#### MATERIAL SUBSTITUTION REQUEST



#### Bid #22-018, Waverly Park

Date: 03/22/2022

We hereby submit for your review the following PRODUCT SUBSTITUTION of the specified material for the above listed project.

Section:

Paragraph:

Specified Material: LED Sports Lighting by Premier Sports Lighting, LLC

Attached is complete technical data of the PRODUCT SUBSTITUTION, highlighted or underlined for easy reading, including laboratory test, as necessary, in duplicate. Included is complete information on changes to the Project Manual Documents required by the proposed PRODUCT SUBSTITUTION for its proper installation.

A) The Trade Contractor, under whose transmittal this information is sent, has reviewed the PRODUCT SUBSTITUTION and agrees it is applicable to this project in the location described and agrees to warrant/guarantee the use of the PRODUCT SUBSTITUTION in the same manner he would the Specified Product.

**Yes** If not, explain:

B) Does the PRODUCT SUBSTITUTION affect the dimensions shown on the Drawings in ANY WAY?

 $\Box Yes \qquad \bigvee No$  If so, how?

C) Does the undersigned have the approval of the Manufacturer/Supplier to pay for any changes to the building design, including engineering and detailing costs, caused by the requested PRODUCT SUBSTITUTION?

Yes VNo

If so, to what extent?

D) What effect does the PRODUCT SUBSTITUTION acceptance have on other trades?

**Don't Know** 

None

As follows:

(Attach additional pages as required)         F)       Manufacturer's guarantees and warranties of the PRODUCT SUBSTITUTION and the Specified Product?         ✓       Same       Different (Explain)         G)       What is the cost differential of the PRODUCT SUBSTITUTION in comparison to the Specified Product?         Same       ✓       Less Expensive by \$         I)       The PRODUCT SUBSTITUTION has been verified by the undersigned with the Manufacturer/Supplier as meeting or exceeding the specifications of the Specified item.         ✓       Yes       No         THE UNDERSIGNED Trade Contractor states that the function, appearance, and quality of the PRODUCT SUBSTITUTION are equivalent or superior to the specified item. In addition, I, as the Trade Contractor will assume all responsibility for any impact or delay the review and evaluation of the alternate product may cause. Your approval of the Substitute Product in no way will relieve me as the Trade Contractor of my responsibilities to conform with all requirements of the Contract Documents.         Submitted By:	<ul> <li>E) Difference between proposed PRODUCT SUBSTITUTION and the Specified Product? BE</li> <li>SPECIFIC IN DESCRIPTION. (ASTM No., Size, Gauge, Material, Color Availability, Construction)</li> </ul>
F)       Manufacturer's guarantees and warranties of the PRODUCT SUBSTITUTION and the Specified Product?	(Attach additional pages as required)
G)       What is the cost differential of the PRODUCT SUBSTITUTION in comparison to the Specified Product?         □       Same       ✓ Less Expensive by \$       □       More Expensive by \$         I)       The PRODUCT SUBSTITUTION has been verified by the undersigned with the Manufacturer/Supplier as meeting or exceeding the specifications of the Specified item.         ✓       Yes       □       No       Waiting for answer.         THE UNDERSIGNED Trade Contractor states that the function, appearance, and quality of the PRODUCT SUBSTITUTION are equivalent or superior to the specified item. In addition, I, as the Trade Contractor will assume all responsibility for any impact or delay the review and evaluation of the alternate product may cause. Your approval of the Substitute Product in no way will relieve me as the Trade Contractor of my responsibilities to conform with all requirements of the Contract Documents.         Submitted By:	<ul> <li>F) Manufacturer's guarantees and warranties of the PRODUCT SUBSTITUTION and the Specified Product?</li> <li>✓ Same □ Different (Explain)</li> </ul>
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Submitted By: <u>Mike Rolison</u> <u>Andrew Weathers</u> Signature       Printed	THE UNDERSIGNED Trade Contractor states that the function, appearance, and quality of the PRODUCT SUBSTITUTION are equivalent or superior to the specified item. In addition, I, as the Trade Contractor will assume all responsibility for any impact or delay the review and evaluation of the alternate product may cause. Your approval of the Substitute Product in no way will relieve me as the Trade Contractor of my responsibilities to conform with all requirements of the Contract Documents.
Submitted By.	Submitted By: Andrew Weathers
FOR USE BY ARCHITECT/ENGINEER:       must comply with all applicable sections of the contract documents         Received Too Late       Not Accepted       Approved As Noted         For Bidding Only, Final approval subject to Submittal Data in accordance with requirements of Contract Documents.       Date:       03/22/2022         PRINTED NAME:       Mike Rolison	Submitted By: <u>+ · · · · · · · · · · · · · · · · · · </u>
	FOR USE BY ARCHITECT/ENGINEER:       must comply with all applicable sections of the contract documents         RECEIVED TOO LATE       NOT ACCEPTED       Approved As NOTED         FOR BIDDING ONLY, FINAL APPROVAL SUBJECT TO SUBMITTAL DATA IN ACCORDANCE WITH REQUIREMENTS OF CONTRACT DOCUMENTS.       DATE:       03/22/2022         PRINTED NAME:       Mike Rolison
SIGNATURE: <u>Mike Rolison</u>	SIGNATURE: <u>Mike Rolison</u>





