	-	-	50	70



	GUPELL 2	GUPELL 2.5	GUPELL 3	GUPELL 4	SQUARE PRO	LAMA+ MINI	LAMA+	consult factory
								
			p. 54					
			p. 55					
			p. 54					
			p. 55					

	GUPELL 2	GUPELL 2.5	GUPELL 3	GUPELL 4	SQUARE PRO	LAMA+ MINI	LAMA+	consult factory
								
		p. 56						
		p. 56						
			p. 57					

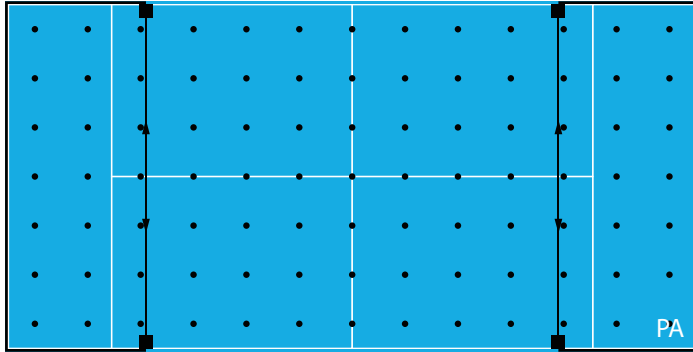
The lighting values in brackets are taken by PERFORMANCE IN LIGHTING as a reference from other regulations in case the rule in question does not expressly declare them.

EN 12193 | 300 lux

CLASS III

REQUIREMENTS:

PLAY AREA (PA)	20 x 10 m	Grid Points (PA)	13 x 7
Eave (PA)	300 lux	Emin/Eave (PA)	0,50
Colour Rendering Index (CRI)	60	Glare Rating (Rg)	40



GUELL 3
0,92 kW total power consumption

PART NUMBER	OPTIC	KELVIN	WATTAGE	Q.TY
306116	A50/W	4000	231 W	4

INSTALLATION SUMMARY:

Poles / Lines	4
Installation height	6 m
Maintenance factor	0,90

RESULTS OVERVIEW:

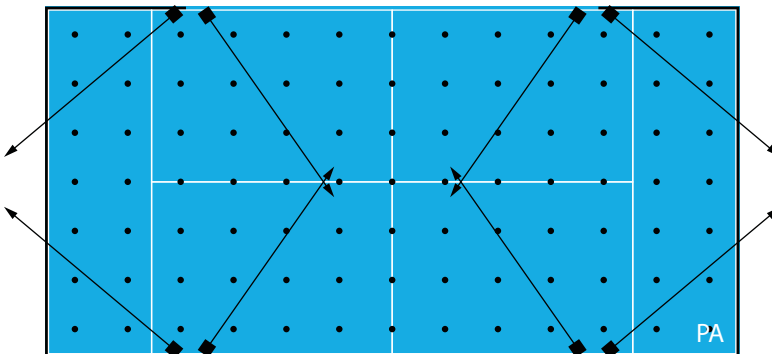
Eave (PA)	328 lux
Uniformity Emin/Eave (PA)	0,62
Glare Rating (Rg)	29

EN 12193 | 500 lux

CLASS II

REQUIREMENTS:

PLAY AREA (PA)	20 x 10 m	Grid Points (PA)	13 x 7
Eave (PA)	500 lux	Emin/Eave (PA)	0,70
Colour Rendering Index (CRI)	60	Glare Rating (Rg)	40



GUELL 3
1,85 kW total power consumption

PART NUMBER	OPTIC	KELVIN	WATTAGE	Q.TY
306116	A50/W	4000	231 W	8

INSTALLATION SUMMARY:

Poles / Lines	4
Installation height	6 m
Maintenance factor	0,90

RESULTS OVERVIEW:

