

USR2



FEATURES

SECOND GENERATION GLARE CONTROL FLOOD.

The USR2 luminaire provides replacement of up to 2000W HID in a form factor that is smaller and lighter allowing safe and easy retrofit of existing systems. With standard diode level internal glare control, the USR2 provides a vast reduction in on and off field glare that is not available in any other product. Available in 400-800W versions, the USR2 is an extremely versatile sports lighter ideal for arenas, sporting complexes and professional stadiums.

- » Industry Leading, Diode Level Glare Control
- » Dim to Off Technology
- » Controls Ready 12V Auxiliary
- » Integral and Remote Driver Operation
- » Standard Stainless-Steel Aiming Device
- » Designed and Manufactured in Texas, USA



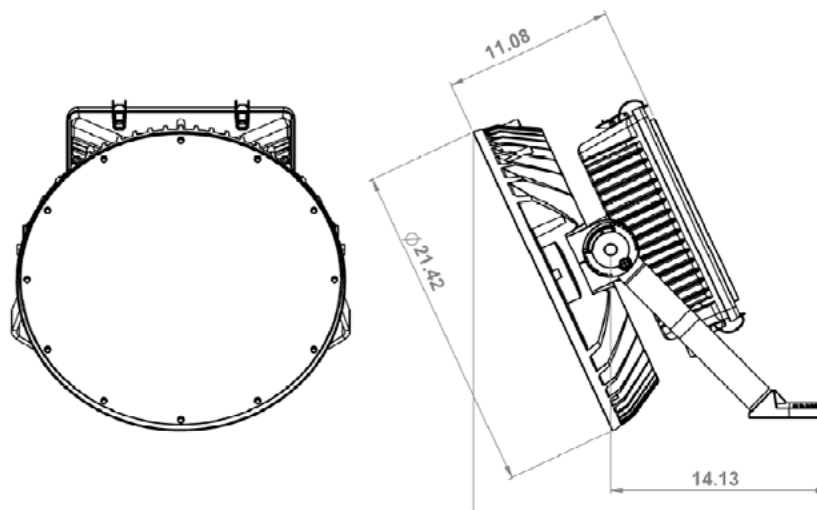
ORDERING GUIDE

EX: USR2-400-G-30-70-N2-1-GC-I

PRODUCT	WATTAGE	FINISH	CCT	CRI	OPTIC	INPUT VOLTAGE	OPTIC HOLDER	DRIVER
USR							GC	
USR2 2ND GEN USR	400 430W 600 600W 800 800W	G GREY DB DARK BRONZE C CUSTOM	30 3000K 40 4000K 50 5000K 57 5700K	70 70 80 80 90 90	N2 NEMA 2 N3 NEMA 3 N4 NEMA 4	1 120V - 277V 2 347V - 480V R REMOTE	GC GLARE CONTROL	I INTEGRAL R REMOTE
VISOR	RECEPTACLE	FUSING	CONTROL		TUNING			
NONE BLANK TV TOP VISOR	NONE BLANK PC 7 PIN	NONE BLANK F1 1 HOT LEG FUSE F2 2 HOT LEG FUSE	NONE BLANK DMX¹ DMX MODULE WIL WILUME WIRELESS CONTROLS		NONE BLANK FT² FACTORY TUNE			

1. Remote Driver option requires separate driver enclosure to be ordered separate from luminaire. Various options are available or remote driver enclosure, contact factory for additional details
 2. FT option allows factory reduction in drive current to meet project specific need. Contact factory for more details
 3. Must be ordered with CHM remote driver enclosure (RDE). Input voltage and phasing to be specified on RDE.

DIMENSIONS



SPECIFICATIONS

GENERAL DESCRIPTION

The complete luminaire is ETL/cETL Listed in conformance to standards ANSI/UL1598 and CSA22.2 No. 250.0 with an ambient temperature rating of 40C and is suitable for wet locations. The complete assembly is designed to fit within the same packaging dimensions and weigh less than previous HID technology permitting safe, easy and straightforward retrofit of existing installations. All critical components are easily replaced with commercially available, off-the-shelf components within the tool-less entry driver housing including the driver, surge protective device (SPD) and control units. Thermal management of the LED, drivers and internal components is passive in design and does not utilize any active methods of cooling. With high beam efficiency and available peak candela greater than 900,000, the USR2 is ideal for sporting venues, aprons and general outdoor lighting applications. Every USR2 comes standard with a stainless-steel aiming device for easy target aiming in the field and a high visibility label on the glass that indicates the photometric distribution of the luminaire that is visible from the playing surface. The USR2 is available pre-wired and pre-aimed as part of a complete sports lighting system from CHM Sports.

HOUSING

The complete housing assembly is precision, heavy duty die cast aluminum with a rugged power coat finish that has a salt spray rating of 2,500 hours per ASTM B117. The driver housing cover utilizes (4) stainless steel draw latches to secure the cover to the driver housing which permits tool-less entry even while wearing work gloves. The integral driver housing cover includes a stainless-steel leash that attaches the cover to the driver housing such that the cover cannot be lost, damaged or dropped during service. Each driver is secured to the housing using a sliding, aluminum driver clip which permit replacement of the driver without having to remove any fasteners thereby eliminating the risk of dropping hardware during service. The remote specification unit includes a gasketed and powder coated wiring junction box that provide simple access to the wiring compartment without having to open the LED housing.