## **Waverly Park**

**LED Sports Lighting** 

March 22, 2022

PROPOSAL SUBMITTED BY PREMEIR SPORTS LIGHTING



# Tab A

## Letter/Checklist

Play the Game in a Better Light<sup>™</sup>



Mrs. Silver,

Thank you for this opportunity to provide you with an overview of our state-of-the-art LED sports lighting system. Most recently Mississippi State University utilized our Remote Pro<sup>™</sup> and Control Pro+<sup>™</sup> systems to enhance the fan experience and provide better broadcasting quality at their softball stadium. Clemson University has chosen our Remote Pro<sup>™</sup> system for the upgrade of the lighting and control system at their soccer stadium, Historic Riggs Field, and it will be installed and operational by early May. Premier Sports Lighting<sup>®</sup> is not only a manufacturer but also a licensed unlimited electrical contractor in many states, including South Carolina.

Our approach to LED sports lighting is simple:

- Provide high-quality lighting at an affordable price by selling directly to the customer
- Provide fan-experience effects as a part of our standard system
- Provide remote access from any web-enabled device in the world
- Provide the lowest total cost of ownership in the industry
- Provide unmatched customer service to potential and paying customers

Project References utilizing our state-of-the-art LED and Control system(s):

٠	Mississippi State University	Starkville, MS	Softball Stadium
٠	Clemson University*	Clemson, SC	Soccer Stadium
•	Georgia Highlands College*	Cartersville, GA	New Baseball and Softball Stadiums
•	Rock Springs Academy*	Milner, GA	4 New Baseball Fields
•	Pendleton High School	Pendleton, SC	Soccer Stadium
•	Pendleton High School	Pendleton, SC	Football Stadium
•	Christ School	Arden, NC	Baseball & Soccer Stadiums
•	Greenwood Parks & Rec*	Greenwood, SC	4 New Baseball Fields
•	Piedmont Community Charter*	Gastonia, NC	New Soccer Stadium
•	City of Pickens	Pickens, SC	5 yr. contract to upgrade lighting

\* = currently in manufacturing

For the retrofit of your stadium, our Remote Pro<sup>™</sup> LED Lighting System, as installed, will have the following included:

- We will strip all existing lights, crossarms, cages, boxes, and wiring on existing poles.
- We will supply all new crossarms and lights at the top of the pole.
- We will supply a new wiring harness down the pole.
- At 10' above grade, we will supply our remote driver enclosure, which will include drivers, surge protection, fuse holder, fuses, spare fuses, control system, and a new disconnect switch.
- We will supply a wireless control system that will work through any web-enabled device. We can add or

delete users at any time as promised. This will allow for on/off, dimming, theatrical controls, scheduling, diagnostics, logs of usage, etc.

- We will include at our master control cabinet an industrial computer to control the system and connect to your local network via ethernet or will be connected to a cellular network provided by Premier Sports Lighting, LLC.
- Each field will get an auto, on, and off-key switch. The switch allows for manual control of the lighting system. The auto position allows for the computer to "control" the system remotely. The key switch additionally can turn lights on/off in the event the computer fails for a "failsafe" operation.

Premier's 25-year parts, labor, maintenance, and performance warranty for all of your fields is the best in the industry. With our ability to log in and look at your system, we can often fix any issues remotely. There are almost never any issues with the lights at the top of the pole with current LED systems. Any warranty/maintenance issues will usually occur with the drivers or other items in the remote box. Premier is placing all of the system's "guts" at 10-foot above grade, which is step ladder height, so bucket trucks for repairs are almost obsolete.

The Remote Pro<sup>™</sup> LED Lighting System is unique in that we utilize TIR lens technology and proprietary louvers to control our lights/beams. This creates greater lighting efficiency for the field of play plus it allows us to also control off-field lighting as well. For this project, we will also include the appropriate visors for your fields based on your site, which will be a big upgrade from what is currently there.

Thank you for your time and I hope we can work together on this project. Premier Sports Lighting would be ecstatic to have the City of Columbia, MS as a customer!

Sincerely,

Andrew Weathers CEO Premier Sports Lighting, LLC



# Tab C

# On Field Lighting Design







## Tab F

## Performance Guarantee



## **Performance Guarantee**

Premier Sports Lighting, LLC will guarantee the performance and will make all corrections necessary to meet the specifications at no expense to the owner.

Additionally, light levels are guaranteed to not fall below the target light levels for the duration of the warranty period.