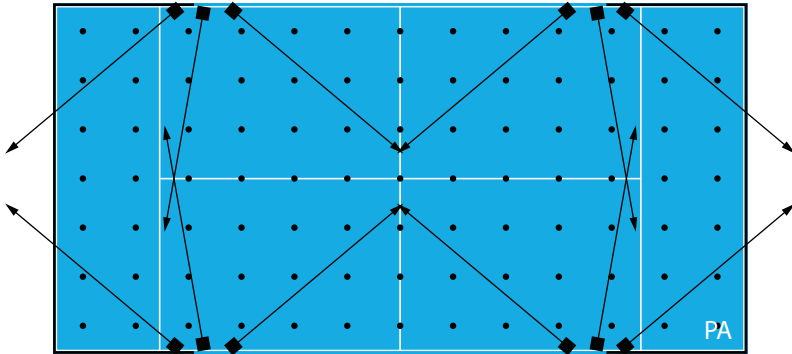
Eave (PA)	532 lux
Uniformity Emin/Eave (PA)	0,71
Glare Rating (Rg)	30

EN 12193 | 750 lux

CLASS I

REQUIREMENTS:

PLAY AREA (PA)	20 x 10 m	Grid Points (PA)	13 x 7
Eave (PA)	750 lux	Emin/Eave (PA)	0,70
Colour Rendering Index (CRI)	80	Glare Rating (Rg)	35



GUELL 3
2,77 kW total power consumption

PART NUMBER	OPTIC	KELVIN	WATTAGE	Q.TY
306116	A50/W	4000	231 W	12

INSTALLATION SUMMARY:

Poles / Lines	4
Installation height	6 m
Maintenance factor	0,90

RESULTS OVERVIEW:

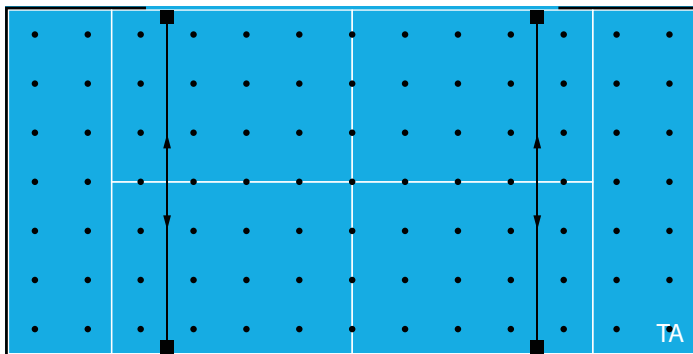
Eave (PA)	818 lux
Uniformity Emin/Eave (PA)	0,72
Glare Rating (Rg)	30

EN 12193 | 400 lux

OLD REQUIREMENT

REQUIREMENTS:

PLAY AREA (PA)	20 x 10 m	Grid Points (PA)	13 x 7
Eave (PA)	400 lux	Emin/Eave (PA)	-0,70
Colour Rendering Index (CRI)	(60)	Glare Rating (Rg)	(40)



GUELL 3
1,22 kW total power consumption

PART NUMBER	OPTIC	KELVIN	WATTAGE	Q.TY
306114	A50/W	4000	305 W	4

INSTALLATION SUMMARY:

Poles / Lines	4
Installation height	6 m
Maintenance factor	0,90

RESULTS OVERVIEW:

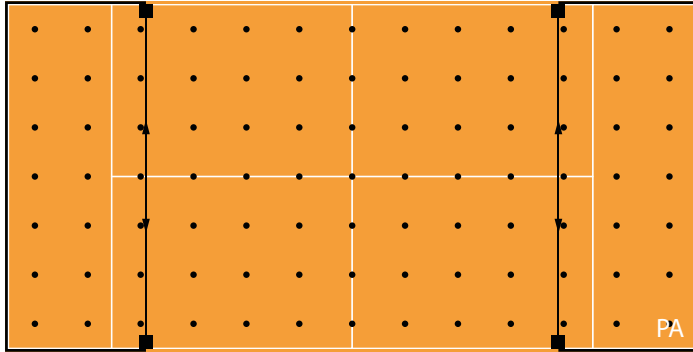
Eave (PA)	437 lux
Uniformity Emin/Eave (PA)	0,70
Glare Rating (Rg)	29

EN 12193 | 200 lux

CLASS III

REQUIREMENTS:

PLAY AREA (PA)	20 x 10 m	Grid Points (PA)	13 x 7
Eave (PA)	200 lux	Emin/Eave (PA)	0,60
Colour Rendering Index (CRI)	60	Glare Rating (Rg)	55



Lighting calculation at zero light pollution.