ELECTRICAL SYSTEM

In integral specification, the unit includes (2) premium, IP67 rated drivers powering 50% of the LED array which provides redundancy to the luminaire wherein a driver failure will only extinguish half the luminaire. Each driver includes integral transient surge protection in accordance with IEEE C62.41 6kV/6kV. The LED drivers have a minimum power factor of 0.95 with a Total Harmonic Distortion no greater than 20%. The drivers come standard with dim-to-off technology and 12V auxiliary output that can be used to power secondary sensors or controls installed in the future or at the factory. All drivers utilized by the USR2 are constant current in design where the output current to the LED is precisely controlled for predictable and accurate light output while the output voltage is automatically adjusted to compensate for operating temperature of the diode and driver-to-LED distance in remote applications. Each unit also includes a secondary surge protection device (SPD) that is fully potted, IP66 rated and UL1449 Listed. The SPD provides a maximum discharge current of 20kA and meets ANSI C82.77-5-2015: High C, ANSI C136.2-2015: Extreme Level and IEEE C62.41.2 Location C High. In remote specification, the unit is provided with a factory wired, die cast aluminum housing with pre-wired and labeled landing terminals for DC input from a CHM Remote Driver Enclosure (RDE).

LED ASSEMBLY

Each LED is provided with a precision cast, TIR optical constructed of PMMA. Standard internal glare control optic holders block unwanted glare in all viewing angles to improve comfort for players and spectators. The glare control is provided in a flat black finish to absorb, rather than reflect, spill light thereby eliminating secondary glare. The LED array is comprised of (4) metal core printed circuits boards (MCPCBs) that provide redundancy to the overall system such that failure of one PCB will not extinguish the other PCBs in the system. The USR2 uses high performance graphite thermal interface material (TIM) that provides high thermal conductivity while allowing for easy field replacement without having to clean or scrape the heat sink. Wiring connection to the PCB is via a poke-in connector that allows easy removal and replacement of the LED modules without the need to solder or splice. The entire LED housing is enclosed with an anti-reflective coated, 4mm thick high-performance glass utilizing silicon gasket-on-glass technology. This allows straight forward removal of the glass in the field and easy replacement of the lens. The LED housing includes (2) IP68 rated breather vents that allow the pressure inside the LED housing to stabilize during normal heating-cooling cycles. This technology extends the life of the gaskets utilized in the system and thereby extends the life of the unit. Utilizing (2) breathers allows for proper circulation of air throughout the system but prohibits ingress of water or particles into the assembly. The breather vents are installed under the trunnion mount casting and are completely shielded from UV exposure, rain and sprayed water. The entire assembly is IP67 rated. The LED utilized is a high power, ceramic base LED which is suitable for outdoor, harsh environments. All stated CRI values for the USR2 are listed as minimums. The typical CRI, in most instances, will be 2 to 5 points higher than the published minimum. To ensure long life, minimal lumen depreciation, high efficacy and cooler operating temperatures the 800W unit utilizes a LED drive current of 750mA, the 600W unit operates at 575mA and the 400W unit operates at a mere 400mA.

WARRANTY

The entire product is covered by a minimum five (5) year limited fixture warranty. Supplementary warranty coverage is provided when supplied as part of a complete lighting solution from CHM. Longer term warranties are available, contact CHM Sports for additional details

SUPPLEMENTARY

STRUCTURAL LOADING			ELECTRICAL LOADING							
DRIVER TYPE	WEIGHT	EPA	OUTPUT	LINE WATTS	120V AMPS	208V AMPS	240V AMPS	277V AMPS	347V AMPS	480V AMPS
INTEGRAL	60	3.0	400	433	3.6	2.1	1.8	1.6	1.25	0.90
REMOTE	40	3.0	600	640	5.3	3.0	2.7	2.3	1.84	1.33
			800	860	7.3	4.2	3.7	3.2	2.5	1.83

4000K 70 CRI MIN PERFORMANCE						
DISTRIBUTION	800W		600W		400W	
	OUTPUT	LPW	OUTPUT	LPW	OUTPUT	LPW
N2	92,533	108	74,849	117	55,520	128
N3	91,892	107	74,331	116	55,135	127
N4	89,399	104	72,314	113	53,638	124

LUMEN OUTPUT CORRECTION FACTOR (LOCF)		
CCT	CRI	LOCF
3000K	70CRI	0.87
3000K	80CRI	0.80
4000K	70CRI	1.00
4000K	80CRI	0.88
5000K	70CRI	1.00
5000K	80CRI	0.88
5700K	70CRI	1.00
5700K	80CRI	0.88
5700K	90CRI	0.75

NOTE

To determine output at various CCT and CRI combinations, multiply 4000K 70 CRI output above by the corresponding LOCF from that table to the right. When utilizing CHM .ies files, include the LOCF as an additional light loss factory to properly model the specific CCT/CRI desired.