Indrew Julit

Andrew Weathers

### Play the Game in a Better Light<sup>™</sup>



## Tab G

## Structural Calculations





Galvanized Steel, 3/4" Male NPT (on undersized of cross-arm)

<b>PREMIER</b> Sports Lighting	2100 CHESPARK DRIVE GAST⊡NIA. NC 28052 DFFICE (800) 674-6058		RE∨.; 00	CHECKED BY: N/A	EXAMPLE: 4-LIGHT CROSS ARM
	EMAIL: SALES@PSL-SPORTS.COM	TCA-4-PSL	IX'	יוע אישאע	



Stainless Steel Braided Geothermal Hose on Fixture (Allows for no exposed wires to the elements)



Fixture Level Locking Connectors (600V, 16A Rated) (after connection is made, the pluggable connectors rest inside cross-arm)



Remote Enclosure (Holds up to 12 drivers) Mounts with 5/8" DA bolts on new construction & stainless steel straps for retrofits)



2100 CHESPARK DRIVE GASTONIA. NC 28052 OFFICE (800) 674-6058 EMAIL: SALES@PSL-SPORTS.COM





Electrical Service (2" aluminum meyers hub & stainless steel nipple)



Wire Harness (Individually boxed per cross arm assembly) Equipped with 600V rated quick disconnects & galvanized steel Kellems grip

**New Construction** 



## Tab H

# Control & Monitoring System









#### Overview

Lighting contractor cabinet provides on/off control of lighting system, remote monitoring and manual key-switch operation.

### **Control Features**

- Lighting system and other customer equipment
- Key-activated switches allow manual control
- Up to 12 controllable zones via Modbus relays
- Industrial PC operating custom software

### **Technical Specifications**

- Operating Temperature: -4°F to 140°F (-20°C to 60°C)
- Weight: Max 62 lb (28 kg)
- Dimensions: 48 x 18 x 8 in (1219 x 457 x 203 mm)

#### Contactor Current Rating

- 38A
- 50A
- 95A

### Construction

- NEMA 4
- Powder coated aluminum (14 gauge)
- Lockable
- Supports up to 480Vac
- Control system operates 200-480Vac
- 24Vdc coil contactor control voltage

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#### **Control Pro Air™ Specifications**

## **CONTROL PRO+**<sup>TM</sup>

## **Wireless Lighting Control System**

#### **TOP PRODUCT FEATURES**

- Master controller installed at electrical panel in enclosure provided by Premier Sports Lighting.
- Carrier-Class Throughput
- Delivers up to 300+ Mbps real TCP/IP throughput
- Dual frequency ability to find the best for your location

Manufacturing Material	Polycarbonate
Networking Interface	Gigabit Ethernet Port
Antenna Connector	N-Type Connector
Antenna	Dual Band (2.4GHz & 5GHz) Omni Fiberglass
Throughput	
2.4 GHz	160+ Mbps
5 GHz	300+ Mbps
Max Power Consumption	8W
Output Power	22 dBm
Power Supply	24VDC, 0.3A (minimum)
Power Method	24V Passive POE (Pairs 4, 5+; 7, 8 Return)
ESD/EMP Protection	24 kV Contact / Air
Operating Temperature	-40 to 70°C (-40 to 158°F)
Operating Humidity	50 to 95% Noncondensing
Shock and Vibration	ETSI300-019-1.4
Certifications	CE, FCC, IC
TX Power Specification	8x 256QA (5/6)   18 dBm
RX Power Specification	8x 256QA (5/6)   -62 dBm
Operating Frequency (MHz)	
2.4GHz	2400-2483.5
5GHz	5150-5875
Cellular (Remote Access)	Verizon LTE or AT&T

#### Control Pro Air™ Functions

Maximum # of Channels	Up to 1,024
Maximum Distance away from Master Controller	1,500 feet
Light Control	(5) Pre-programmed theatrical scenes controlled via web interface
Monitoring	Real-time monitoring of lighting status at the fixture and system level, outage notifications, storage of power consumption, and other system parameters which can be retrieved for later analysis*
Remote Monitoring	Web interface can be accessed through the internet via any web-enabled device
Driver Failure	Notification through email of the location of the potentially failed driver via 12Vdc Digital Input signal loss. Example: Pole 1 fixture 8
Lightning Monitoring	Notification of lightning strikes within 8 miles. Strikes within 1 mile will trigger a diagnostic system check to search for potential damages.
User Permissions	User and administrative accounts with multiple permission levels available
Scheduling	Ability to schedule up to 10 years in advance. Save up to 1000 schedules against memory loss.

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## **CONTROL PRO+**TM

## **Wireless Lighting Control System**

The Control Pro Air<sup>™</sup>, a wireless control system that provides theatrical scenes and effects, comes standard with (5) pre-designed and uploaded scenes with the capability to build new scenes<sup>\*</sup>. For instance, build scenes to spotlight the national anthems, athlete introductions, halftimes, blackout the stadium, maintenance, and safety egress scenes.