GUELL 2.5
0,62 kW total power consumption

PART NUMBER	OPTIC	KELVIN	WATTAGE	Q.TY
306204	A50/W	4000	156 W	4

INSTALLATION SUMMARY:

Poles / Lines	4
Installation height	6 m
Maintenance factor	0,90

RESULTS OVERVIEW:

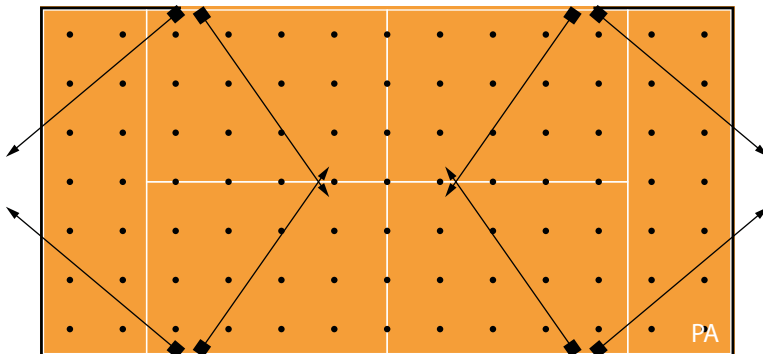
Eave (PA)	213 lux
Uniformity Emin/Eave (PA)	0,64
Glare Rating (Rg)	29

EN 12193 | 300 lux

CLASS II

REQUIREMENTS:

PLAY AREA (PA)	20 x 10 m	Grid Points (PA)	13 x 7
Eave (PA)	300 lux	Emin/Eave (PA)	0,70
Colour Rendering Index (CRI)	60	Glare Rating (Rg)	50



Lighting calculation at zero light pollution.



GUELL 2.5
1,25 kW total power consumption

PART NUMBER	OPTIC	KELVIN	WATTAGE	Q.TY
306204	A50/W	4000	156 W	8

INSTALLATION SUMMARY:

Poles / Lines	4
Installation height	6 m
Maintenance factor	0,90

RESULTS OVERVIEW:

Eave (PA)	355 lux
Uniformity Emin/Eave (PA)	0,72
Glare Rating (Rg)	29

EN 12193 | 500 lux

CLASS I

REQUIREMENTS:

PLAY AREA (PA)	20 x 10 m	Grid Points (PA)	13 x 7
Eave (PA)	500 lux	Emin/Eave (PA)	0,70
Colour Rendering Index (CRI)	70	Glare Rating (Rg)	50



GUELL 3
1,85 kW total power consumption

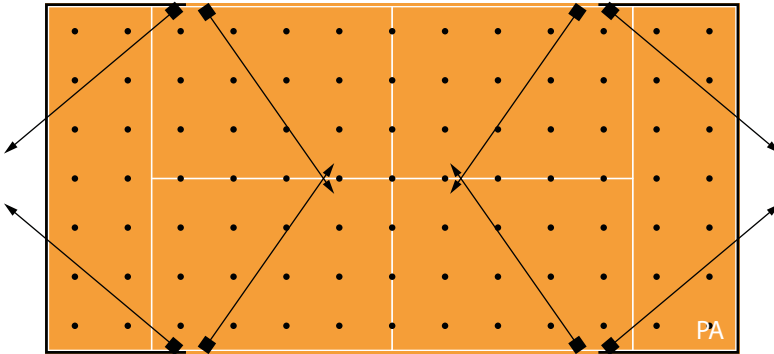
PART NUMBER	OPTIC	KELVIN	WATTAGE	Q.TY
306116	A50/W	4000	231 W	8

INSTALLATION SUMMARY:

Poles / Lines	4
Installation height	6 m
Maintenance factor	0,90

RESULTS OVERVIEW:

Eave (PA)	532 lux
Uniformity Emin/Eave (PA)	0,71
Glare Rating (Rg)	30



Lighting calculation at zero light pollution.