### **Theatrical Scenes**

Product Color Type		Standard Scenes	Dancing Scenes						
750w									
	5000K or <mark>5700K</mark>	<ul> <li>High (100%)</li> <li>Medium (66%)</li> <li>Low (33%)</li> <li>Blackout (0%)</li> </ul>	<ul> <li>Pole Chase</li> <li>Fixture Chase</li> <li>Alternate</li> <li>Flash (Standard &amp; Fast)</li> </ul>						
1500W	-								
	5000K or 5700K	<ul> <li>High (100%)</li> <li>Medium (66%)</li> <li>Low (33%)</li> <li>Blackout (0%)</li> </ul>	<ul> <li>Pole Chase</li> <li>Fixture Chase</li> <li>Alternate</li> <li>Flash (Standard &amp; Fast)</li> </ul>						
RGB									
	5000K or 5700K	<ul> <li>High (100%)</li> <li>Medium (66%)</li> <li>Low (33%)</li> <li>Blackout (0%)</li> <li>RGB Color Mixing</li> </ul>	<ul> <li>Pole Chase</li> <li>Fixture Chase</li> <li>Alternate</li> <li>Flash (Standard &amp; Fast)</li> <li>RGB Flash</li> </ul>						





## Tab I

# Electrical Distribution Plans



## **Electrical Distribution Plans**

Premier Sports Lighting, LLC will provide electrical distribution plans stamped by a professional engineer licensed in South Carolina if awarded the project.

Note:

Premier Sports Lighting, LLC provided photometric layouts show that there KW is lower than the basis of design from Musco Sports Lighting.

Indra Julat

Andrew Weathers

### Play the Game in a Better Light<sup>™</sup>



## Tab J

# Warranty

Play the Game in a Better Light<sup>™</sup>







## 25-YEAR / 10-YEAR All-Inclusive Warranty

Premier Sports Lighting, LLC provides a <u>25-year</u> and <u>10-year</u> "all-inclusive warranty" to the owner for complete peace of mind at no out-of-pocket cost.

#### What this warranty covers:

Premier Sports Lighting, LLC warrants both the 750-watt and 1,500-watt Remote Pro<sup>™</sup> LED Lighting System for 25 years or 15,000 hours of usage from failure. All fixtures and or components are covered under this warranty for the full 25 years. All necessary labor, parts, wiring, etc. will be replaced or corrected at Premier's expense. The use and cost of equipment (cranes, lifts or other heavy construction equipment) is included in this warranty at Premier's expense.

#### What is covered and included:

- Total system coverage, lights, poles, drivers, controls, etc.
- All labor
- · Lifts, crane or other equipment required for repair
- All parts will be supplied by PSL at no cost to owner
- Light levels are guaranteed for full 25-year period
- Fixture aiming and mounting is guaranteed.

#### What is not covered:

- Acts of God (flood, hurricane, lightning, tornado, strong winds, hail, etc)
- Vandalism
- Damage from improper installation
- Non-compliant power conditions (power surges, etc.)

#### **Conditions of Service:**

- · Adequate, pre-determined egress/ingress is required for heavy service equipment
- Safe working environment for crews

#### Response Time:

- · Normal non-emergency service work will be scheduled within owner's requirements
- · Emergency service response will occur within a 24-hour period

#### Notes:

- This warranty is intended for normal usage for <u>all</u> Premier Sports Lighting's system's that would be installed on a grade school, high school sports venue, charter schools, park and recreation, collegiate level or other venue with normal use considerations. Please contact Premier Sports Lighting for high or extreme use facilities.
- If using existing poles in a retrofit/upgrade project the warranty automatically becomes 10 years.
- 15,000 of usage equates to 600 hours per year of available usage.



# Tab K

# **Project References**



### **Project References**

#### Eric Sabin ~ Clemson University Athletics

Associate Athletic Director / Facilities Management & Capital Projects Jervey Athletic Center 220 Perimeter Road, McFadden 119 Clemson, SC 29633 Email: <u>sabin@clemson.edu</u> Tel: (850) 528-6646 Scope of Work: Retrofit of Soccer Stadium (May 2022)

#### Eric Thorp ~ Christ School

Athletic Director 500 christ School Rd. Arden, NC 28704 Email: <u>ethorp@christschool.org</u> Tel: (828) 684-6232 ext. 128 Scope of Work: New Baseball and Lacrosse Fields

#### Amanda Brooks P.E., RCDD ~ Optima Engineering

Electrical Engineer 150 Fayetteville Street, Suite 520 Raleigh, NC 27601 Email: <u>abrooks@optimaengineering.com</u> Tel: (919) 413-3566 Scope of Work: Approved our system for the upgrade of Carter-Finley Stadium (NC State Football)

#### Eric George ~ Mississippi State University Executive Senior Associate A.D./CFO 288 Lakeview Drive Mississippi State, MS 39762 Email: egeorge@athletics.msstate.edu

Tel: (<u>662)</u>325-8670 Scope of Work: Softball Field Upgrade (more venues to come)



Nusz Park - Home of the Miss. State Bulldogs Starkville, MS USA - February 2022

'STA'

#### Light Levels

100 horizontal footcandles infield 70 horizontal footcandles outfield

> Power Consumption 36 kW

Comparison vs Previous Equipment 67% increase in light levels 60% reduction in energy usage



Historic Riggs Field ~ Home of the Clemson University Tigers Coming April 2022





#### Project References

Name	Location	Field Type	Year Completed
Elkin Parks and Rec	Elkin, NC	High School Softball	2018
City of Pickens	Pickens County, SC	5 year Agreement	2018-2023
Pendleton High School	Pendleton, SC	New Soccer & Track	2019
Christ School	Arden, NC	Baseball & Lacrosse	2021
Pendleton High School	Pendleton, SC	Football Retrofit	2021
Mississippi State University	Starkville, MS	Softball Stadium	2022
Greenwood Parks & Rec	Ninety Six, SC	4 Baseball Fields	2022*
Clemson University	Clemson, SC	Soccer Stadium	2022*
Rock Springs Academy	Milner, GA	4 Baseball Fields	2022*
Piedmont Community Charter	Gastonia, NC	Soccer Stadium	2022*
Georgia Highlands College	Cartersville, GA	New Baseball & Softball Stadium	2022*
Mississippi State University	Starkville, MS	Track and Field Stadium	2022*



# Tab L

# Product Information







## <u>Remote pro 750W</u>

#### **TOP PRODUCT FEATURES**

- 112,000+ lumen output
- Glare and cutoff control via Louver and TIR Optical System
- Virtually eliminate maintenance with accessible components
- Industry leading light source reliability with low driver current LEDs
- Wireless, Wired DMX or sACN controls options to suit your needs
- Impact Resistant Tempered high transmission glass that protects from vandalization and prevents down time in the event of impact to the glass.

#### **LUMINAIRE FEATURES**

Delivered Lumens	Up to 112,500
Input Wattage	Up to 788
Input Voltage	180-528VAC
Efficiency Range	130-144 lm/W
CRI	75 typical. 70 minimum
Color Temperature (CCT)	5700K
Distribution	Narrow, Medium, Wide
Dimming Range	DIM TO OFF, 10%-100%
UL ambient temp. Rating	-40°C to +45°C (-40°F to113°F)
Usage	Indoor & Outdoor
Mounting Option (3G Rated)	Local Yoke
Surge Protection	Each enclosure is equipped with 75kVa
Weight (luminaire)	35 lbs
EPA (Effective Projected Area)	≤ 1.84 (sq. ft.)
Ingress Protection	IP 66
Material & Finish	Die cast aluminum, powder coated

#### **Electrical Performance Data**

PN	Input Voltage Range	Nominal Input Power	Input Current	Power Factor (>60%load)	THD (>60%)	Inrush (A2s)	Inrush Period (ms)	Peak Inrush (A)
	180-240V	781	3.5A Max	> 0.97	≤4%	< 0.25	3.2	15
750W	277V	781	3.5A Max	> 0.97	<b>≤</b> 3%	< 0.25	3.2	15
	480V	781	2A Max	> 0.95	<b>≤</b> 10%	< 0.50	3.3	20

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#### **Optical Performance Data**

Optic	NEMA Type	CRI	CCT	Delivered Lumens	Input Power	Lm/W	Beam Angle	Field Angle
Norrrow	NEMA 2	Typical 75	5000K	112,494.1	777.70	144.65	H12.7 V12.9	H26.3 V25.0
Natitow		Typical 75	5700K	112,491.1	777.70	144.65	H12.7 V12.9	H26.3 V25.0
Modium	NEMA 3	Typical 75	5000K	101,750.5	781.29	130.23	H20.4 V19.7	H38.9 V37.1
Medium		Typical 75	5700K	101,750.5	781.29	130.23	H20.4 V19.7	H38.9 V37.1
Wide	NEMA 4	Typical 75	5000K	104,753.0	787.79	132.97	H37.4 V39.4	H67.1 V65.2
		Typical 75	5700K	104,753.0	787.79	132.97	H37.4 V39.4	H67.1 V65.2

#### Photometry Data (750W / 5000K / 75 CRI)









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2.0 x 1.0 in

(50.8 x 25.4 mm)

64.00 in

(1625.6 mm)

60.00 in (1524 mm)



15.00 in

(381 mm)

12.00 in

(304.8 mm)

## <u>Remote pro enclosure</u>

Premier Sports Lighting's Remote Pro<sup>™</sup> System is a premium lighting solution for professional quality sports lighting applications. Our remote driver system allows for each access to critical components from a small step ladder. The days of going to the top of the pole for maintenance are over. A single 60" enclosure allows for up to (12) 750w luminaires, which means we require less enclosures to be mounted than our competitors.

#### **Features**

- Factory-built and tested as a unit
- Quick connect plugs for easy field wiring
- Mounted 10ft above grade for servicing with ladder
- Labeled with pole identification and electrical information
- Drivers individually fused and spare fuses supplied
- Wire access from inside the pole (no exposed wiring or conduit)
- Rotary Disconnect per circuit
- Type 1, 75kA surge arrestor before the disconnect switch, providing exceptional surge protection

#### **Technical Specifications**

- Constructed of aluminum and powder-coated
- Enclosure ratings: NEMA 3R, IP54
- Designed to operate in up to 60° C (140° F) ambient temperature
- Aluminum lift off hinges for easy access to interior of enclosure
- Stainless steel lockable latches
- Meets touch-safe standards
- Up to 12 drivers per enclosure
- Approximate weight <125 lbs fully assembled
- Grounding continuity
- Fully tested before leaving factory

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#### Overview

Transient surge is the most detrimental event that can happen to a LED sports lighting system. That's why we provide superior protection on our complete system.

### **Main Distribution Panel**

At all main distribution panels a 200kA UL1449 Type 1 surge suppression device is mounted and it is installed in parallel. Additionally, there is visual and audible fault indicators.



### **Remote Driver Enclosures**

At each remote driver enclosure a UL1449 Type 1 75kA surge suppression device is installed. The main 3P 4W feed directly into our surge suppressor providing unmatched protection in the LED sports lighting industry. Each phase protector has visual fault indicators and remote contacts.





### **Driver Fusing**

Each driver utilizes (2) Littelfuse Midget Fuse-holders with blown fuse indication. Each fuse holder utilizes 10Amp slow blow fuses manufactured by Eaton Bussman.

### **Driver Protection**

Each driver is protected line to line 6kV, line to ground 10kV Each driver utilizes 600V rated quick disconnects for AC, DC and Control wires for easy exchange in the event of a failure.

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Remote Drivers 10' Above Grade
 Lightning & Surge Suppression
 No Exposed Wiring To The Elements
 Easy Accessibility For Maintenance
 Equipped With Quick Disconnects
 Unmatched Glare & Spill Control

Ready to upgrade your venue with an LED sports lighting system? Have a question? Let our experts create your tailored solution. Just give us a call at (800) 674-6058 or email us at <u>sales@psl-sports.com</u>. We look forward to assisting you.





#### **SEEKING BETTER LIGHT**

At Premier Sports Lighting, we're obsessed with going beyond the imagined possibilities of what light can do. The Remote Pro<sup>™</sup> 750 is the result of advanced LED technology and Premier's need to constantly improve the overall performance and value of our products. Utilizing Premier's cutting-edge technology, the Remote Pro<sup>™</sup> 750 blends extreme optical control, advanced thermal management and modern clean aesthetics to dramatically reduce maintenance and energy costs for a rapid return on investment.

#### **PRODUCT SUMMARY**

Initial Delivered Lumens: Up to 112,000 lumens

Initial Power: Up to 781 watts

Color Rendering Index (CRI): Typical: 75, Minimum: 70

CCT: 5000K (+/- 300K), 5700K (+/- 500K)

Replaces: Multiple 1500W HID

Enclosure: 60" Aluminum, NEMA 3R Rated

Limited Warranty: Standard 10 Year Parts & Labor (Up to 25 year)

#### **TYPICAL FOOTBALL FIELD PRODUCT COMPARISON**

	Remote Pro™ 750	Competitor M	Metal Halide
# of Fixtures 36		40	72
CRI	75	75	60
CCT	5700K	5700K	3800K
Total System KW	28.12	50.36	115.92
Efficacy (LPW)	Up to 142	Up to 115	Up to 75

41% Energy Savings vs. Competitor M / 75% Energy Savings vs. MH

#### **LUMINAIRE DIMENSIONS**



Weight: 25 lbs. (11.34 kg)

#### Visit psl-sports.com or contact a Premier Sports Lighting representative to learn more

#### sales@psl-sports.com | 800.674.6058

#### **APPLICATIONS**







#### **Professional & Collegiate**

Our systems offer a stunning theatrical effect for fans to really engage in the contest. The technology in our systems meets the needs of your venue and more importantly, your budget.

#### K-12

Your costs don't stop after your sports lighting system purchase. Our systems offers the lowest TCO ... guaranteed. Our energy efficiency is unmatched in todays lighting market. That means our systems cost less to operate over their life.

#### **Municipal**

You're a central part of your community, so you want to give them the safest, most neighbor-friendly, and most energy-efficient light possible. Light your field, please your neighbors—and do it all under budget.













## ABOUT US

In late 2017 four friends in the lighting industry possessing 190+ years of hands-on sports lighting experience recognized the need to design and manufacture a high quality and extremely affordable LED sports lighting system. The Field Pro<sup>™</sup> 750 & 1500 LED Remote or Integral system is now revolutionizing the market.

Features typically reserved for professional venues are now directly available to colleges, high schools, and municipalities who desire to reduce light spill, have lower energy consumption and virtually eliminate costly maintenance with our system. Contact a Premier team member or an installation partner for a turnkey quote to retrofit an existing metal halide field OR build a LED sports system with poles and wireless controls from ground-up.

## EHPERIENCE

Premier Sports Lighting's team consists of seasoned sports lighting individuals who have experience from the smallest to the biggest projects and everything in between. Premier's management team collectively has designed, sold or installed over 5,000 sports lighting systems across the USA over the last (37) years ranging from Olympic venues to (20+) Professional sports venues to university settings, high school to municipal and P&R fields.

### FINANCING

Too often, organizations and municipalities think a state-of-the-art LED sports lighting system is out of their financial reach. With Premier Sports Lighting Finance it isn't. We offer programs that tailor payment schedules and financing terms to nonprofit organizations, private industry, municipalities and public schools. By acting today, you can greatly enhance your facility while also realizing a number of fiscal benefits.

### **ASK ABOUT OUR NO PAYMENTS FOR 365 DAYS OPTION!**

## COOPERATIVE PURCHASING

As a NCPA vendor, Premier Sports Lighting can provide a complete sports lighting solution for your facility including poles, LED luminaries, mounting brackets, wired or wireless controls and turn key installation.

Contact Premier Sports Lighting today to learn how you can leverage our NCPA contract to save time, money, energy and frustration on your next sports lighting project.





The total cost of ownership (TCO) is the purchase price of an asset plus the costs of operation. Assessing the total cost of ownership represents taking a bigger picture look at what the product is and what its value is over time. When choosing among alternatives in a purchasing decision, buyers should look not just at an item's short-term price, known as its purchase price, but also at its long-term price, which is its total cost of ownership. The item with the lower total cost of ownership is the better value in the long run. <u>The Field Pro™ LED Systems provide the</u> <u>lowest Total Cost of Ownership in the industry guaranteed</u>! Let us show you how to calculate TCO.

(((KW x hours of operation) x KWh) x 25) + Initial Cost = TCO over 25 years



## **Actual High School Baseball Comparison**

Our systems cost less to purchase AND operate for 25 years versus the competitor's ONLY purchase cost.

## REMOTE PRO SYSTEM®

## CROSS ARMS

- Galvanized tubular steel (2X4); provision for sealed wiring from fixture head to remote box
- Optional 2, 4, 6 and 8 fixture mounting arm
- Bolted 'plate to plate' cross arm to pole connection

## **RFB** LUMINAIRE

- Oreate a fan experience like the pro's
- Requires Control Pro+ System\*
- Can double as an Egress luminaire, saving additional costs

## *Concrete Base*

- PE stamped foundation designs per project specs
- Rebar enforced cages; galvanized anchor bolt sets

## EGRESS

- Affordable UL924 UPS (uninterruptible power supply)
- Meets NFPA 101 for Life Safety (90min standby)
- IP20 (must be installed in a conditioned space)



## LUMINAIRES

- Remote 750w, 1500w
- Stainless steel flex enclosed wiring-LED head to bottom cross arm
- Narrow, Medium, Wide & Ultra Wide Beam Angles

## WIRE HARNESS

- PVC cover, color coded, #14AWG, 600V conductors
- Pole top and remote harness quick disconnects
- Cable support grip with loop

## STEEL POLE

- Galvanized steel anchor base
- Manufactured to ANSI & AASHTO standards
- PE stamped drawings provided with each pole

## **ENCLOSURE**

- Standard 75kA surge and transient protection device
- Control Pro+<sup>™</sup> location driver failure notification, dimming and theatrical
- Manual on-off disconnect switch
- Fusing per line
- Holds up to 12 drivers for 750w

## FIELD PROSYSTEM®

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## LUMINAIRES

- Integral 750w, 1500w
- Stainless steel flex enclosed wiring-LED head to die-cast driver housing
- Narrow, Medium, Wide & Ultra Wide Beam Angles

## CROSS ARMS

- Galvanized tubular steel (2X4); provision for sealed wiring from fixture head to remote box
- Optional 2, 4, 6 and 8 fixture mounting arm
- Bolted 'plate to plate' cross arm to pole connection
- Optional Platform for maintenance (climbing steps included)

## **STEEL POLE**

- Galvanized steel anchor base
- Manufactured to ANSI & AASHTO standards
- PE stamped drawings provided with each pole

## SURGE PROTECTION

- 50kA Surge Rating
- OL 1449 Type 1
- Audible Alarm
- NEMA 6R Waterproof

## ELECTRICAL LOCATION

- Standard 200kA surge and transient protection device
- Control Pro<sup>™</sup> location wireless switching and scheduling
- Manual on-off-auto key switch per field

### Concrete Base

- PE stamped foundation designs per project specs
- Rebar enforced cages; galvanized anchor bolt sets

## PRECISE LIGHT CONTROL®

## INTEGRAL

 Die-cast aluminum driver box added for integral LED system

## AIMING

- Stainless steel allen-bolt and close spaced serrated grooves for precise, quick, locked-in-place aiming
- Green laser aiming insures original field designs are achieved

### HEAT SINH ASSEMBLY

- Aircraft grade 6063 aluminum heat sink material
- Oustom taper thin fins maximize heat convection rise
- Machined 'PCB to heat sink' surfaces maximize heat transfer with added thermal pad
- Proprietary thermal designs insure low LED junction temps of less than 80°C during high wattage operation

## LENS

- Low iron substrate (water-white like) high lumen transmission glass
- Permanently sealed to protect optics and chips
- Vented, filtered optic chambers to balance pressures
- Impact resistant tempered heavy (5MM) glass for strength

## DIODE ASSEMBLY

- Custom, high power, Tier 1 diodes (chips)
- Metal core (proprietary) printed circuit board design
- Larger numbers of diodes, all operated at significantly lower drive currents 'equal' higher reliability and longer life

### **GLARE CONTROL**

- Standard feature; light absorbing internal glare and spill control louvers
- Eliminates direct view of the LED and optic when the luminaire is tilted away from your viewing position

## optics

- High temperature rated optical material for long life
- Custom made optics with multiple beam spreads
- Lowest off-site spill lighting in the sports industry
- Lowest brightness index (per sq.in.) in the industry
- Higher vertical FC's (to competitors) to meet HDTV requirements with less luminaires and KW consumption



#### Remote Scheduling System

## POWER SUPPLY

- 180-525Vac input
- 24Vdc output (5A)

## FUSING

Midget fast acting 15A

Blown fuse indicator

## Controller

- Custom software based PLC
  - Remotely managed on a VPN

## *55 Relay*

- Controller switches each field on/off via solid state relay
- Solid state relay controls coil to the contactors

## Communication

- Wired or wireless LAN
- Cellular based (4G)

## **CAPABILITIES**

- Remote access via login and password through a web enabled device (tablet/phone/computer)
- Schedule field usage up to 15 years in advance
- Various security levels of access/privileges per user
- On/Off/Auto Key Switch per field for manual on/off switching

- Scheduler stores up to 1000 schedules against memory loss
- Shows estimated total energy consumption and run times to date
- All communication costs included during warranty period

## CONTROL PRO+®

**Dimming & Theatrical System** 

## POWER SUPPLY

- 80-277Vac input
- 24Vdc output (1.5A)

## Communication

- Wired or wireless LAN
- Wireless Bluetooth



## Controller

- Custom software based PLC
- Remotely managed on a VPN

### DIMMING

- 0-10V Analog
- S stage dimming (High/Medium/Low)

## Monitoring

 Notification of driver failures and power surges

## **CAPABILITIES**

- Control Pro+<sup>™</sup> offers everything Control Pro<sup>™</sup> has with the additional features below:
  - Individual fixture control
  - Notification of potential driver failure via email alert
  - 3-stage dimming (High-Medium-Low) (manual switch at Control Pro location)

#### Standard Theatrical Effects (5) pre-designed light shows for exceptional fan experience











Weight (luminaire) 750w	Integral ~ 55 lbs   Remote ~ 35 lbs
Weight (luminaire) 1500w	Integral ~ 80 lbs   Remote ~ 60 lbs
Ingress Protection	IP 66
Material & Finish	Die cast aluminum, powder coated
UL ambient temp. Rating	50°C (122°F)

#### **Photometric Characteristics**

Project Lumen Maintenance per IES TM-21-11

L90	>78,000 hours
L80	>78,000 hours
L70	>78,000 hours
Color Temperature (CCT)	5000K or 5700K
CRI ~ 750w	75 typical. 70 minimum
CRI ~ 1500w	83 typical. 80 minimum
Lumens ~ 750w	109,000
Lumens ~ 1500w	193,000
RGB ~ Total Lumens	43,000
Lumens, Red	18,000
Lumens, Green	21,000
Lumens, Blue	6,600

## REMOTE ELECTRICAL ENCLOSURE

Surge Suppression : Type 1, 75kA per line to include grounding wire

Rotary Disconnect Switch : Red handle for easy identification

Fusing: Each line is fused with 15A midget fast acting fuse

Quick Disconnects: AC, DC & Controls wires utilize quick disconnects

Wire Way: Our enclosures utilize panel building methods that provide clean aesthetics

Drivers: 60" can hold 12 drivers and 32" can hold 6 drivers

Our enclosures are made in the USA



2100 Chespark Drive Gastonia, NC 28052 Phone: (800) 674-6058

Email: sales@psl-sports.com Web: www.psl-sports.com